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[56TH YEAR BOOK ON TEACHER EDUCATION]

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[The 56th Yearbook on Teacher Education is a collection of papers and reports from the 56th World Assembly held on the 10-12 July 2012, at the University of Cape Coast, Ghana.]

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REPORT OF THE MEETING

Introduction

The 56th World Assembly of the International Council on Education for Teaching (ICET) was hosted by the University of Cape Coast from 10th to 12th July 2012. The 3-day meeting was under the theme ***“The Changing Global Perspective on the Role of Teacher and Teacher Education”***

Participation

Before the start of the Conference, 120 participants had registered online to attend. At the end of the Conference, 169 actually registered onsite and took part in the 3 day Conference.

Opening Ceremony

The opening ceremony, chaired by Prof. Jophus Anamuah-Mensah was attended by the Vice Chancellor of the University of Cape Coast, the Secretary-General of the Association of African Universities, the President and Board members of ICET, participants of the 56th ICET, staff and students of the of University of Cape Coast.

The ceremony started with addresses from the Vice Chancellor of the University of Cape Coast and the Secretary-General of the Association of African Universities.

The Vice Chancellor of the University of Cape Coast, Prof. Naana Jane Opoku-Agyemang welcomed Board Members of ICET and participants of the 56th World Assembly of ICET to Ghana, and to the University of Cape Coast. At a time when educators everywhere are exploring coping strategies for dealing with growing technological advancement, the Vice Chancellor was hopeful the Conference would contribute to knowledge to achieve this objective. This, she said is what ICET’s World Assemblies organized around the world have done since its inception in 1954.

The World Assembly, she noted is hosted by University of Cape Coast in the year the university celebrates its 50th Anniversary. Prof. Opoku-Agyemang stated that this great institution she heads was initially established as the University College of Education, Cape Coast with the mandate of preparing

teachers to fill academic positions in high schools of the education industry in Ghana. “Even though the university has expanded this mandate considerably, it has remained very faithful towards its obligations to education in the country”. Listing the achievements of the University, the Vice chancellor proudly informed participants that her institution is the first in West Africa to establish an Institute of Educational Planning and Administration (IEPA). The IEPA plans to offer training to neighboring countries that are opening out of conflict, especially Liberia and Sierra Leone, and the University aims at turning IEPA into a category 11 institute of UNESCO.

The Secretary-General of the Association of African Universities (AAU), Prof. Olugbemiro Jegede, expressed his organization’s pleasure at being associated with ICET. He commended Prof. Opoku-Agyemang, a member of the AAU Executive Board for accepting to host the Conference. He also commended the Local Organizing Committee for the good work done to get the Conference underway.

Prof. Jegede informed that the AAU with its over 300 active higher education institutional membership is happy to partner ICET for the development of education in Africa.

Prof. Pai Obanya, a seasoned educationist and currently Chair of Council of the West African Examinations Council delivered the opening keynote address on “**Looming Threats to Teachers, Teaching and Education**”.

The President of ICET, Darell Bloom, on behalf of ICET, presented an award to Prof. Obanya for his contribution to education.

Main Business

Keynote Speeches

Proceedings of each day was preceded by a keynote address presented by Prof. Pai Obanya, Prof. Jophus Anamuah-Mensah and Prof. David Imig, respectively.

Delivering the first keynote speech on the **Looming Threats to Teachers, Teaching and Education** Prof. Obanya stated that whatever affects teachers affects teaching and consequently affects education. The presentation discussed 3 concepts (Who is a teacher? What is teaching? What is education?). By means of 4 illustrative anecdotes (policy positions dominated by non-educationists; dis-inclination for the study of education; education and choice of profession; and make me a solemn promise), Prof. Obanya

explained how politicians, education professionals, and society have belittled education and relegated it to the background.

Prof. Jophus Anamuah-Mensah's speech addressed ***The Changing Global Perspective on the Role of Teacher and Teacher Education***. The changing global perspectives, he noted are driven by globalization, the labor market, cognitive science and technology. Learning, he said has moved from the traditional forms to game-based and open content and teacher education will need to factor the use of new technologies to make an impact. Students, on their part will need to develop personal, social and learning skills. The presentation was concluded noting that ***"in order to prepare students for the future and not the past, educational systems must be re-designed to embrace change. To do this, teacher education must be transformed to prepare teachers to handle change and be change agents themselves"***.

Prof. David Imig's presentation focused on the American educational system, also addressed the ***"Changing Perspectives on the Role of the Teacher and of Teacher Education"***. The presentation examined what awareness, understanding, beliefs and action needed to be created to address these changes. The speaker identified Technology, Globalization, the Labour Market, Neuroscience, Economic Constraints and Political Considerations as looming threats to the United States educational system.

An important factor in addressing these threats according to the speaker is to develop "Trust" in the relationship between the public and the functional groups which have organized to provide a public service and confidence in those who provide a public service.

Political, Social and Economic trends were identified as influencing the role of the teacher and teacher education. On the political front, issues of shifts in political power, ascendancy of conservative policies and politics and social responsibility in a bifurcated society among others were listed. On the economic front unacceptable unemployment rates, off-shoring of white collar work to countries with low cost labor, persistence of income inequality and the concentration of wealth and commitment to low taxation – with implications for public sector support were mentioned. Social trends identified included a rise in social networking and information vetting through close personal connections

He identified pathways to success to include Trust, Professionalism and Effective Teaching.

The 3 keynote speeches are attached as ***Annex 1***

Presentation of Papers

Three days were dedicated to presentation of papers received for the Conference. Before the start of the Conference, 88 papers had been received by the organizers for presentation in parallel sessions under the following 5 sub-themes:

1. *Leadership for Learning and Instruction*
2. *Sustainable Teacher Education for the 21st Century*
3. *Monitoring and Evaluation of Teaching and Instruction*
4. *Educating Learners with Special Needs: New Trends*
5. *Assessment, Accreditation and Quality Assurance*

Changes were made as was necessary. By the end of the Conference, of the 88 papers listed to be presented, 62 were actually presented by the end of the Conference. Apologies were received from 13 presenters. Six papers which were not listed in the program due to late submission were received on site for presentation. 18 presenters were in attendance but not available during the time of their presentation.

Group Presentations

Papers received for the Conference were discussed in groups under the 5 sub-themes listed above. Abstracts of the papers are attached as **Annex 2**

This sub theme presented the following papers:

Leadership for Learning and Instruction

1. *The Changing Global perspectives on teacher education and leadership development (Dr. Katherine Perez)*
2. *Transformational school leadership in Sub-Saharan Africa: Leadership for Learning in Ghana (Stephen, J, Swaffield, S & MacBeath, J)*
3. *Myths, bandwagons and moral panics: implications for teacher education and leadership development (Dr. David Manduk)*

4. *Low Cost Private Schools in Ghana: School Leadership for Student Learning* (**Paula A, Cordeiro & Nicolas Hlover**)
5. *Mentors' professional development and knowledge base for mentoring* (**Maria da G.N. Mizukami; Aline Maria Medeiros, Rodrigues Realli, Regina Maria Simoes, Puccinelli Tancredi** *Learning-centred leadership: Practices and effects* (**Eric A Kyeremeh**)
6. *CULTURIS: Leadership for Learning supported by information systems* (**Viana, Isabel, C; Ricardo J. Machado & Ana Maria Serrano**)
7. *Shifting Faculty Perspectives: Leading Curriculum Change for the Development of Globally Competent Teachers* (**Letitia Marion Williams**) *Learning space design for large classes* (**Robert Maribe Branch**)
8. *Towards a learner-centred –connectivity (LCC) Approach which embraces socio-experiential and associational learning of the 21st century learner* (**Rank-Ramaili & Chetty, D**)
9. *Leadership and Crisis Management in Tertiary Institutions* (**Dr. Isaac Nwankwo & Ibeh Ifeanyi**) *From Leadership through Instructions to Leadership for Learning* (**Professor Tony Townsend**)
10. *Gender sensitivity in leadership for learning and instruction: A 21st century imperative for teacher education* (**Edmore Mutekwe and Maropeng Modiba**)
11. *Teacher-student collaboration and pre-service teacher learning success in a tertiary classroom: an experiential account of a level 200 early literacy learning classroom in Ghana* (**Dr. Kafui Etsey**)
12. *Female Zimbabwean School Heads negotiating the challenges of leading in disadvantaged school contexts* (**Joyce T. Zikhali & Prof. Perumal**)
13. *Leadership support for school-based professional development for primary school teachers: the use of TESSA OERs in schools in Kenya* (**Jane Cullen & Fred Keraro**)

Sustainable Teacher Education for the 21st Century

Under this sub-theme the under-listed papers were presented:

1. *Critical Issues and Policy Directions in Seven Latin American Countries* (**Avalos, Beatrice**)
2. *Exploring partnership for teacher capacity building & sustainable development* (**Mejai Avose & Kris Reed**)
3. *Sustainable teacher education for the 21st century* (**Dr. Lore Gallasdtegi & Mrs Hendrina Mildred Givah**)

4. *Design and implementation of a postgraduate programme in teaching and learning in higher education for academics in Ghana* (**Kofi Mereku and Akwasi Asabere-Ameyaw**)
5. *Discourses of teacher provisioning the ODL methodology: A critical qualitative meta-analysis study* (**Nyoni, J**)
6. *The future of Content is an Open Book: Open Educational Resources in African Teacher Development* (**Tessa Welch**)
7. *Areas of specialization versus present teaching subjects of NCE Teachers in primary schools in Nigeria* (**Adeola Shobola, Sehinde Olawatosin, & Onijuni Olatomide**)
8. *Dissidence in Teacher Education: Challenging the Neoliberal paradigm* (**Parkinson, Paul, T.**)
9. *Towards Sustainable Teacher Education for the 21st Century* (**Dr. John Ikechukwu Ezeudu**)
10. *Sustainable Teacher Education and Professional Counselling in the 21st Century* (**Dr. Florence N.C. Onyilofofor**) *Teacher student recruitment experiences from Portugal and Sweden* (**Niklasson, L & Flores, Maria .Assuncao**)
11. *How do Portuguese Teachers Perceive their Work in Challenging Times? Findings from a 3-year research project* (**Maria Assunção Flores Fernando Ilídio Ferreira, Isabel Viana**)
12. *Effectiveness of the integration of Information and Communication Technology in the teaching process in selected Colleges of Education in Zambia* (**Lemmy Kangwa, Vitalicy Chifwepa and Henry Msango**)
13. *The perception of students on the need for entrepreneurship education in teacher education programmes* (**Amos Adekunle Adeniran & Dr. Abdul Kareem Y.A.**)
14. *Diploma Disease in the education and training of basic school teachers in Ghana* (**Kofi Mereku**)
15. *Sustainable Teacher Education in Nigeria in the 21st century: the necessary ingredients* (**Inyang, Mary Imo1, Ekpa, Uwem Okoni 1, Ajake, Uchenna 1**)

Monitoring and Evaluation of Teaching and Instruction

Papers presented under this sub-theme were:

1. *Standards in the teaching profession: controlling or developing professional practice?* (**Dr. Maria Assuncao Flores & Dr. Shirley van Nuland**)
2. *Using Teacher Value Added to promote Education Values: preliminary results of the Rapid Assessment of Teacher Effectiveness (RATE) Instrument in Mathematics* (**Michael Strong & John Gragani**)

3. *Assessing the impact of using problem posing as a strategy for teaching mathematics on the pedagogical knowledge and skills of pre-service mathematics teachers. (Dr. Jonathan Fletcher)*
4. *Experiences of ‘a community of TESSA OER Teacher users’ in Uganda and the paradigm shift to learner centred approach to teaching and learning in primary schools in Uganda (Bbuye, J, Zziwa G (Mrs.), Mageji & Okellokabojj)*
5. *Transforming into a bilingual nation: One nation’s initiative and imperative to produce globally competent citizens (Reyes L. Quezada)*
6. *Correlation of tutor characteristics with students performance in Home Economics at Colleges of Education in Ghana (Edjah, H.B.& Amu Manasseh Eddison K)*
7. *Teacher and Institutional Factors that Affect ICT use for Sustainable Education: Principals and Teachers’ Perceptions (Bello Olisaemeka & Oshionebo E. E.)*
8. *Teacher agency and pupil consultation for evaluating teaching and learning: some cultural challenges (Oduro, G.Y & Otsin M)*
9. *The nexus between teacher education and rural development in Africa (Matunhu, J)*
10. *Teacher preparation for effective implementation of E-Learning in Tertiary Institutions (Prof. A.S. Omenyi & Dr. Isaac Nwanko)*
11. *Early grade pupils’ inability to read: the outcome of the ITE programme in Ghana (Christine Adu-Yeboah)*
12. *Lecturers’, Students’, and Administrators’ perception of discipline in the Faculty of Education, University of Cape Coast (Kwame Bediako Asare & Ben Adzrolo)*

Educating Learners with Special Needs: New Trends

Papers presented here were:

1. *Learning beyond borders: Web 2.0 and its relation with development (Martha Maria Prata-Linhaires & Alexandra Bujokas de Siqueira)*
2. *Educational counselling on defective study behaviours of Distance Learners: The National Teachers’ Institute (NTI) experience (DR. N.B Longbap, & Mrs. M.O.Oyedeki, Mrs. B. Yakubu & Mrs. B. Umar)*
3. *Nothing new under the (African) sun: bringing to mind indigenous pedagogies in the context of contemporary African education (Mr. Gareth Dart & Dr. Austen Cheyeka)*

4. *Educating Learners with Special Needs: New trends in Cross River State, Nigeria.*(**Ajake, Uchenna Egodji, P. U. Bassey & Inyang Mary Imo**)
5. *Ghana's Education Strategic Plan – 2010-2020: A focus on school health and implications for Teacher Education* (Dr Joseph Kwesi Ogah)
6. *Global Mind-All-Ness: a developmental need for 21st Century Teacher Education* (**O' Meara, J.**)
7. *An investigation in the use of ILN by mothers/ caregivers in the Ahanta West District of in the West Region of Ghana* (**Joseph Yaw Appiah**)
8. *Impediments to and Prospects for Acquiring Millennial Skills in Low cost Ghanaian Academies* (**Joi A. Spencer & Raketa Ouedraogo-Thomas**)
9. *Teaching for emotional intelligence: A rethink of teacher education in Nigeria* (**Prof Alice Eta Asim & Gladys Promise**)
10. *Adjustment needs and coping patterns if international students in the university of Cape Coast* (**Linda D. Forde & Evelyn E. Brenya**)

Assessment, Accreditation and Quality Assurance

The sub-theme received presentations from the under-listed:

1. *Assessment, Accreditation and Quality Assurance* (**Deborah Eldridge**)
2. *Getting ready for Accreditation : Internal Quality Assurance in Teacher education Tertiary Institutions* (Dr. **Bosu, R. & Dr. Amakyi, M**)
3. *Colleges no more: the dissolution of the British Columbia College of Teachers and the General Teaching Council for England* (**Dr. Shirley van Nuland & Dr. Margery McMahon**)
4. *Revisiting the implementation of the Federal Programme PARFOR at the State University of Norte Fluminense –UNENF: the policy of leading teachger education towards excellence and quality* (**Sonia Martins de Almeida Nogueira & Sergio Arruda de Moura**)
5. *Ghana's Science education at the cross-roads: the case of two dilemmas* (**Prof. Ossei-Anto**)
6. *Improving Internship in Ghanaian Polytechnics: Stakeholders' Perceptions of its Organisation* (**Edward Zikhali**)
7. *Diffusion of mathematics education resources in River state of Nigeria: problems. Prospects and policy implications* (**F. B. Eze, B. O. Olowu, U. Sibeate & E. N. Ekaka-a**)

8. *Effectiveness of the implementation of the out segment of the in-in-out programme in Colleges of Education within the Central and Western Regions of Ghana* (**Margaret B. Lemaire, Daniel F. Amoah, Ebenezer A. Bonney, Sophia A. Micah, Maria D. Dunyo & Bridget Woyoe**)
9. *Labour market prospect among Tertiary school undergraduates as a correlation of quality entrepreneurship education in Nigeria* (**Dr. Joy Ubunadike & Dr. Uju Ughamadu**)
10. *High Fidelity Teaching through Action Learning* (**Robert Maribe Branch & Sang Joon Lee**)
11. *The role of an effective Assessment System in Attaining Accreditation* (**Angela Owusu-Ansah**)
12. *Ain't just how they teach, it's their preparation: realities of teacher performance* (**Takona, James P**)

Discussions

Most of the presentations addressed challenges or initiatives of the presenters' environment, thereby creating a forum for knowledge-sharing. After presentations, some group members probed further to inform themselves about how issues raised in the presentations are being addressed by the affected countries or institutions. Other group members who identified similar issues affecting their countries or institutions shared how those issues are addressed in their particular situations.

Symposia

2 symposia formed part of the presentations at the Conference:

1. *Gender gaps in Student Academic Performance: Patterns of disparities and implications for the role of the Teacher and Teacher Education* (**Dr. Mohammed E. Osman, H. Honourable Dr. Thuwayba, A. Al Barwani & Dr. Mustafa B. Abu Sheiba**)
2. *Developing 'global mindedness through global competences' – Standard based approaches to global education* (**Margery McMahan**)

ICET Business Meeting

The ICET Business Meeting, chaired by H. Honorable Dr. Thuwayba A. Al Barwani

1. Nominated a new Chair-Elect (
2. Announced the venues for the 57th and 58th World Assemblies as follows

- a. 57th World Assembly, Thailand (2013)
 - b. 58th World Assembly, Canada (2014)
3. The newly elected President (Dr. James O'Meara) was announced
 4. Dr. Darell Bloom (out-going President) and Prof. David Imig were recognized for their contribution to ICET

H. Honorable, Dr. Al Barwani thanked all participants for making the Conference a possibility. She also congratulated the Organizing Committee as well as the students who volunteered their time to help make the meeting a success.

Closing Plenary

To bring the session to a close, the newly elected President of ICET, Dr. James O'Meara thanked the organizing committee for the hard work put in to pull off a successful Conference. He informed that the date for the next meeting to be held in Thailand would be announced soon.

Prof. Flolu (University of Education, Winneba) Chair for the session called on participants to apply knowledge gained at the conference in order to contribute to the development of education at their various institutions and countries.

Bringing the Conference to a close, Prof. Anamuah-Mensah hoped participants had had fun alongside participating in the conference. He bid participants farewell till the next meeting in Thailand.

The 56th ICET World Assembly was adjourned till Thailand 2013.

Dinners

The Vice Chancellor of the University of Cape Coast hosted participants at a welcome dinner held at her residence on 10th July 2012.

A closing dinner hosted by the Local Organizing Committee was held at the Elmina Beach Resort on 12 July 2012.

KEYNOTE PRESENTATIONS

LOOMING THREATS TO TEACHERS, TEACHING AND EDUCATION

By

Pai OBANYA

This presentation is intended to open up more in-depth discussions on a number of societal factors that are already posing serious threats to the Teacher, the Teaching profession and consequently to Education as a discipline, and as a national development undertaking. The three layer threats are inter-related and impact on one another. A threat to the existence of the Teacher leads to a much more serious threat to Teaching as a professional activity and more profoundly to a threat to educational practice and educational systems.

The discussion is in three parts. Part one deals with concept clarification and will attempt to explain (not necessarily define) the key concepts in the title of the presentation – Teacher, Teaching and Education. The clarifications will be in the context of the changing world perspectives, especially the emerging demands of the knowledge-based economy of the current century. Part two of the discussion will present a few anecdotes to illustrate how societal attitudes are posing serious threats to the Teacher, Teaching and Education. The anecdotes will draw from our limited experience within Nigeria and Africa, but it is hoped that they will mirror experiences in other parts of the world. Finally, the presentation will suggest appropriate responses to the looming threats.

CLARIFYING OUR KEY CONCEPTS

As earlier indicated, three related and mutually reinforcing concepts deserve clarification as an opening phase to this discussion. These are Teacher, Teaching and Education. Our ultimate goal is the promotion of Education. Teachers are there to engage in Teaching so that Education can be promoted. A threat to Teachers can therefore lead to a threat to Teaching, which eventually becomes a threat to Education.

Who is a Teacher?

The following quotation aptly introduces our conception of a Teacher as NOT just someone (who may even be a dummy) who stands in front of children in a classroom

“Sir, what do you mean by a teacher?”

“Good question, my child,” John Dewey had said. “A teacher is a social servant.” And Gandhiji had left this quotation, “A teacher is a good friend who prevents his friends from shedding tears.” Again, someone has said that a teacher is a nation builder. My teachers taught me that a teacher is a social animator.

A teacher means many things. Look at the blooming flowers, always colourful and spreading the fragrance of sweetness – a teacher does the same. Or look at the bees, always working cooperatively with zeal and enthusiasm, or the brooks flowing towards their goal unhindered by the obstacles on the way. Don’t teachers do the same?

If you think that a teacher is like the sun, it is true. The sun gives warmth and light, so does the teacher. Even if you think that a teacher is like the moon, it is true for a teacher can be cool and calm even in the hours of darkness and trouble.

Now let us think of a mountain. Shall we take Jomo Lhari as an example or would you want to choose Kula Gangri? Let us look at both. They have been there since the time immemorial, and yet, they have never shrunk, nor have they changed with the changing of seasons. So are the teachers, faithful and strong as they are.

A teacher is also like a wise farmer. The field may be hard and infertile, but he ploughs, tills and manures it before sowing seeds. He prepares the soil and selects and sows appropriate seeds so that they grow well and bear good fruits.

You do naughty things at times, don’t you? Your parents scold you and they even beat you, yet they still love you so dearly. A teacher does the same. The only difference is that your parents bring you up and the teacher educates you. That is equally important and equally challenging.

“Then, Sir, a teacher’s life is so tough, no Sir?”

“Yes, but it is also beautiful if all the students were good like you.”

By Sonam Wangdi (The vice principal of Tashitse HSS in Wamrong): Butha Times, 1 July 2011)

Experience has taught us that a Teacher is all that is conveyed in the brilliant imageries employed in the above quotation. We shall, in this discussion, focus on

- The knowledge base of the Teacher, as demanded by contemporary world developmental trends
- The soft skills or emotional intelligence dimension of the requirements of today's Teacher
- The professional competency levels expected of the Teacher
- The Teaching Personality concept that should characterise the ideal Teacher

The Teacher's Multi-layered Hat

There was a time when it was generally believed that to be a teacher, all that is needed is to master 'subject' and 'methods'; in other words, a mastery of the subject of instruction and of the pedagogical principles of teaching the subject. Times have since changed; the world has become more complex; the knowledge economy has set in and the prestige of Teachers and Teaching would be seriously jeopardised if we were to remain in a far-away and long-ago world of mere subject plus methods.

Figure one below shows how the emerging trends in a knowledge-propelled world have meant additional requirements and qualifications for the teacher. These rely on a solid foundation of lifelong/life-wide learning skills on which other layers of knowledge are to be built: broad general education, broad-based subject area knowledge, in-depth knowledge of a specialised area of knowledge (with emphasis on ways of knowing), broad knowledge of the foundations and principles of Education, and practical skills in effective teaching to foster effective learning.



1. Lifelong learning skills
2. Broad general knowledge and culture (including ICT)
3. Broad field knowledge e.g. science)
4. Specialized in – depth knowledge e.g. chemistry)
5. Knowledge of education principles
6. Education principles application

Fig. 1.3: The multi-layered intellectual cap of today's teacher

The soft skills or emotional intelligence dimension of the requirements of today's Teacher,

Intellectual knowledge and technical skills alone do not make aTeacher. To be successful in empathizing with learners, motivating them and bringing about the best in them and to enhance the teacher's social acceptance, additional skills of the 'soft' type are required. These are:

1. Love of learning and knowledge – an important trait for persons in the frontline of promoting learning, the knowledge profession
2. Love of children – the work of every teacher centres on facilitating learner development; thus love of learning should be mainly for the interest of learners
3. An eye (as well as an ear) for community signals – the ability to follow the evolution of society as a means to ensuring that school work derives from societal dictates as much as possible
4. Grooming (appearance, clothing, speech, interpersonal relations etc.) – a means by which the teacher teaches by personal example
5. Gender sensitivity – with particular emphasis on ability to remove obstacles to the full participation of girls in schooling

6. Acceptance of differences (racial, ethnic, gender, religious, political/ideological, etc.) – implying the avoidance of prejudice and stereotyping
7. Team play, as school work is team activity among teachers, while helping the child to grow involves team work with parents and communities
8. Professionalism –familiarity with education policy, curricula, examination requirements, commitment to continued professional development, maintenance of high standards, etc.
9. Role models for integrity, morality, work habits, etc.
10. Key emotional intelligence competences – self-control, patience, temperance, empathy, etc.

The professional competency levels expected of the Teacher

Governments and most employers of teachers tend to place emphasis on the TRAINED teacher. Education statistics on teachers used to be limited to computing TPR (teacher-pupil ratio), but there has since been a move towards QTPR (qualified teacher-pupil ratio). The rationale seems to be that all that a Teacher needs to be a high performing professional is for him or her to be qualified, according to official/national prescriptions. However, the reality is as follows

- A qualified teacher is not necessarily a competent teacher
- A competent teacher is not necessarily an efficient teacher, and
- An efficient teacher is not necessarily an effective teacher.

No play on words is intended here, as there are clear differences among the four categories of teachers.

- A qualified teacher is one who possesses the minimum accepted qualifications to function as a Teacher
- A competent teacher is one who has mastered the principles of Teaching
- An efficient teacher is the one who can apply the principles of Teaching to the letter, as learned
- An effective teacher possesses all the above attributes, but is able (most importantly) to teach creatively, in such a way that results in most-if not all- students learning.

In summary, the Teacher should not simply be qualified, She or he must in addition be competent, efficient, and, on top of it all, be effective. A teacher is not a teacher until she or he attains the effectiveness level of competency.

The Teaching Personality concept that should characterise the ideal Teacher

An education professional who has acquired a TEACHING PERSONALITY has a combination of qualities/capabilities that enable her/him to:

RADIATE

1. The soft skills (or personality traits) outlined in the foregoing section, having internalised them and exuding them in interactions with learners
2. Self-confidence
3. The broad spectrum knowledge embodied in the multi-layered intellectual-professional hat (figure one), having simply imbibed the features of the 'hat' into their system
4. Level-5 (creative – see figure three) teaching, as automatic behaviour in any teaching-learning situation.
5. Joy and contentment in carrying out the teaching act

ENTHUSE, as a result of what the teacher radiates

1. Learners, who will always enjoy her/his company and willingly engage in teacher-directed activities
2. Other teachers, as professional role model
3. Parents and other social contacts: as they would see the teacher as respected and trusted custodian of learners.

INFLUENCE and TRANSFORM directly and indirectly, because of the enthusiasm already aroused:

1. Learners, who would have been motivated to learn for their ready acceptance of the teacher and as a fruit of the creative teaching they would have experienced.
2. Other teachers for professional modelling purposes
3. Parents and other social contacts; regarding their regard for teachers

To answer the question 'who is a Teacher?' therefore requires going beyond what is officially defined in most countries to digging deep into what the task of Teaching requires and accepting as teachers only

the professionals who have been moulded to undertake the task of Teaching effectively and who, in the process (or as a result) have acquired a Teaching Personality.

What is Teaching?

Formal Interactions with learners in a variety of pedagogical spaces (classrooms, laboratories, workshops, play grounds, in the course of field work, and during independent/self-directed study and assignments) is not simply a question of some adult standing in front, by the sides, or at the back of a classroom. What is involved is teacher design and guidance of student learning activities.

Experience has shown that these interactions do occur at five possible levels (or in a variety of forms), as illustrated in figure two below. Persons who have not attained the level of 'Effective Teacher' and who have not acquired a Teaching Personality would tend to function at the lower levels in figure two (levels 1 to 3). They cannot be said to be engaged in Teaching, as their activities are not likely to exert the required transformational influence on the learner.

Genuine Teaching occurs at levels four and five, when the activities designed and directed by the Teacher are executed with a certain level of creativity. In short, creativity is the hallmark both of the Teacher and of Teaching.

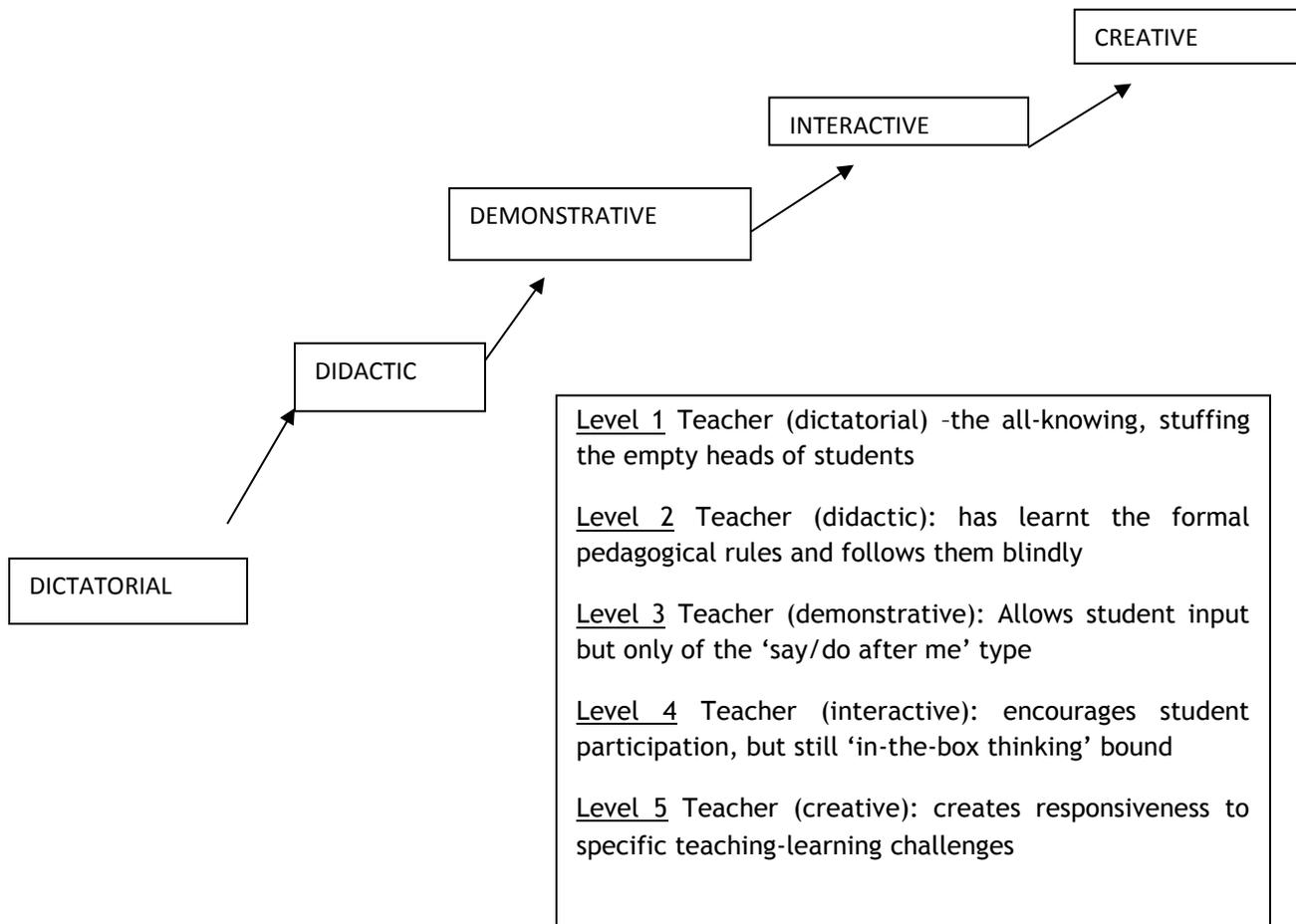


Fig. 2: Five levels of Teaching

What is Education?

Education (a combination of incidental, informal, non-formal and formal models), takes place in all types and forms of human society, aims at the systematic, trans-generation transmission of societal norms, values and culture. It is a process of systematically identifying and continuously nurturing human talents and potentials for the lifelong and life-wide development of individuals, to enhance their contribution to the continuous rejuvenation of Society.

To fit the individual into wider society requires the inculcation of a set of life skills, determined by the nature, the needs and the evolving trends in Society. For the emerging world of our time, the set of life skills that we expect the Education process fall into three broad categories as illustrated in the tripartite model presented in table one below.

Table 1: A Tripartite Life Skills Set for 21st Century Compliant Education

HARD SKILLS	SOFT SKILLS	GO-GETTING SKILLS
Cognitive Intelligence	Emotional Intelligence	Imaginative Intelligence
<ul style="list-style-type: none"> Self- Expression Skills (Oral, written, etc.) 	<ul style="list-style-type: none"> Character formation skills (for strengthening the total person) 	<ul style="list-style-type: none"> Creative thinking skills (thinking out of the box)
<ul style="list-style-type: none"> Logical Reasoning Skills (for analysis and problem solving) 	<ul style="list-style-type: none"> Intra-personal Skills (for the individual to understand his/her personal strengths and weaknesses, as well as possibilities/potentialities) 	<ul style="list-style-type: none"> Ideational fluency skills (proclivity in generating novel ideas)
<ul style="list-style-type: none"> Computational Skills (for mathematical reasoning) 	<ul style="list-style-type: none"> Inter-personal skills (for understanding and ‘teaming’ with others) 	<ul style="list-style-type: none"> Opportunity-seizing skills (perceptivity in making the best of opportunities)
<ul style="list-style-type: none"> Design/Manipulative Skills (for purely technical reasoning and action) 	<ul style="list-style-type: none"> Lifelong learning Skills (knowledge-seeking skills) 	<ul style="list-style-type: none"> Experiential learning skills (making the best use of the lessons of experience; ever working on new ideas)
<ul style="list-style-type: none"> Conceptual Skills (for generating ideas and translating them into ‘action maps’) 	<ul style="list-style-type: none"> Perseverance Skills (for seeing ideas and projects through to fruition) 	<ul style="list-style-type: none"> Idea-to-product (or ideas conversion) skills (Ease and passion for turning ideas into products and services skills, ability to apply head-hands-heart)

The trend has been, especially in modern forms of formal education, to emphasize the hard skills. This has to change for fitting into today's rapidly evolving world requires learning to know, learning to be and learning to belong. Therefore, while the conventional educational/school disciplines might continue to be promoted, they should be used as material for inculcating the above tripartite skills set that one needs to fit the world as we see it moving. Teaching should also move from mere instructing to systematically (through creative methodologies) creating teaching-learning situations and opportunities for the acquisition of this set of life skills.

A FEW ILLUSTRATIVE ANECDOTES

MANNING OF THE TOP ECHELONS OF THE EDUCATION POLICY APPARATUS BY NON-EDUCATIONISTS:

We will illustrate this trend that seems to be saying 'Education is too important to be handled by Teachers' with a few examples from our direct experience.

First, since independence in 1960, the country has had some twenty-eight ministers of Education and only three of these have been professional educationists. Whenever these ministers have come from universities and have been professors of Law, Political Science, Home Economics, Zoology and the like, they have all been labelled 'educationists'. The assumption is that every university teacher is an expert on Education, for 'after all, they 've been teaching'.

Second, Nigeria's UBE (Universal Basic Education) programme is the country's flagship project. Its management is headed by a former university teacher of History, while the two deputies are professional teachers and university professors of Education.

Third, it is becoming the trend for the country to have specialised universities of Education that should be headed by seasoned teacher educators. However, the two universities of Education already in existence are headed by professors who have nothing to do with the discipline of Education.

Education (as a course of study) is hardly anyone's First Choice:

Disinclination for teacher education programmes is a well known phenomenon in Nigerian Universities. A casual opinion survey of first year faculty of education students during the 2001/2002 academic year yielded the results captured in figure three.

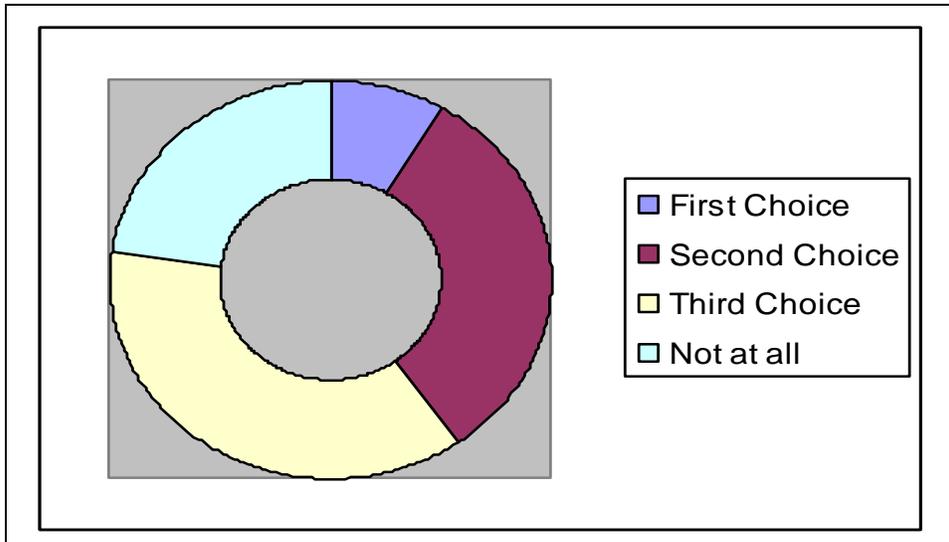


Fig. 3: Preference for Education Among 171 Students Already registered in a University Faculty of Education

Only 15 of a total of 179 students claimed that Education was their first choice. It was second choice for 57 of them, third choice for 66, and 'not my choice at all' for the remaining 41

We can then see a real looming danger on Teachers, Teaching and Education. Very few young persons would want to study Education, in order to become professional teachers. This has led to a situation in which some countries are teaching without Teachers, meaning that persons who are supposed to be teaching are doing so neither by choice nor, by orientation, nor by any form of specialised education and training.

The True Story of AKKA and AKKO

This is a life story involving twin brothers, both of whom graduated from university with identical qualifications and at the same time. One of them went straight into Marketing as salesman, while the other continued his formal education to post-graduate level to qualify as a professional Teacher.

Table II: The Tale of Akka and Akko

LIFE PATH	AKKA	AKKO
1. Formal qualification at age 18	Senior Secondary School Certificate	Senior Secondary School Certificate
2. Choice of university course	Mathematics/Physics	Mathematics/Physics
3. career choice on graduation	Teaching	Marketing
4. On the job further education opportunities	<p>Post Graduate Diploma in Education (2nd year of career)</p> <p>Master's degree in Education (6th year of career)</p> <p>2-week integrated science workshop (7th year)</p>	<p>Basic marketing course (1st year)</p> <p>Annual marketing seminars (1st year onwards)</p> <p>Overseas attachment ((2nd year)</p> <p>ICT applications in marketing (4th and 5th ears)</p> <p>New product development seminar (6th year)</p> <p>Finance in Marketing (7th year)</p> <p>Fellowship of the Institute of marketing (8th year)</p> <p>Study tour of Asian emerging markets (10th year)</p>
5. Position 10 years after graduation	Secondary school Principal	Executive Director (Client Services)
6. Personality features 10 years after graduation	<p>Meek and humble</p> <p>Timid</p> <p>Limited exposure to new ideas</p> <p>Limited social and intellectual horizon</p> <p>Low self esteem</p>	<p>Wide exposure to the world and to new ideas</p> <p>Accumulated skills in a variety of areas</p> <p>Cosmopolitan</p> <p>High self esteem</p>

A look down the six rows of the above tables reveals the following

- The teacher continues with formal tertiary education with formal qualifications
- The salesman goes through a variety of job-performance related programmes, on a continuous basis.
- Ten years after graduating from university, both brothers have made progress in their chosen careers

Then comes the major difference in the lives of the twin brothers. The teacher is meek, humble, timid, has had very limited exposure to new ideas, and has a limited intellectual horizon. The salesman, on the other hand, has had wide exposure to new ideas, has accumulated a variety of skills, is cosmopolitan. The end product is that the teacher has low self-esteem, while with the salesman high self-esteem is the case. As a corollary, society would likely have more respect for the brother who has been marketing than the one who has been teaching,

Make me a solemn promise.

The following true life story is very illustrative of societal perceptions of Teachers and Teaching. The effect of such perceptions on Education can best be imagined than described. The occasion is one in which a family has gone with its son (who happened to be a Teacher) to the prospective in-law family to ask for the hands of their daughter in marriage. A most revealing interaction takes place in the process, as presented in box one below.

Box 1: GET OUT OF TEACHING AND LOOK FOR A JOB

- *Suitor's family spokesman*: A-salama-leikun, my people. May I introduce my young man, Ahmadu Tijani. Stand and be seen, Tijani
- *Tijani (Standing)*: A-salama-leikun, my elders
- *Spokesman* : As you are well aware, we have come to ask for the hands of your daughter, Amina, in marriage
- *Amina's Father*: La-kuli-lai! Tijani has grown so big! Looks every inch like his grandfather. What does he do for a living?
- *Tijani (timidly)* I teach at Government Secondary School, Azare.
- *Amina's Father*: Huum! Well, you are from a good family. I'll give you my daughter, but...**LISTEN CAREFULLY**
Promise me that you'll look for a job!

The conversation shows the future bridegroom talking about what he does for a living (Teaching) timidly. This portrays the lack of self-esteem highlighted in the story of Akka and Akko. We should also notice the future father-in-law's conditions for giving out his daughter in marriage. The young man's family lineage is an advantage, but he must 'look for a job'; implying that Teaching is seen as something below the level of a job.

The conversation illustrates a major looming threat to Teachers, Teaching and Education. It shows the extent to which some members of society see Teaching as unbefitting, a state of affairs with serious negative repercussions on Education.

RESPONDING TO THE LOOMING THREATS

The Educationeering Process

It would be necessary to introduce the discussion on possible responses to these looming threats with reference to the EDUCATIONEERING PROCESS (or the process on making Education happen), as illustrated in figure three below.

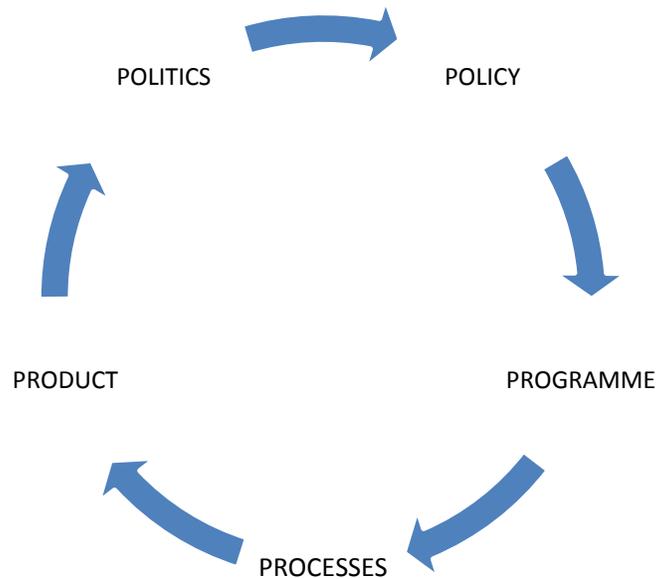


Fig. 3: The Educationeering Process

The process is one that begins and ends with Politics. Good politics is likely to result in good policies. This in turn would likely produce good programmes that promote good processes that finally produce

good products. In pursuant of this line of thinking, addressing the looming challenges to Teachers, Teaching and Education would require propulsion at the level of Politics, and ensuring that this exerts positive influences on the four other levels: Policy, Programme, Processes and Products.

Response Options

First and foremost, at the level of Politics, Education should be given priority, not simply in the form of slogans but in the form of concrete action. This includes having a scientific (rather than a political) conception of Education, something that must rely heavily on inputs from professional educators. It is for this reason that Education ministries should be headed by educationists (who are supposed to be versed, knowledgeable and experienced in matters concerning Education). This would fall in line the the practice of lawyers and no other professionals serving as ministers of Justice and of medical doctors (and not even any other professionals in the health sector) serving as ministers of Health.

Second, at the Policy level, every nation needs a Teachers' Policy that is the product of participatory-consultative processes and in the form of a living document that keeps evolving with time, and that is closely linked with the national Education policy. It is also an important requirement that education policy functions in ministries of Education be fully professionalised.

Table3: A broad-scope Curriculum for Initial Teacher Education

Elements of the Skills Package	Appropriate field of study	Main areas of emphasis
1. Lifelong Learning Skills	<ul style="list-style-type: none"> ▪ Study skills ▪ ICT-fluency 	<ul style="list-style-type: none"> ▪ Efficient reading ▪ Writing for different purposes ▪ Effective verbal and written communication ▪ Team work and team play ▪ Computer basics ▪ ICT as learning and communications tool
2. Broad General Knowledge and Culture	<ul style="list-style-type: none"> ▪ National and World Affairs ▪ Major Challenges to Human Survival ▪ Civic awareness 	<ul style="list-style-type: none"> ▪ Information gathering and analysis ▪ Climate change, HIV/AIDS, population issues, etc ▪ Gender sensitivity ▪ Self-empowerment ▪ Civic responsibility

<p>3. Broad Field Knowledge</p>	<ul style="list-style-type: none"> ▪ Language and Literature ▪ Mathematics and its applications ▪ Social science ▪ Natural/experimental science ▪ Creative/performing arts ▪ Vocational/practical arts 	<ul style="list-style-type: none"> ▪ Concentration on at least ONE of the broad fields, as foundation for layer 4 below ▪ Basic education teachers may not require layer 4
<p>4. Specific fields knowledge</p>	<ul style="list-style-type: none"> ▪ Any one of the broad areas in layer 3 above 	<ul style="list-style-type: none"> ▪ In-depth study of any specialized areas of layer 3
<p>5. Knowledge of foundations and principles of learning</p>	<ul style="list-style-type: none"> ▪ Foundations of educational practice ▪ Management and Organisation of educational systems ▪ Curriculum studies 	<ul style="list-style-type: none"> ▪ Integrated ‘foundations and principles’ for basic education teachers (plus practical work in ‘student guidance and counselling’ AND the national curriculum AND ‘school organisation’) ▪ More detailed/separate subject studies for senior secondary teachers <ul style="list-style-type: none"> ○ Historical/philosophical/psychological foundations/sociological foundations ○ Management of education ○ Curriculum principles/analysis of the national curriculum – philosophy, orientation, organisation and content
<p>6. Educational principles application</p>	<ul style="list-style-type: none"> ▪ General Pedagogy ▪ Practical Guides to teaching and learning specific subject disciplines ▪ ICT applications 	<ul style="list-style-type: none"> ▪ Practice-oriented activities in a variety of forms <ul style="list-style-type: none"> ○ Lesson/syllabus planning ○ Textbook/educational materials analysis ○ Learner needs assessment ○ Classroom organisation/ interaction methods

	<ul style="list-style-type: none"> ▪ Supervised school and classroom practice 	<ul style="list-style-type: none"> ○ School and classroom organisation ○ Design of teacher made pedagogical materials ○ Practical work with children in school and classroom settings
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Third, at the level of programmes, teacher education curricula would have to emphasize the multi-track nature of knowledge required of the Teacher in a fast changing world, as seen in the six-layered hat in figure one. In more practical terms, this would translate into coverage and mastery of the specific content areas in table three above.

Fourth, at the level of processes, teacher educators would need to be re-oriented to promote both **mastering the teaching model and modelling the master teacher**. The first implies instilling pedagogical principles, while the second implies radiating them in such a way that a teacher educator is able to serve as teaching-behaviour model. In addition, the process of Teacher Education must involve the inculcation of the tripartite sets of skills indicated in table one, along with the specific soft skills required to produce an effective teacher, as earlier outlined.

Most importantly, **the continuum model of teacher education** (one that sees initial professional education and career-long development of teachers as an unbroken thread) should become a reality everywhere. Career-long development should become a more systematic activity, founded on assessed learning needs of specific groups of teachers and the specific roles expected of them in the education system.

It also important for continuing professional development of teachers to include a good dose of ‘culture generale’ intended to broaden their intellectual horizon on a continuous basis. This would be one way of enabling teachers to mingle freely with othe groups in society on a knowledge-based interaction basis. It will also to contribute to enhancing teaher self-estimate.

Fifth, at the product level, education systems should seek to produce professional educators who have acquired the TEACHING PERSONALITY, a trait that would enable them stand out as persons with distinct knowledge, skills , competences and characteristic behaviour that should enhance respect for Teachers and Teaching by wider society.

CONCLUSIONS

This discussion is premised on the logic that whatever affects Teachers would directly impact on Teaching and would consequently impact on Education. We have attempted a concept characterisation of our key concepts (Teachers, Teaching and Education) to draw special attention to the type of teachers and the level of teaching that today's rapidly evolving world requires to promote the type and level of Education that is 21st-century compliant. There are, in every society, looming threats to promoting Education using the right type of professional teachers for effective teaching that should ensure most children learning. We have drawn specific examples from our own limited experience in Nigeria and Africa. We have also made the point that the threats call for appropriate responses from different angles, using the Educationeering processes model. It is hoped that the analysis and suggestions are sufficiently weighty to engender more in-depth discussion on a subject that lies at the very heart of Education for Teaching.

CHANGING PERSPECTIVES ON THE ROLE OF TEACHERS AND OF TEACHER EDUCATION: STORIES OF POLICY, REFORM AND ENGAGEMENT FROM THE US

Introduction

Fifty ago years this past October, I landed at the Entebbe International Airport near Kampala, Uganda to begin my first African adventure. I was part of an ambitious development project sponsored by the United States, Britain, Australia and Canada to send both novice and experienced teachers to East Africa to enable African teachers without university training to obtain such credentials at Makerere University. My teaching assignment was to the Government Secondary School at Nyakato, Tanganyika, in the northwestern part of the country near the town of Bukoba. I was to teach history, geography and English to large classes of boys drawn from every corner of Tanganyika. In an attempt to overcome the historical legacies of tribalism in Tanganyika, students travelled for days by train, ferry and bus to arrive at the boarding school where Maasai, Haya, Luo and Chagga boarded and learned together. I arrived on Independence Day in 1961 and would spend the ensuing two years preparing these students for their Cambridge School Examinations.

Our assignment was to teach the students, many of whom were older than I was at the time, a curriculum intended to enable them to engage in English society. It was a curriculum intended for mid-20th century European students (the text we used in our introductory history course began with the phrase “our ancestors, the Angles and Saxons”) and many of the expatriate teachers were frustrated by a schooling so asynchronous with what we saw as the emerging needs of African society. In our history classes we learned about English kings and queens, memorized dates of great battles and societal transformations in English society and read Dryden and Shelley, Chaucer and Milton. This was at a time when there were dramatic changes underway just outside our gates in our provincial and tribal authorities with the inauguration of Julius Nyerere and his call for Ujama. Teachers for East Africa eventually enrolled more than 450 young expatriates that taught at all of the government schools in East Africa in the early 1960s, and served as the model for the Peace Corps.

Later I would pursue a doctorate in African education (and write a dissertation on the schools of Sierra Leone) and work for the Agency for International Development in both Sierra Leone and Liberia. There we would build secondary schools for the city of Monrovia, establish an agricultural university in

Sierra Leone, develop rural teacher training colleges for both countries and undertake university training for teacher educators and professional development for classroom teachers. I left Africa in the mid-1970s to pursue a career in association management and have returned infrequently to this extraordinary continent.

I insert this personal account so you will know how much I learned from my African experiences, how honored I am to speak to you today, and how much I look forward to learning from all of you in attendance at this conference.

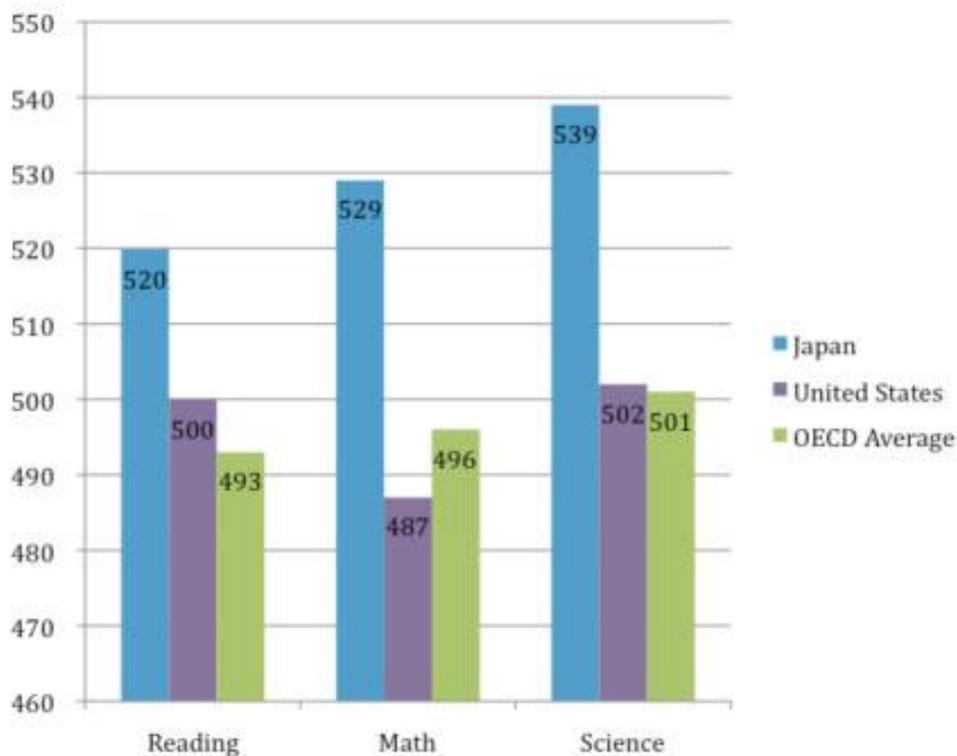
We have gathered in Cape Coast to talk about the challenges of preparing quality teachers who will thrive in today's classrooms and help develop the next generation of responsible citizens who understand how to play a critical role locally and globally. Whether it is in Ghana, Asia, the United States, or Europe, there is an insistence that the performance and effectiveness of teachers must improve (OECD, 2009). Widespread evidence showing that teachers are critical to raising education standards and the impact of teacher quality on the student learning overshadows all other educational investments. The emphasis on teacher quality highlights the importance that those who prepare teachers and provide professional development do so in ways to ensure that all teachers are highly skilled and motivated to perform at their very best. For those of us who prepare teachers, there have never been such high expectations (Goldhaber, 2009; Gordon, Kane & Staiger, 2006; Darling-Hammond, 2010). How we respond to these expectations is important in my country and in yours. Today, in the hope that you will learn from our experiences, I will share with you the story of the challenges that face teacher education in the U.S. and how we are responding to those challenges.

The foundation on which I wish to build this lecture is the concept of trust. My claim is that trust is essential in any enterprise for that enterprise to flourish and grow. Without trust, there is skepticism and doubt about every aspect of the enterprise. Bryk and Schneider (2004) are among a host of scholars who have used "trust" to examine why schools succeed – with trust by parents and the public with principals and teachers – schools meet the needs of young people; absent trust, their efforts are thwarted. See this lecture as one that describes teaching and teacher education in an American context where teachers (and teacher educators) enjoyed great trust, lost that trust, and are seeking to rebuild trust.

Demands on Teacher Preparation

In the United States, we are facing an impending crisis in education and the academic performance of our elementary and secondary students. There is evidence that U.S. students are not prepared well for future challenges. Data from the Program for International Student Assessment (PISA) that surveys 15 year olds in principal industrialized countries indicates that high school students in the US are not competing at expected levels especially in mathematics and science. In a comparison of US and Japanese student data, the US lags far behind in reading, science and mathematics (Figure 1). In addition, within our own country, there are wide achievement gaps between diverse student groups, such as those between children from low income versus high income communities. For example, only 8% of students growing up in poverty will graduate from college by age 24 versus 80% of students in more affluent areas. Increasingly, students are unable to enter the workforce with the appropriate skills and abilities needed for today's jobs, let alone the jobs of the future. These issues and others have resulted in an urgent examination of our current system of education and how we, as a country, prepare future teachers.

Figure 1: PISA 2009 Mean Scores by Country for Reading, Mathematics, and Science (Source: OECD)



The trust of the public in our education system is also being diminished. Nowhere else was this so well documented as when the public embraced the film *"Waiting for Superman: How We Can Save America's Public Schools"* (2010). The movie was characterized by poignant examples of worthy students struggling to find good schools and experience excellent teaching, captured the country's attention. Its less than positive characterization of public school classrooms and teachers and its promotion of innovative charter schools and teachers prepared in non-traditional, non-university programs served as a dramatic wake-up call for American schools and focused public discourse on the quality and training of teachers. The movie captured the negative tenor of public conversations and debates around education and the quality and preparation of teachers.

The focus of public policy makers and politicians, philanthropists, the media and "think tanks" across the political spectrum has continued to assert that the quality of teachers must improve. Their insistence is reinforced by research evidence that high quality teachers are critical to raising educational standards and improving the learning of all students. Indeed, many contend that the efficiency and equity of schooling now depends on having highly effective teachers in the classrooms making teacher preparation a target of attention in the discussions. Many feel that our country's problems related to education are directly connected to teacher preparation and the professional development of experienced teachers. Unfortunately, one of the greatest challenges we as teacher educators face is that we lack a compelling road-map to follow in response to criticism.

Almost everyone agrees that high quality teachers will improve the educational experiences of learners in elementary and high school classrooms. There is less agreement about the nature of the programs that prepare them and how to measure the results of a well-trained, highly qualified teacher. Questions about high quality teacher education programs abound. Are longer programs better than shorter programs? Are programs based in schools, relying on classroom teachers, better than campus centered preparation programs, relying on university faculty? Are programs focused on subject matter knowledge better than those built on a foundation of socio-cultural theory and appropriate pedagogy? Which modes of instruction should be taught? What models of classroom management should be evident? What backgrounds and experiences should future teachers bring to their experience? Do we train or do we educate future teachers? Can we shape the personal dispositions that candidates carry-away from programs?

There are many questions that we cannot answer with the assurance of research support. As a recent study, completed by the prestigious National Research Council concluded, there is little evidence that supports any one way of preparing teachers (National Research Council, 2010). And it is not just colleges and universities who are striving to solve the problems in our current models of teacher preparation and reform our profession. In fact, philanthropists, entrepreneurs and business leaders, conservative politicians, liberal media interests, the Obama administration, and reform groups like Teach for America, the New Teachers Project, Chiefs for Change and Education Trust, are each trying to drive the agenda for teacher education reform in the US.

For these reasons, the nature of teacher preparation and the quality of teachers is the basis for an intense debate in the US. As with every debate, there are two contending forces. On the one side are those labeled “traditionalists”, those who support conventional rigorous university-based teacher preparation and robust clinical experiences for future educators. On the other side are so-called “reformers,” those who emphasize performance over credentials and show skepticism about conventional licensure and preparation.

Each side is determined to recast teacher education in their own image using “their” tools to measure the efficacy of programs and to highlight the success of graduates. And even though the two camps differ significantly on methods, their emergence in the public discourse on education has certainly prompted a renewed commitment to elevating the quality of teacher education programs in an effort to increase the academic performance of our students. The debate is far-reaching, affecting everything from education policy at the national and state levels, standards development within accreditation bodies, the rise of non-academic non-profit organizations, and program design and delivery at universities. Before I describe some of these developments, it is important to provide a brief comparison of the traditionalist and reformist views within the context of the US education system.

Traditionalists v. Reformers

For the moment, the reformers have coalesced around an agenda that places much more authority in the hands of the state, ensures greater conformity across the nearly 1400 teacher preparation programs, and insists on assessing the effectiveness of program graduates in their practice and attributing those successes to their preparation program. Their agenda for action includes standards

setting, alignment and accountability, data-driven decision making, performance assessment of teachers, value added or “achievement gain” assessments of students, clinically based preparation, the use of modern technologies, and competition between and among “providers of beginning teachers.” Reformers insist on defining effectiveness in terms having to do with raising student achievement scores as measured by various standardized assessments of student performance. Student retention and student engagement and school and college readiness are important, they argue, but student performance on school system administered tests is primary.

Traditionalists, on the other hand, believe that all learners must acquire the skills and knowledge to succeed in a competitive and fast-changing global society and that teacher education must be “extended” to accommodate such demands. Traditionalists insist on models that require additional resources to prepare teachers to be more effective in teaching diverse learners in a highly technical and media rich society with new, highly sophisticated strategies (Darling-Hammond & McLaughlin, 1999). They point to new forms of preparation and greater mastery of content and more lengthy and labor intensive models that rely on clinical preparation, internships, induction programs, and teacher residency models. They envision five and six and even seven year preparation and induction programs that would reshape the relationships between university preparation programs and school-based professional development and create “seamless transitions” between preparation and practice. Unlike reformers who are supportive of non-conventional teacher preparation programs, the traditionalists insist that short term or abbreviated teacher preparation programs fail to produce quality teachers and that only through extended and clinically based preparation programs can they be prepared.

A continued theme in the debates is how to identify and measure high quality teachers and how to hold teacher education programs accountable for their preparation. *Race to the Top*, as well as other state and federal policies insist that the profession find ways to measure teacher education programs by linking a teacher’s performance with elementary and secondary student learning. The struggle to find a coherent way to measure the impact of teacher education on the classroom performance of teachers provides a challenge to researchers and scholars. The methods of linking teacher performance and student achievement continues to be a major part of the US debate regarding teacher quality and one that will require a great deal of effort and resources.

Impact on Education Policy

So how has this rhetoric between the traditionalists and the reformers actually impacted current education policy? The questioning of the value of university-based teacher education programs can be seen in US federal policy. The *No Child Left Behind Act* (NCLB) of 2001 and its efforts to define a highly qualified teacher elevated the discourse on teacher education accountability (Crowe, 2010). NCLB attempted to define highly qualified teachers by focusing on the subject matter preparation of current and future teachers. In making the point of the importance of subject matter preparation and building a case against teacher preparation, a leading philanthropic figure (Bill Gates) asserted that teacher certification did not ensure teacher quality.

More recently, the Obama administration brought forward the *Race to the Top* initiative (RTTT) as its answer to educational change and reform. Although focused primarily on elementary and secondary education, RTTT identified the improvement of teacher quality as one of the most pressing issues of educational reform. RTTT continued NCLB's emphasis on subject matter but the teacher education components of RTTT required that students' achievement be linked to their teacher's preparation programs and suggested that performance in the classroom after their formal teacher education program was the only thing that mattered.

Each of these federal initiatives supported policies related to stronger content and quicker methods of preparation and gave rise to alternative routes to certification and fast track teacher preparation in higher education as well as those located in private and non-profit settings. A popular example of such a program is Teach for America (TFA), which enlists high-achieving recent college graduates to teach two or more years in low-income communities. Praised by Reformers as innovative and effective, Teach for America recruits are prepared in a two month, summer intensive program and placed primarily in urban and rural schools throughout the United States. Teach for America teachers are often in competition for job placements with traditionally trained teachers even though TFA teachers often leave the profession at the end of their two year commitment. Federal and state policies and funding processes often favor Teach for America and many private foundations and corporations have contributed money to the program to make it hugely successful. The Teach for America program has an effective marketing program and successfully recruits students on university campuses and even recruits students away from traditional teacher education programs.

The ideological differences between Reformers and Traditionalists are perhaps best illustrated by the recent effort of the Obama administration to establish new federal rules for the conduct of teacher education programs. The US Department of Education assembled a panel of 17 representatives drawn from both the Traditionalists and the Reformers in Spring 2012 and asked them to identify high quality teacher preparation and to propose new criteria for identifying high quality and low performing teacher preparation.

Six months of efforts by the panel produced more frustration than results. The traditionalists and the reformers divided as expected on issues having to do with the validity and reliability of measures used to assess beginning teacher performance in classrooms. After much contentious debates, the panel ended without making any decisions and left the end results in the hands of the federal government raising concerns in a our political system known for “local control” and decentralized decision- making for teacher education. Shaping a federal agenda for teacher education in the US has become a priority for the Obama administration.

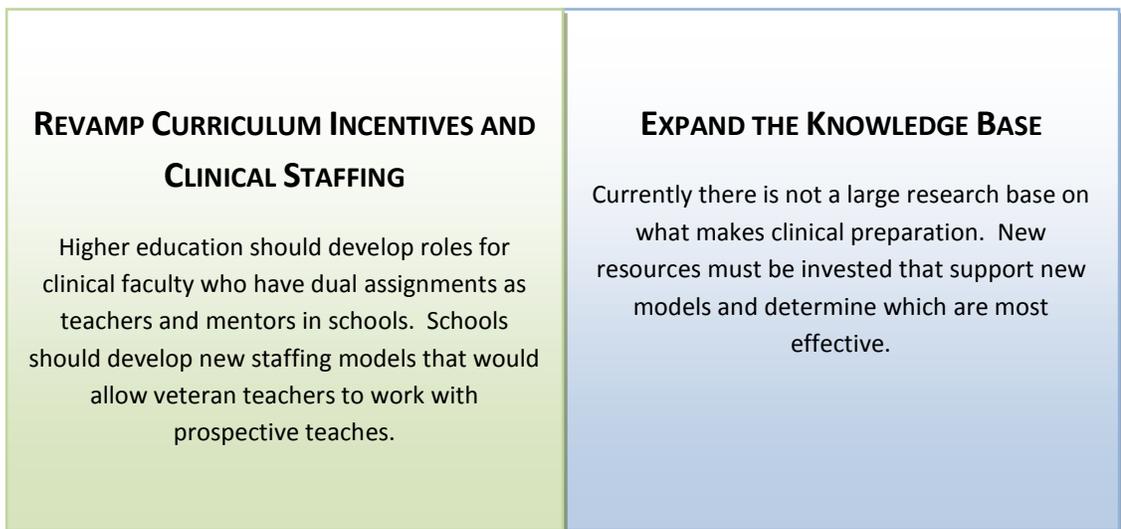
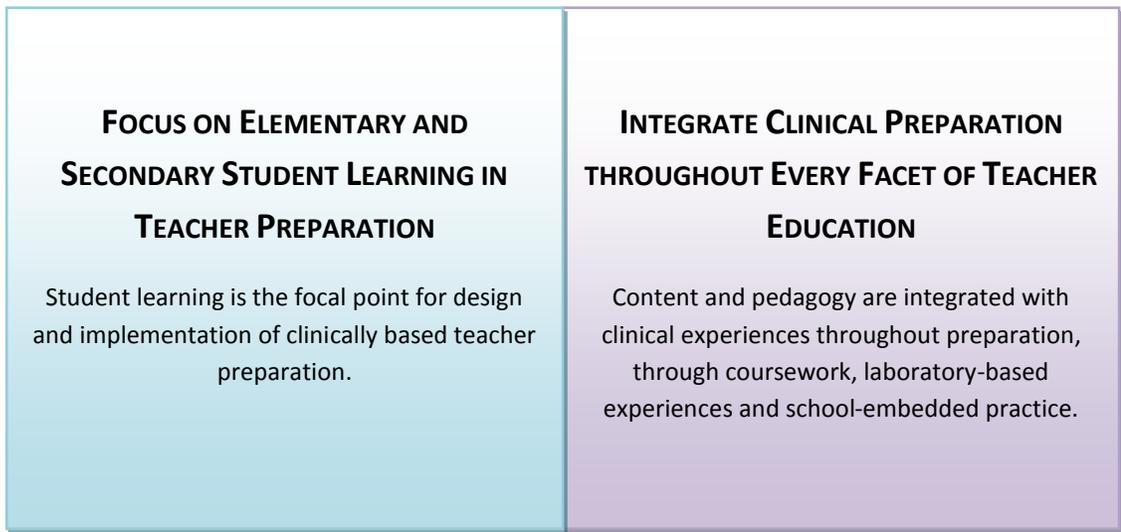
Proposed Solutions: Responses from Teacher Preparation

In the midst of the political rhetoric, public demands, and continuous debates the teacher education profession has made a series of moves intended to strengthen university-based teacher education programs and respond to the demand for higher quality preparation programs. I’d like to highlight three such initiatives. The initiatives have to do with outlining conditions for robust clinical practice, standards setting for the teaching profession, and establishing an assessment system that documents the growth of future teachers during their preparation programs.

First, there has been a renewed focus on clinical practice. Nearly two and a half years ago, the National Council for Accreditation of Teacher Education (NCATE) commissioned a Blue Ribbon Panel (BRP) on Clinical Preparation and Partnerships for Improved Student Learning. The purpose of the commission, on which I served, was to provide NCATE and the field with guidance on what changes to make in educator preparation. Ultimately, the goal of the BRP was to establish a framework that would be a key factor in redesigning educator preparation. The NCATE leadership was guided by the belief that there was a gap between how teachers are prepared and what schools need and that the way to reform teacher education was to establish strong clinically based programs.

The resulting report (NCATE, 2010) presented examples of excellent clinically-based programs but posited that individual attempts were not enough and that the profession needed an entirely new system of teacher preparation to improve teacher quality. The basic assumption of the BRP was that teacher education programs must work in close partnership with schools and place practice at the center of preparation experiences. The report issued a call to action (Figure 2) and provided several design principles that if implemented would turn “...the education of teachers ‘upside-down’” (p.2).

Figure 2: Recommendations from NCATE Blue Ribbon Panel



In my home state of Maryland, all future teachers are prepared in Professional Development Schools which are clinical sites that have formal agreements to prepare teachers, design professional development for experienced teachers, improve curriculum in teacher education programs, and develop collaborative research projects that improve teacher preparation and classroom instruction. The graphic in Figure 3 illustrates the complexity of one of our most effective school-university partnerships. The goal of the partnerships is to form a learning community that focuses on communication, collaboration, and professional growth. As you can see, various oversight committees comprised of school and university faculty oversee the activities. University supervisors from all content areas and teachers in the schools are involved guiding university students at all levels of preparation as they observe, participate in day-to-day school activities, plan and deliver lessons, and assess student learning. During their training our students are a part of the school, attend staff and department meetings, and participate in the same professional development offered to teachers at their host school.

Figure 3: University/Community School Partnership

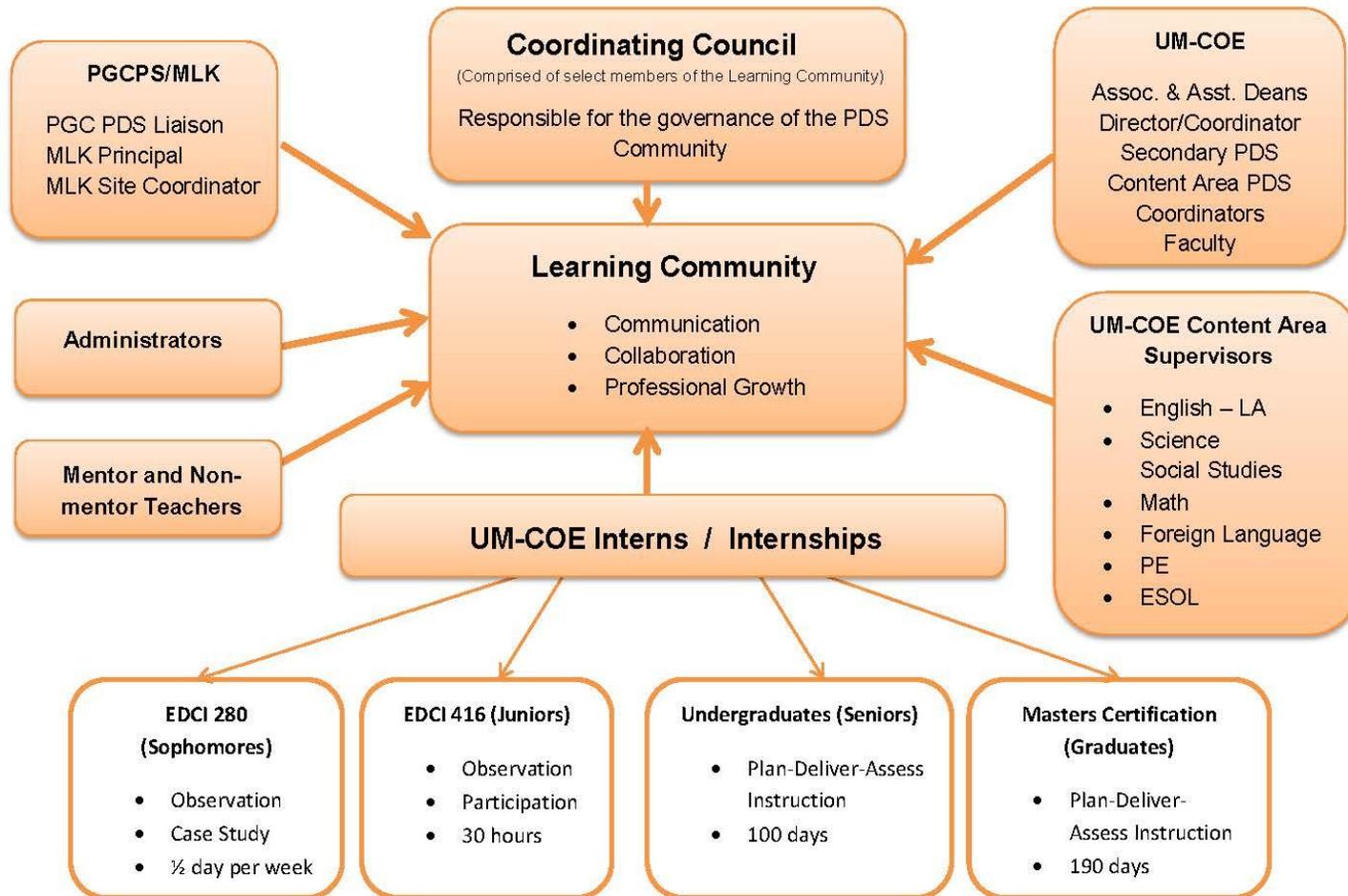
Prince George's County Public School System (PGCPS)/Univ. of Maryland College of Education (UMCOE)



**Professional Development School Partnership at
Martin Luther King Jr. Middle School (MLK)**

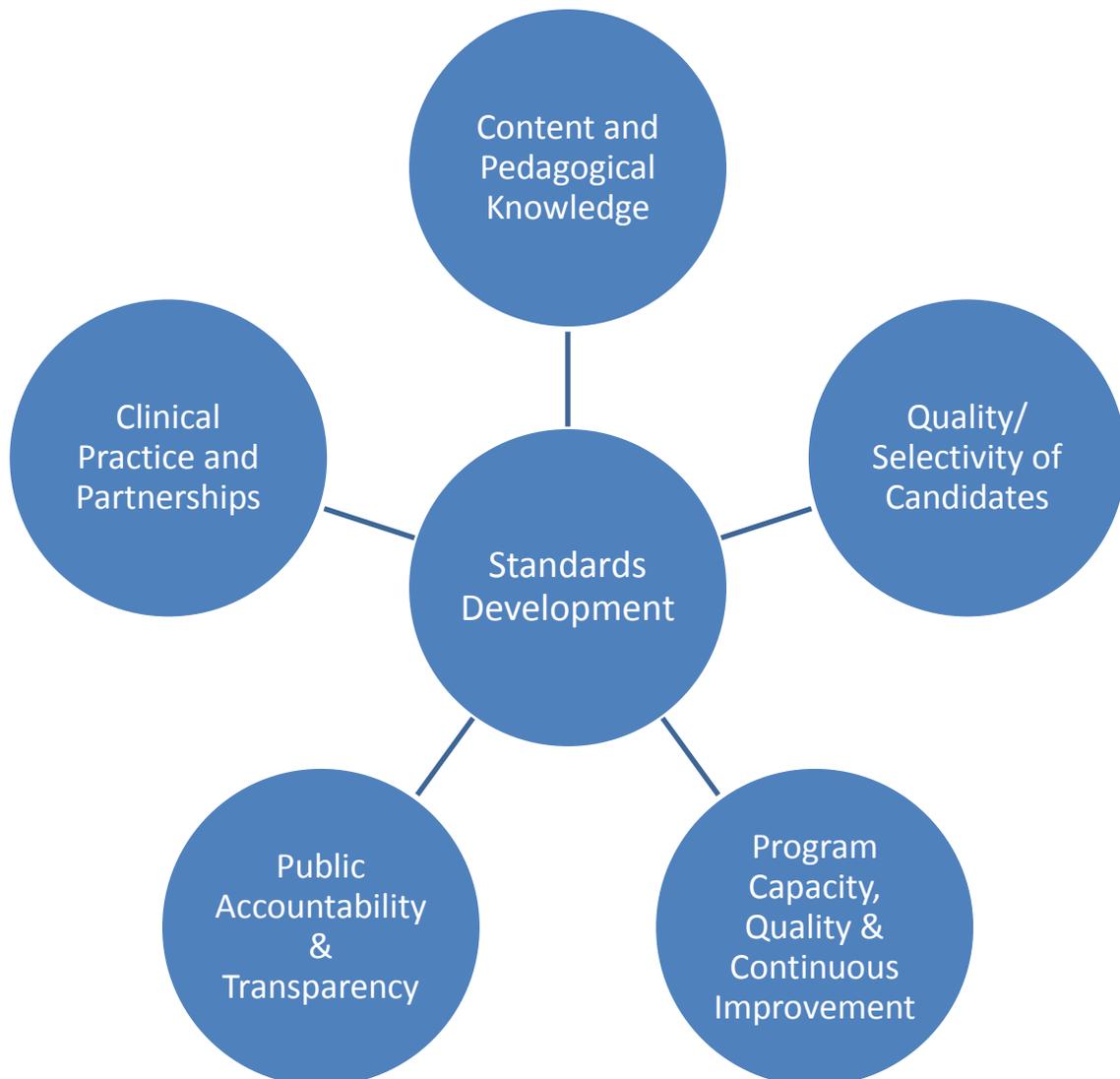


PDS Organization & Governance



A second initiative taken on by the profession has to do with accreditation and establishing rigorous standards for teacher preparation programs. In 2011, the joining of the two specialized professional accreditation agencies for educator preparation was finalized in 2011, bringing together the National Council for the Accreditation of Teacher Education and the Teacher Education Accreditation Council to form the Council for the Accreditation of Educator Preparation (CAEP). The merger provides an extraordinary opportunity for the profession to define a common set of specific characteristics of high performing and high quality educator preparation programs. The intent of the new body is to create standards to be used in a unified manner with evidence-based examples of how programs are performing. A Commission of leading educators in the US is currently at work to develop a set of prescriptive standards grounded in research that will guide both traditional and alternative route programs. The Commission is focused on standards development in five areas (Figure 4).

Figure 4: CAEP Standards Development



One of the authors of this paper has been assigned to a group to consider standards related to quality/selectivity of candidates. Her small group recently spent two days discussing how we would develop standards that result in recruiting, preparing, and retaining more qualified students into our preparation programs. Their discussions centered on qualifications that novice teachers should possess before being admitted to preparation programs and skills and abilities that should be developed while in the program. They also discussed the importance of collecting data so the profession would be capable of describing the impact of high quality teacher preparation. There were three areas that that her subcommittee spent considerable time discussing: 1) how can standards be written for the variety and diversity of schools in our country, 2) how do standards acknowledge that we may be preparing teachers for technology enriched and media supported environments that may require very different skills than current teachers need, and 3) what basic experiences and dispositions are required of all future teachers.

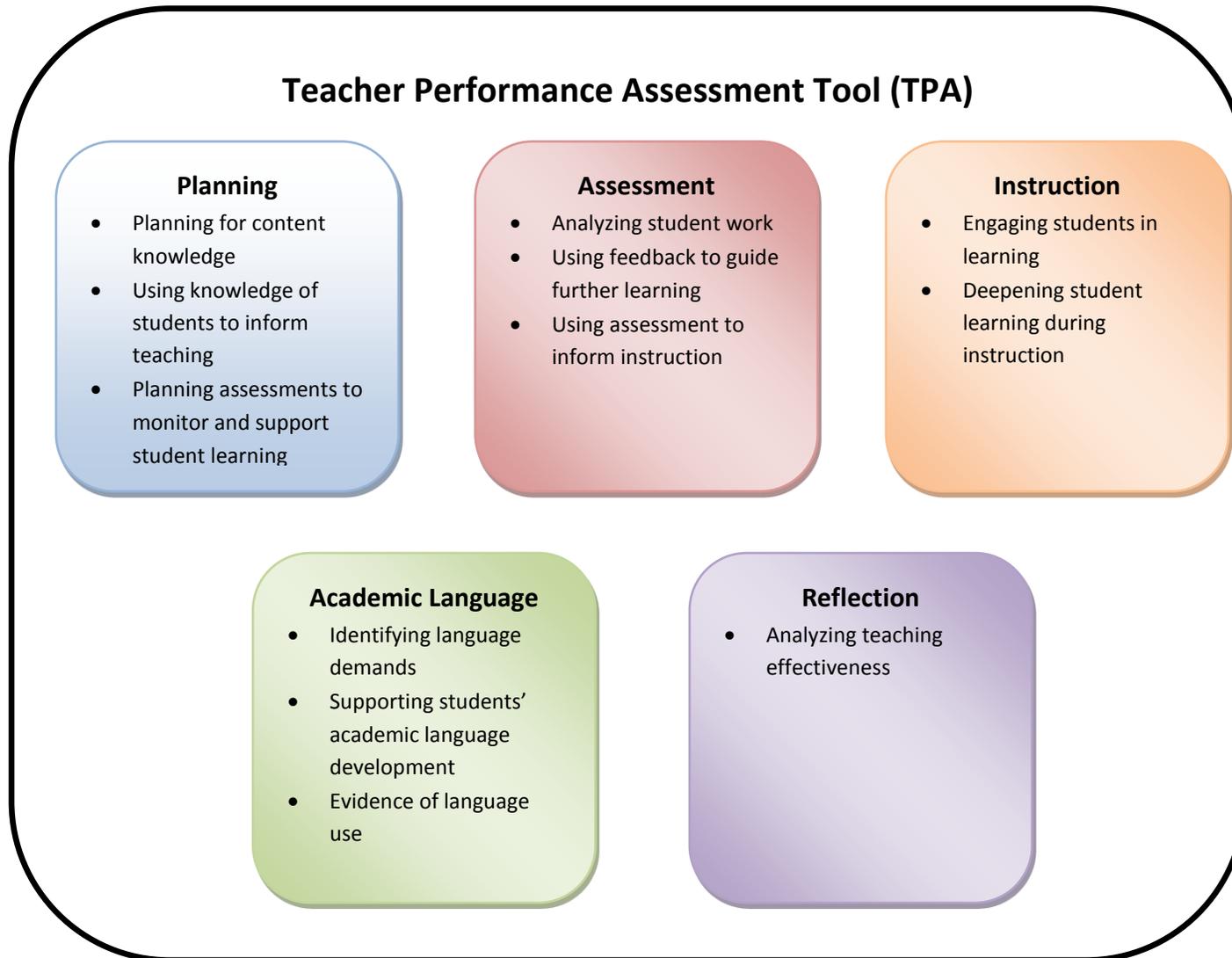
It is anticipated that these new standards and the processes used to examine preparation programs will provide a basis for raising the caliber of programs and securing greater recognition and support for all educator preparation. More prescriptive standards, emphasizing specific features of knowledge acquisition, and learning to teach and practice in clinical settings will “raise the bar” and challenge providers of teacher education.

And finally, in response to our critics, the profession is working to develop and implement a way of assessing future teachers that provides evidence of preparation effectiveness, supports program improvement, and informs policy makers about qualities of teaching associated with student learning. U.S. teacher education has relied on various forms of candidate assessment - from standardized admission tests and course-embedded assessments to observations of candidates in classroom settings “doing” student teaching and “technical assessments” of candidates regarding their dispositions and readiness to teach. Student portfolios have emerged in recent years to enable teacher candidates to document their accomplishments and to provide instructors with ways to assess their progress. Exit examinations are used in most states in the US to determine suitability for state licensure. The inadequacy of these measures and their inability to predict later effectiveness in classrooms has led the profession to seek new strategies for evaluating teacher competence.

The American Association of Colleges of Teacher Education (AACTE) and Stanford University formed a partnership to develop the Teacher Performance Assessment (TPA), a 25-state initiative involving more than 140 teacher preparation programs (Figure 5). TPA is an assessment tool that gathers and uses evidence of teaching performance to improve teaching and teacher preparation. These performance assessments require future teachers to document their plans and teaching for a unit of instruction, videotape and analyze their teaching and collect and evaluate evidence of student learning. All these pieces are assembled and evaluated by highly trained raters who score the materials in a consistent manner against specific criteria that reflect standards of effective practice. These assessments have been found to measure novice teachers' performance and can be used to help them improve their practice.

We are implementing TPA in our own university and have found that it dramatically changes the way our students respond to assignments. It guides their reflection and learning in ways that connect directly to the classroom. The TPA targets the following competences of future teachers in our program.

Figure 5: AACTE and Stanford University Teacher Performance Assessment



Case studies of students, analysis of student learning, and curriculum/teaching analysis are signature TPA assessments. An example of a curriculum/teaching analysis illustrates the difference the assessment process makes in future teachers reflections in classrooms. As you can see from the very short example in Figure 6, future teachers think through their actions and anticipate their students' reactions much more when involved in a curriculum teaching analysis activity guided by the TPA.

Figure 6: Lesson Comparison

Before TPA Adoption: One Section Describing

Directed Reading Activity: Grade 1

Teacher will gather students onto the circle time rug, and present students with the book "Muncha, Muncha, Muncha" by Candance Fleming. The teacher will explain to students that first students are going to brainstorm what the story will be about. The teacher will show students the cover of the book, and select pages at random to show the students. The teacher will encourage students to study each page, and start thinking about what's happening on each page.

Example of Assignment After adoption of TPA

Directed Reading Activity: Grade 1

Hello boys and girls! Today we will read "We're Going on a Lion Hunt" by David Axtell. We are going to practice letter combinations of sw-, sq-, sp-, and -sh. We are going to learn a way to decode words that contain these sound combinations. When we have a better understanding of what sounds each letter combination produces, we will be able to identify words on our own. Before we begin reading the story, we will do a very quick speed writing activity in our reading journals. I will list on the board the 4 letter combinations I want you to focus on. With these letter combinations, I want you to write down any word that contains one of the letter combinations that comes to mind. You can write as many words as you want for each sound combination for 2 minutes. Afterwards we will go around and share the words that we came up with on the board.

Note: I will be reading this book for them because it will be their first time reading it and will be helpful for Gisoo, who has a bit of difficulty reading at times alone. The group reciting of words will engage students, especially Kobi

Evidence of:
Planning
Instruction
Assessment
Academic Language
Reflection

In spite of the fact that these assessment systems are extremely complex, will require faculty development, student training, and the allocation of greater resources to teacher education, the Teacher Performance Assessments have the potential to document the value of teacher preparation programs, predict future success of our students, and help us understand more about “what works” in teacher preparation programs. While these efforts will not solve the perception problems that the teaching profession faces in the United States, each are critically important to improving academic outcomes of our nation’s children. As a Dean of a college of education, I am optimistic that even these three initiatives will foster an improvement in the way we prepare future educators.

At the same time, we cannot overestimate the challenges that teaching and the teacher education profession are facing in the United States. Currently, the profession is divided by two very different views of teaching. The traditionalists are trying to build a profession while the reformers want highly competent and accountable public sector workers. The efforts of the reformers are succeeding at all levels of policy and government--the traditionalists seem to be reacting more than leading the conversation. Even during our current presidential campaign both candidates take more of a reformist perspective when talking about teaching and teacher education. Whether one adopts a Traditionalist or Reformer paradigm of how the education system should work, there is wholesale agreement that change is necessary. In order to develop agreement on what changes should happen, the two groups must come together in some way and build trust that is built on the common goal of educating our children. Unfortunately, the two groups are a long way from working together so for the foreseeable future, the divisive context surrounding teaching and teacher education will remain at the forefront of education policy and reform. The impact of this potential split cannot be underestimated.

Conclusion

The story of our quest to define quality teaching and teacher preparation in the US is complex, sometimes confusing and often contentious, but our greatest hope comes from our day-to-day efforts and the students in our programs. While the conversations outside colleges and schools of education have to do with trust and the need to regain and sustain public trust in the enterprise, it is different within the hallways and classrooms of higher education. There the caliber, commitment, and energy of students enrolling in undergraduate and graduate classes is remarkable. Cohort after cohort is alive with expectations and a readiness to commit to the

challenges of educating our nation's youth. Are they idealists? Yes, of course and we need them to bring their positive energy to the teaching profession. They are eager to learn the means to best teach all students and the most effective ways to collaborate and partner with colleagues in schools to ensure that all students benefit from their schooling. While education deans (and leaders of the enterprise) worry if there is a future for university based teacher education, the next generation of teachers eagerly participates in the university program of studies, volunteering to tutor high risk students, observing skilled teachers practice, and undertaking student teaching.

There is no doubt that the challenges related to preparing teachers for the future are great. No matter the location, it is an era of increased accountability for the teaching profession, the ascendancy of a new reform community influencing policy debate and discussion, a growing centrality of standards setting for elementary, secondary, and higher education (and particularly teacher education), competition from alternative providers, and confidence in data gathering and the ability to attribute student learning to teacher performance. Colleges and universities are definitely challenged to respond to the criticism. Here we have told the story of how the American teacher education community is responding with a series of bold interventions. However, we still have a great deal of work ahead of us with continued challenges for teaching and teacher education.

Why is it important for the US to share our challenges and accomplishments at an international conference and why should you be concerned about efforts in the US? Of course, the simplest answer is that we learn from one another and we gain understanding about important issues when we share experiences and solutions. In today's world, brought closer together by the ease of travel and communication, what happens in one of our countries will most likely come about in another country making it even more important for us to work together to answer some of our common questions and consider our connected themes. How much more powerful we could be if we answered important questions related to teaching, learning and teacher preparation together? The very nature of the ICET experience provides opportunities for colleges and schools of education to examine their study and practice and

encourages the establishment of networks and joint study projects between Japanese and US scholars, educators, and practitioners.

Preparing teachers who are capable of responding effectively in today's complex educational climate is an international imperative. The demands on teaching are constantly changing and teacher education throughout the world will be continually called upon to rethink curriculum and programs that stay relevant and meet current demands. Those of us in the profession can expect that there will be significant debates about what experiences produce quality teachers. There will be constant policy-driven decisions made from within and outside the profession. The public and political rhetoric will continue and it is safe to say that during the coming years teacher educators throughout the world must be prepared to participate in the debates in an informed and reasoned manner. It will be up to us to contribute scholarly solutions to the policy questions and issues. We can find those scholarly solutions so much better by working together.

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SELECTED PAPERS

LEADERSHIP FOR LEARNING AND INSTRUCTION

PROGRAMMING FOR INTERNATIONALLY EDUCATED TEACHERS IN CANADA: A SOCIAL CAPITAL PERSPECTIVE (MANDZUK, SCHMIDT & YOUNG)

Introduction

Canada is, and always has been, a nation of immigrants; in fact, according to Statistics Canada (2007), during the past century, the percentage of Canada's population that was foreign-born ranged from 13% to a high of almost 20% in 2006. Citizenship and Immigration Canada (2007) reported that in that year, 251,649 people immigrated to Canada and close to 1500 of them reported that they were trained as teachers and/or administrators¹.

In Manitoba, a province in the geographic centre of Canada, aggressive immigration strategies have dramatically changed the complexion of our student populations in the last few decades; in fact, "one of the most striking differences in Manitoba classrooms since the early 1990s has been the increasing cultural, linguistic, religious, and socio-economic diversity that has resulted from increased immigration to the province" (Mandzuk et al. 2008, p. 5). In addition to the richness of diverse cultures and experiences, this has resulted in increasing numbers of students for whom English is an additional language (EAL) and children arriving from war-torn countries, some of whom have had very little formal education.

A central question for the Manitoba school system is to what extent is its teaching force reflective of this increasingly diverse student population. Unfortunately, the simple answer to this question is "hardly at all". The majority of teachers still come from white, middle class backgrounds; further, many of them find it difficult to identify with their immigrant students and their families, and to imagine what their journeys to Manitoba have been like. Given the discrepancy between the diversity among students and the relative lack of diversity among

¹ While 1500 of these immigrants declared, it is safe to assume that the actual number of educators would have been greater as it is not necessary for immigrants to declare their previous occupations.

teachers, it is not surprising that increasing diversity in the teaching force is a central element in the Manitoba government's *Kindergarten to Grade 12 Action Plan for Ethnocultural Equity* published a few years ago (Manitoba Education, Citizenship and Youth, 2006). Among other goals, this policy called for enhancing the diversity of Manitoba's teaching force based on the premise that "students benefit from the vibrancy of a diverse teaching population and from experiencing difference, not as a deficit, but as a source of knowledge" (Mandzuk et al., 2008, p. 5). However, the gap between governmental directives and actual practice can be wide and the case of internationally educated teachers (or IETs as they will be referred to in this paper) is no exception. Some still view IETs from a deficit perspective rather than seeing the potential for how they can contribute to the Manitoba school system. Further, in a province where there is no shortage of teachers at the present time, IETs can sometimes be seen as competing with "home grown" teachers for the limited positions that do exist.

The purpose of this paper is to discuss the Academic and Professional Bridging Program for Internationally Educated Teachers, a program that has been offered at the University of Manitoba for five years and was designed to facilitate the integration of IETs into the teaching force in the province of Manitoba. After a brief discussion of some of the common challenges that IETs face when they arrive in Canada, we will: 1) provide an overview of the Manitoba context, 2) describe the Academic and Professional Bridging Program offered by the University of Manitoba, 3) examine the concept of social capital as it relates to IET programming, 4) demonstrate how an understanding of social capital can help explain why we have programmed in the ways that we have, and 5) look to the future for even further ways we might better respond to the needs of IETs arriving in Canada and other immigrant-receiving countries.

Common Challenges of IETs

Upon arriving in Canada, IETs' experiences vary widely; however, their new journey typically begins with having their credentials assessed by the certifying body of the province or territory in which they land² and often that results in them having to take additional courses even when they have advanced degrees and years of teaching experience in their countries of origin. While this generally causes some anxiety and frustration on the part of IETs, most understand that, in

² It is important to note that there is no national educational system in Canada as education was assigned in 1867 to the various provinces with the signing of the British North America Act (now known as the Constitution Act) .

order to be able to teach in a new country, they need to learn about the local curricula, the nuances of teaching in a different context, and the educational priorities of the province in which they would like to teach³.

In most cases, IETs comply by doing whatever provincial or territorial registrars tell them they must do to be granted either provisional or permanent certification⁴.

However, the vast majority of IETs face huge financial burdens as they return to school to complete mandated coursework. Many are forced to work more than one job and for those who are also parents, the combination of work and study results in them spending less time with their own children who also need additional support while they, too, are making the transition to a new community and a new school system. These factors, coupled with the stress of returning to the student role and living with the uncertainty about employment prospects present significant challenges for most IETs.

Although in some jurisdictions, IETs still receive relatively little guidance from university authorities and sometimes confusing information from certifying bodies, recently, in a number of provinces, there has been a more of a realization that the best way to prepare IETs for teaching in the Canadian context is to design bridging programs specifically tailored to meet their unique needs. Programs such as these have been established at such universities as Simon Fraser University in Vancouver, British Columbia, The University of Calgary in Calgary, Alberta, and at the University of Manitoba in Winnipeg, Manitoba. While these programs are designed differently, they share at least two major agendas: 1) an employment equity agenda of facilitating the integration of IETs into the Canadian school context so that they can resume working as teachers, and 2) an educational agenda of working towards diversifying the teaching

³ In Manitoba, for example, all prospective teachers must take courses in Aboriginal Education and Inclusive Special Education as *Manitoba Education* has deemed that these are priorities that respond to an increasing Aboriginal student population and its commitment to inclusive classrooms.

⁴ Some IETs receive provisional certification; however, others, particularly those from the Philippines (one of the largest groups that we serve), frequently do not even get provisional certification because their first two years of post-secondary education are not typically recognized as they start university after Grade 10 rather than Grade 12. A provisional certificate is valid for three years and it allows the holder to work as a teacher in the Manitoba school system. A provisional certificate is granted to individuals who are: 1) a Canadian citizen or landed immigrant (permanent resident) or hold a valid work visa: AND 2) meet the minimum academic requirements for provisional certification in Manitoba (Manitoba Labour & Immigration, 2007:4).

population so that it is more representative of the diversity of students that are now found in Canadian classrooms.

Overview of the Manitoba Context

Manitoba is a province of about 1,300,000 people located in the geographic centre of Canada and it has always been a province of immigrants. Recently, the Manitoba government, like the governments of many other Canadian provinces, has been very active in attracting skilled immigrants through its provincial nominee program. The program has been so successful in attracting immigrants that the most recent targets of 20,000 immigrants a year place Manitoba's immigration rates among the highest per capita targets in the country. While it makes good economic sense to attract professional immigrants to Manitoba, the reality is that many of these skilled immigrants become disappointed when they realize that resuming work in their chosen professions will be more problematic than they may have been led to believe. This is certainly true for internationally educated teachers, some of whom end up working in the service industry, driving cabs, or working as educational assistants in the K-12 school system, all at a fraction of the salary that they would have been paid as full-time teachers.

Internationally educated teachers who arrive in Manitoba and want to resume teaching must first apply to the Manitoba Professional Certification and Student Records Branch. It is here that their credentials are assessed and after a fairly lengthy process⁵, it is determined whether or not they are able to teach in Manitoba. Often they are told that their previous credentials are insufficient and are then advised to take additional coursework at one of the province's universities to compensate for any gaps that the Director and his staff have determined that they have. It is usually soon after receiving their letters from the Professional Certification Branch that IETs make their first contact with the Faculty of Education at the University of Manitoba and it is at that point, that our staff begin assessing whether or not they are eligible to be admitted to the Academic and Professional Bridging Program for Internationally Educated Teachers.

⁵ The length of time it takes to process an application for certification can vary depending on how well the Professional Certification Branch happens to be resourced, how many applicant files are currently open, the IET's specific country of origin, and the availability of required documentation.

The Academic and Professional Bridging Program for Internationally Educated Teachers

The Academic and Professional Bridging Program for Internationally Educated Teachers has been offered at the University of Manitoba since 2006.⁶ At that time, Dr. Clea Schmidt, who had extensive experience working with internationally educated teacher candidates at OISE/UT in Toronto, Ontario began working with the Faculty's advising staff who believed that the case-by-case approach that they had used in the past was not adequate in preparing IETs for teaching in Manitoba; more specifically, although IETs were directed to courses that were judged to best meet their needs, it was a somewhat fragmented approach that was based primarily on convenience, course availability, and the Certification Branch's requirements. IETs were typically left on their own without being able to connect with other IETs and without having the opportunity to complete a school-based practicum.

All that changed in 2006 when we designed the Academic and Professional Bridging Program for Internationally Educated Teachers which is characterized by a number of key features:

- 1) The program has been designed as a 30 credit hour program, initially over 14 months and currently over 10 months.⁷ The courses have been carefully selected to provide students with a solid grounding in Manitoba curriculum and pedagogy as well as courses in the administrative foundations of education and inclusive special education.
- 2) The program has been designed using a cohort model, much like that adopted for the B. Ed. students in the various programs offered by the Faculty. This means that students in the program take almost all of their courses with other IETs⁸ and become part of a professional learning community in the process (Dooner, Mandzuk & Clifton, 2008; Hasinoff & Mandzuk, 2005; Mandzuk, Hasinoff & Seifert, 2003).

⁶ Readers should note that since this paper was submitted, funding for the cohort-based IET program has been discontinued. As an alternative, we now direct IETs to the Post Baccalaureate Diploma program, an advanced practice, continual entry program through which IETs will still be able to get certified but they may find it more challenging to generate social capital.

⁷ The program is designed for IETs who require 15-30 credit hours of university coursework for permanent or provisional certification. Those IETs who require substantially more than 30 credit hours of university coursework and/or a B.Ed. degree are directed to the B. Ed. program.

⁸ We are currently working with IETs in our fourth cohort and are planning our next intake for September, 2011. To date, IET cohorts have been relatively small with between 8 and 12 students at any one time.

3) Recognizing that most IET students need at least some English language support, there are language workshops which provide students with customized sessions that focus on professional and employment-related language acquisition.

4) The program provides approximately 12 weeks of in-school practicum placements where IETs are supported by carefully-selected mentor teachers and faculty advisors who are sensitive to, and aware of, the unique strengths and needs of IETs.

5) The program provides ongoing opportunities for professional development, not only *from* others but also *for* others. This includes opportunities to participate in weekly professional development workshops organized by the Faculty's student council, debriefing sessions with school representatives and external stakeholder groups, and even conference presentations at local teacher education conferences.

6) Acknowledging that being an IET and returning to university is not just an individual but a *collective* effort, the program provides opportunities for IETs and their immediate families or significant others to get together socially for events such as bowling and movie nights and potluck dinners⁹.

It is important to note that the design of the Academic and Professional Bridging Program for IETs has evolved over time based on our experiences working with these students and getting a better sense of their particular needs. We are now convinced that a multiple entry model by which students could enter and exit the program at different times would not necessarily be in the students' best interests. While such an approach might facilitate quicker admission and earlier completion of the program, we think that the students would lack the sense of community that the cohort model offers. We are also convinced that a program which includes carefully selected courses, language workshops, and supported practicum experiences is critical to ensuring optimal success of IETs. Not only does our experience and research suggest that they benefit from being in the same program as others who are also seeking certification (Schmidt 2008; Schmidt, Young and Mandzuk, 2010), they also benefit from developing networks with Canadian teachers, administrators, and those in school board offices who are ultimately responsible for hiring teachers.

⁹ The IETs who have been involved in the Bridging program to date have come from countries as diverse as China, Egypt, Eritrea, India, Israel, Nigeria, the Philippines, Romania and Ukraine.

Although it is important to acknowledge that there is a growing body of literature on the role that internationally educated teachers can play in the Canadian teaching force (Cummins, 2003; Reitz, 2005; Santaro, 2008), much of it is descriptive in nature and some of it lacks a conceptual grounding that we think is essential for better understanding how to program most effectively for IETs. We believe that the concept of *social capital* contributes to filling this conceptual gap by linking the way we design IET programs with the goals of integration and challenging systemic discrimination in hiring practices. We also believe that an understanding of the concept serves to counterbalance the deficit argument which is perhaps the dominant discourse related to IETs – that they have little to offer school systems, particularly those systems that are not currently experiencing teacher shortages.

What is social capital?

One of the first references to the concept of social capital was by L. J. Hanifan in 1916 when he referred to personal commitment to community and the notion of social cohesion. The concept was later picked up by a number of scholars in a variety of disciplines such as Bourdieu (1972), Coleman (1988), Fukuyama (1999), Putnam (2000), Requena (2002) and Woolcock (2001). In fact, the concept has had such broad appeal over the years that it has sometimes been criticized for being defined in too many different ways and in the process, becoming “all things to all people”. To this end, Woolcock (2001) has cautioned to keep what social capital is separate from what social capital does. In any case, for the purposes of this paper, we will use Coleman’s definition of the concept which emphasizes social structures, the actions of those within social structures, and anything that facilitates individual or collective action generated by networks, relationships, social norms, and reciprocity. Coleman was a prominent University of Chicago sociologist who was interested in the effects of social capital generated within families and in the community on high school dropouts. Since then, the concept has been used in a wide variety of fields from economics and medicine to law and of course, education. According to Woolcock (2001), “social capital refers to the norms and networks that enable people to act collectively” (p. 13). It also refers to the benefits that can accrue to individuals by virtue of their membership in social networks.¹⁰ In other words, social capital describes all of the intangible benefits of belonging to

¹⁰ Scholars such as Mandzuk, Hasinoff & Seifert (2003), Putnam (2000), and Woolcock (2001) have pointed out that social capital is not just about benefits but it also has a ‘dark side’; however, for the purposes of this paper, only the benefits will be discussed.

social structures such as families, teams, church groups, professional organizations, and even the cohorts of IET students that we work with at the University of Manitoba. To gain a better understanding of what social capital involves, we will now discuss the properties of social structures that enhance the development of social capital and the two dimensions of social capital known as bonding and bridging.

Properties of social structures. As one might predict, some social structures are more likely to provide social capital to their members than are others. In 1988, Coleman identified four properties of social structures that increase the likelihood that social capital will be generated--*closure, stability, interdependence, and shared ideology*. *Closure* refers to the ability of social structures to provide equal access to all group members while ensuring that there is limited intervention from the outside. *Stability* refers to the degree to which the membership of social structures is relatively constant over time allowing group norms to develop thereby influencing how group members think and act. *Interdependence* refers to the importance of working together within social structures to achieve common purposes and the extent to which group members are expected to work collectively to achieve common goals. Finally, *shared ideology* refers to a common vision that binds members of social structures together as they work towards common goals. In essence, Coleman (1988) argues that the more evident these properties are in social structures, the greater the likelihood that group members will be able to generate social capital. While an understanding of these properties is important in determining the degree to which different social structures present opportunities for group members to generate social capital, we also think that the dimensions of social capital are also worth understanding, particularly when thinking about how to program most effectively for IETs.

Dimensions of social capital. According to Putnam (2000), there are two dimensions or types of social capital – *bonding* and *bridging*.¹¹ *Bonding* refers to deep, inward-looking relationships between like-minded individuals and is characteristic of primary social groups such

¹¹ Woolcock (2001) also refers to ‘linking’ social capital giving different groups of people differential access to power, information, knowledge, and resources but for the purposes of this paper, we will discuss bonding and bridging only.

as families. In other words, bonding social capital reinforces alliances among similar types of people and emphasizes strong interpersonal relationships and a sense of community. *Bridging*, on the other hand, describes “more outward-looking relations between people with different interests and goals” (Woolcock, 2001). These relationships are not typically as deep and are more sporadic and diffuse than bonding relationships. Put another way, bridging captures the notion that, when looking to get ahead, it’s not *what* you know but *who* you know that is important. To more fully capture the distinction between the two types of social capital, Putnam, (2000, pp. 22-23) suggests that we should think of bonding “as a kind of sociological superglue” and bridging “as a sociological WD-40”. What Putnam means by this is that bonding allows people of like mind to ‘adhere’ to one another while bridging ‘lubricates’ relationships between different kinds of people.

The point of discussing the concept of social capital, the properties of social structures, and the dimensions of bonding and bridging is our belief that they are powerful in providing a conceptual explanation of our current efforts in working with IETs and they also suggest other ways in which we might serve them in the future.

Social Capital and the Academic and Professional Bridging Program for IETs

As mentioned earlier in this paper, the Academic and Professional Bridging Program for IETs at the University of Manitoba has adopted the cohort model as an organizational scheme, a model that we believe clearly addresses the four characteristics outlined in the previous section of this paper. By its very nature, the cohort ensures a high degree of *closure* - group members have easy access to one another and, with the exception of instructors and program coordinators, there is limited involvement of others. This provides IET students with many opportunities to share their experiences, share resources, and even share their challenges as they all adjust to being students once again; in other words, the cohort provides the mechanism for IETs to travel the same path together or experience what Goffman (1961) once called the “shared ordeal”.

The membership of most cohorts is also *stable* over time – there are relatively few changes in group membership and this allows group norms such as open and honest communication, the building of trust through reciprocity, intellectual challenge, and of course, social and emotional support--to develop. Our experiences working with IETs have shown that normative behaviours

like these which are so important in sustaining lively and meaningful professional learning communities (Dooner, Mandzuk & Clifton, 2008; McLaughlin & Talbert, 2006; Westheimer, 1999) are less likely to develop in programs where students do not get the opportunity to really know one another or where group membership is constantly changing due to multiple entry and exit points.

IET cohorts also encourage *interdependence*, particularly if instructors in the program give group assignments and expect their students to collaborate on a regular basis. Interestingly enough, for those IETs who come from countries where teaching is primarily teacher-directed and learning is primarily independent, this can present interesting challenges; however, the collaborative nature of learning within our cohort-based program is consistent with how teachers are expected to work jointly with their colleagues and increasingly, how students in the K-12 system in Manitoba and across Canada are also expected to work together on assignments.

Finally, IET cohorts are characterized by having what Coleman (1988) calls a *shared ideology*. This is not to suggest that all group members are expected and socialized to think alike; rather, it suggests that IET students who are organized in cohorts have the common professional goal of becoming certified and they must not just individually but collectively come to terms with what becoming a teacher in a different context “looks” and “feels” like. For example, on both an individual and group level, IETs must come to terms with the reality that Canadian teachers are generally less teacher-directed and more student-centered in their approaches. Making this shift in one’s professional identity is often not easy but the support of the cohort can help with this transition. Another example of shared ideology is coming to terms with the reality that “professional distance” is defined somewhat differently in Canada and other Western countries; more specifically, teachers in most Canadian schools are expected to downplay status differences between them and their students as a way of building meaningful *learning relationships* with them (Dooner et al., 2010).

What about the dimensions of bonding and bridging? How do these apply to the Academic and Professional Bridging Program for IETs? We see bonding occurring on at least three levels. First, IET students bond with and find strength in one another as they travel the IET journey together. Second, IETs bond to IET program staff who provide academic and professional advising during the application process and while they are in the program. Third, IETs bond to their instructors

and faculty advisors who help them make important connections between their previous teaching experiences in their countries of origin and the Manitoba teaching context.

As important as the bonding opportunities are, we believe that the bridging that IETs do is probably even more critical because it is through bridging opportunities that they can build capacity, create important linkages and networks with people who are actually hiring, and in ideal circumstances, build awareness among policy makers to work toward systemic change by developing more equitable hiring practices. First, our IET program provides opportunities for IETs to bridge to the approximately 600 B. Ed. students that we have in the Faculty at any one time. Although our earlier attempts to integrate IETs into select B. Ed. courses were somewhat problematic¹², with the proper support and careful selection of instructors, IETs can be perceived not as marginalized members of the class but rich sources of cross-cultural and professional knowledge; in other words, IETs can be seen, not from a deficit perspective (Schmidt, Young and Mandzuk, 2010) but from a perspective where others can clearly gain from their collective knowledge and experience.

Second, our IET program offers opportunities for IET students to bridge to school division personnel such as mentor teachers and administrators. Mentor teachers are carefully selected teachers who have a record of effective teaching and demonstrate professional dispositions such as empathy, humility, and open-mindedness which are critical attributes for those who host IETs and support them while they learn to teach in the Manitoba context¹³. Critical among these attributes is a clear understanding that IETs are not teacher candidates and they should not be treated as such.

Finally, our IET program provides opportunities for IET students to bridge to external stakeholders such as ethno-cultural advocacy groups, government officials, and funding agencies. In our particular case, the funding of our program continues to be an ongoing challenge. Initially funded by a three-year grant from Manitoba's Department of Labour and Immigration and various grants from the University of Manitoba, we are once again looking for

¹² It is our view that if we had provided more support to instructors and if the instructors themselves had been more carefully selected, a better sense of integration would have occurred.

¹³ One example of these kinds of nuances is Manitoba's approach to assessment. In our province, as in many jurisdictions in Canada, there is a clear emphasis on assessment "for", "as" and "of" learning and distinguishing between these three approaches can be challenging even for "home grown" teachers who have been prepared in Manitoba.

sources of permanent funding that will make the program more sustainable over the long term. Our experience has demonstrated time and time again that the first-hand accounts of IETs themselves are the most effective in reaching government officials, immigrant-serving agencies, and others who have the power to influence public policy. These accounts can go far in closing the gap between aggressive immigrant recruiting strategies and the harsh realities that await many recent immigrants to Manitoba and other immigrant-receiving jurisdictions.

Our view is that any program that is designed to meet the unique needs of IETs (and other immigrant professionals for that matter) must include by its very structure, opportunities to both bond and bridge and some consideration needs to be given as to the optimal balance between the two. For instance, too many opportunities for bonding at the expense of bridging, can result in an environment that may be mutually supportive but is also inward-looking and as a result, cut off from the very system to which IETs want access. On the other hand, too many opportunities for bridging at the expense of bonding can result in sporadic, individual contacts with external stakeholders without a sense of community that is important in coming to a greater understanding of what it means to be a teacher in Manitoba. In essence, we would argue that the cohort model provides the conditions for building cohesion and generating bonding social capital among IETs and that this is an important antecedent for having the confidence to bridge to others in the field.

The Future of IET Programming

In this paper, we have discussed the Academic and Professional Bridging Program for IETs at the University of Manitoba and we have shown how the concept of social capital can provide a conceptual lens through which to consider our current efforts working with these students. In this last section, we focus more specifically on future efforts that we believe will make the transition from teaching in an international context to teaching in Manitoba less arduous and more transparent (Office of the Manitoba Fairness Commissioner, 2011). At the application stage, there is no doubt that we need to provide IETs with clearer, more accurate information up front so that they can begin to prepare while they are still in their home countries. By providing more accurate information that doesn't assume an understanding of the Manitoba teaching context at the front end of the process, we believe that we can minimize the number of IETs who quickly become disappointed upon arrival in Manitoba. This means that university

programs like ours and the Professional Certification Branch need to continue to work hand in hand in the future.

Another effort that would support IETs during the application process would be for the Certification Branch to be more open to the idea of considering diverse experiences and education when evaluating teachers' credentials. No one doubts that the evaluation of foreign credentials is a complex and time-consuming business but perhaps it is time to rethink how foreign credentials are evaluated and whether or not years of experiences should be part of that equation.

We believe that we should continue to implement an IET program that is both cohort-based and also provides opportunities for IETs to bridge to other students in the Faculty. However, given that many IETs have advanced degrees, perhaps we should provide more opportunities for them to bridge to graduate students who like them, typically have years of experience in the classroom and/or in administration. In other words, maybe the more appropriate reference group for IETs is *graduate* students rather than undergraduate students.

It is clear that at least in our context, continued advocacy for IETs with external stakeholders and particularly those responsible for hiring teachers, will continue to be essential in order to make any discernible impact on hiring practices. We need to move beyond past practice when accents were often seen as problematic to a practice where internationally educated teachers are seen as assets to school systems and critical links to the diverse students attending our schools.

Finally, we need to continue to find new opportunities for IETs to connect to ethno-cultural groups so that together, they can make the case to the government that financially supporting bridging programs like ours is an investment in the future and a step in the right direction. This might go a long way in preventing IETs and other immigrant professionals from becoming disillusioned when they arrive in Manitoba and other immigrant-receiving provinces and realize, to their surprise, that the integration back into their chosen professions will be much more difficult than they thought.

Conclusion

We believe that, as long as jurisdictions like Manitoba continue to recruit professionally trained immigrants like internationally educated teachers, our efforts should be guided by the moral imperative of supporting them when they arrive. That doesn't necessarily mean that they should all be able to begin teaching right away because in some cases, that is not always in some individuals' best interests. However, it does mean that those of us who are involved in programming for IETs should do all we can to ensure that the process of becoming certified is as transparent as possible. Furthermore, when they enrol in a program like the Academic and Professional Bridging Program for IETs at the University of Manitoba, we should ensure that they benefit from the social capital available to them. This means that they should experience a balance of opportunities to both *bond* with those who are travelling the same path as they are and *bridge* to those who are already travelling the path of full-time employment.

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LOW COST PRIVATE SCHOOLS IN GHANA: SCHOOL LEADERSHIP FOR STUDENT LEARNING (CORDEIRO & HLOVER)



Introduction

According to a recent article in the Huffington Post (July 3, 2012) "...61 million young people around the world are not in school, 793 million adults worldwide cannot read these words (64% of whom are women) and [25%](#) of US young people do not graduate from high school in four years" (Levy et. al. Retrieved 7/3/12). There are several implications from this lack of access to education not only in the US, but in all countries in the world. Many young people will be excluded from meaningful careers and the jobs that society needs in a 21st century economy. They will have considerable difficulty supporting their families and they will not have access to crucial information on health, financial planning, and technology training, among other opportunities. Access to learning opportunities can improve both the quality of their lives and at the same time lessen the social economic burden that the rest of society bears in their support.

The Millennium Development Goals (MDGs)

In 2000, one hundred and eight-nine nations made a promise to free people from extreme poverty and multiple deprivations. This pledge became operationalized in the eight MDGs, which were to be achieved by 2015. Two of the eight MDGs are education specific: universal primary school enrollment is the second goal and the third goal is the promotion of gender equality and the empowerment of women. According to the United Nations Development Programme (UNDP, 2012), in 2008 there were 96 girls for every 100 boys enrolled in primary school and 95 girls for every 100 boys in secondary schools in developing countries. Despite considerable strides in many nations, it is highly unlikely the targets on the goals will be met.

Enrollment in primary education continues to rise (UNDP, 2012), reaching 89% in the developing world in 2008, with enrollments increasing by 18 percentage points in sub-Saharan Africa. A 2007 Human Development report published on Ghana indicates that progress on Goal 2 (Universal Basic Education) may potentially be met, while Goal 3 (Gender Equality and Empowerment) is unlikely to be achieved. More recent reports (XX) are not as optimistic as the 2007 HD report and despite the strides made, they predict Ghana will not meet the goal of universal primary school enrollment by 2015.

Worldwide Trends in Education in Developing Nations

Four major trends are occurring which hold much potential to support the achievement of these two MDGs. Several of these trends overlap and have the potential to vastly improve education in developing countries overall (see Table 1). First, developing nations are increasing their resources for primary education by building facilities, developing curriculum, and expanding the capacity of Ministries of Education and universities to support schools and improve teacher training. This ramping up takes several years; thus, other, in some cases nontraditional providers have entered the education marketplace.

Secondly, since the timeline for implementation of the MDGs is an ambitious one, other organizations have stepped forward to support government expansion of schools. An unprecedented number of foundations and nongovernmental organizations (NGOs) from around the world have joined in these efforts. Some of these organizations work with both public and private schools, while others only work to help expand private schools. Currently in Ghana the IDP Foundation, Edify and Opportunity International are but three of the many nongovernmental organizations providing micro-loans, and in some cases technical assistance, to private, for-profit schools. Additionally, some of these organization themselves are for profit.

For a variety of reasons, private schools for the poor are expanding in developing nations all over the world. Increasing numbers of parents in emerging nations are choosing to send their children to affordable private schools instead of to free public schools. Some scholars such as Tooley (2009) argue that, "Their quality is higher than that of government schools provided for the poor...(p. 263)." As the affordable private sector grows, so does the number of questions regarding pedagogy, proprietor and teacher decision-making, and community impact and involvement. Omega, a for-profit chain of ten schools in Ghana with approximately 6,000 students, recently formed a partnership with Pearson, a book publishing company. Omega, like the Bridge International Academies in Kenya, has adopted a "school-in-a-box" model that can be replicated.

The third trend is the rapid growth of the use of technology in schools in developing nations. Dozens of private companies and nonprofit organizations are working with public and private schools to implement computers technology and various types of mobile devices. For example, the newly created African School for Excellence (<http://africanschoolforexcellence.org>), a chain

of low cost private schools, utilizes the Khan Academy videos in their high school curriculum. Omega Schools in Ghana have computer labs, while mobile phones and tablets are being implemented in thousands of schools throughout the developing world. Worldreader an NGO, whose mission is to “make digital books available to children in the developing world” has been working with primary and secondary schools in Ghana since 2010. Worldreader has sent nearly 200,000 e-readers to children in sub-Saharan Africa and they have conducted research on the impressive reading gains made by these students (www.worldreader.org)

The fourth trend is related to the third MDG (gender equity and empowerment). There is significant growth in the number of programs, projects, nonprofit organizations and schools that directly address the many issues facing girls and young women in the developing world. Daraja Academy, a free, private boarding school for high school age girls in Kenya is one example. In addition to offering a curriculum that addresses the Kenyan education standards, Daraja has a special curriculum (WISH) to address the unique needs of young women (see www.daraja.org). Other organizations offer programs in partnership with schools to support girls (e.g., Voice4Girls www.voiceforgirls.org ; Educate Girls Globally www.educategirls.org) in developing nations, while others have created ‘movements’ to support girls (e.g., the Girl Effect www.girleffect.org).

Ghana ranks 135 on the Human Development Index’s Gender Inequality Index (<http://hdr.undp.org/en/statistics/hdi/>) .

The Ghanaian Context

Ghana, a country approximately the size of the US state of Oregon, is located on the West coast of Africa. With a population of approximately 24 million, this former British colony in 1957 became the first Sub-Saharan nation to gain independence. Ghana is a stable constitutional republic. (Retrieved 4/10/12 <http://en.wikipedia.org/wiki/Koforidua>). According to the World Bank, Ghana is a lower middle-income country. Ghana’s capital Accra is the largest city in the nation and the country is divided into ten regions.

English is the official language of Ghana. The mother tongue of most Ghanaians is one of the nine languages that have the status of government-sponsored languages. The most frequently spoken languages are Asante (14.8%) Ewe (12.7%), and Fante 10%. Most Ghanaians

are Christian (68.8%) and approximately 16% are Muslims who are more predominate in the Northern areas of the country. Ghana has numerous ethnic groups with Akan, Mole-Dabon and Ewe comprising approximately 75% of the country. (The World Factbook, retrieved 4/10/12 <https://www.cia.gov/library/publications/the-world-factbook/geos/gh.html>)

Ghana's Educational System

Ghana has 12,130 primary schools, 5,450 junior secondary schools, 503 senior secondary schools, 21 training colleges, 18 technical institutions, two diploma-awarding institutions and five universities serving a population of 17 million (<http://www.ghanaweb.com/GhanaHomePage/education/>) The official language of instruction throughout the Ghanaian educational system is English and all textbooks and materials are in English. Students may study in any of eleven local languages for much of their first three years, after which English becomes the medium of instruction. Students continue to study a local language, and French, as classroom subjects through at least the end of junior secondary school (ninth grade). According to Akyeampong (2009) 15.6% of boys and 18.4% of girls are out of school in Ghana.

Article 39 of the Ghanaian constitution mandates the major tenets of the free, compulsory, universal basic education (FCUBE) initiative. Launched in 1996, it is one of the most ambitious pre-tertiary education programs in Africa. Since the early 1980s, Government of Ghana expenditures on education have risen from 1.5% to nearly 3.5% of GDP. Since 1987, the share of basic education in total education spending has averaged around 67%. Thus, the Ghanaian government has devoted significant resources to education. The Ministry of Education, Science and Sports (MOESS) has several divisions responsible for education: the Ghana Education Service (GES), which oversees basic education; the National Council on Tertiary Education for higher education; the National Accreditation Board; and the National Board for secondary level.

Primary Education in Ghana

Ghana operates a 6-3-3 educational system. Primary school begins at age 6 and lasts six years, junior high school (JHS) is three years and senior high school is three years. There are approximately 6000 primary and junior secondary school schools that tuition-free. Ghanaian students take the Basic Education Certificate Examination (BECE) at the end of JHS 3 (ninth grade) in nine or ten subjects. Admission to Senior High School is highly competitive with approximately 70,000 students admitted into the 500 secondary schools.

In 2006 there were approximately 5.1 million students attending schools at these the levels: 68% at the primary level, 23% at the junior secondary level, and 10% at the senior secondary level. According to the World Bank (<http://www.world.bank.org>) Ghana's primary school completion rate was 80% in 2007 and it has risen to 86.3% today. Akyeampong (2009) maintains that about 85% of Ghanaian children from rural and urban areas attend public schools while private for-profit schools account for 12% of the enrollment. This number is disputed (see Tooley, 2009) with other scholars (Kwan, 2012) arguing the number of for-profit schools is considerably higher. For example, in Ghana's state of Ga, Tooley found private school enrollment (registered and unregistered schools) to be as high as 65%. The Ghana National Association of Private Schools (GNAPS) estimates that there are 20,000 private basic education schools in Ghana (International Finance Corporation, 2010). Whatever the actual numbers are, there are a significant number of Ghanaian students attending private, for-profit primary schools. In comparison with the North American schools and the UK, only 10% of all US students are enrolled in the private (independent) schools. Independent schools educate approximately 7% of Britain's children and 5.6% of Canadian students are educated in private schools (Retrieved 6/18/12 http://en.wikipedia.org/wiki/Private_school)

Secondary Education

There are a limited number of facilities for secondary schools in Ghana, so there is limited access to a secondary education. About 99 % of junior secondary school graduates are able to gain admission to senior secondary schools, and only about 34.4% of senior secondary school graduates are able to gain admission to universities and polytechnics, plus another 10%-20% to diploma-level postsecondary education (<https://www.cia.gov/library/publications/the-world-factbook/geos/gh.html>) Another obstacle for low income families is that secondary education in Ghana is not free.

There are approximately 500 secondary schools in the nation. Of those 500 only about 15 are private schools. Private secondary schools play a very small role in Ghana, with only a handful of institutions offering international curricula such as the British-based A-levels, International Baccalaureate, and U.S. high school. Combined, they graduate fewer than 200 students a year. Because Ghana does not have the separation of church and state found in schools in the US,

numerous Ghanaian public and private schools are faith based and/or gender-based. Several faith-based secondary schools are Catholic or Muslim.

At the end of Senior High School all students take the West African Senior Secondary Certificate Examination, (WASSCE) in each of their seven or eight subjects. Each year these exams are given nationwide in May-June, and results are not available until October. In order to enter university, the WASSCE must be taken.

Methodology

This qualitative research study includes two phases of data collection over a two-year period. The initial exploratory phase began in summer 2011. Data were analyzed and a more detailed interview protocol was then developed. This protocol will be used to collect data in Phase II during July 2012. Secondary data sources include interviews and artifacts collected by other USD faculty, graduate students and Edify personnel from January-March 2012.

Research Questions

The exploratory phase of this study examined the follow questions:

1. What do the proprietors of low-cost private schools in Ghana believe will lead to the sustainability of their schools?
2. How and why did these proprietors obtain ownership of these schools?
3. What are the major challenges these school proprietors facing?

Phase II of this study will explore:

1. What components/factors will help you to achieve greater learning gains for the children in your school?
2. What will it take to implement these components?

Participant Selection

A total of twelve school proprietors were interviewed for this study. Each audiotaped interview lasted approximately two hours. All twelve primary and middle schools owned by these proprietors were located in four regions of Ghana: Tema in Greater Accra, Kumasi in the Ashanti region, Cape Coast in the Central region, and Koforidua in the Eastern region. Proprietors were randomly selected from the list of schools receiving micro-loans from Sinapi Aba Trust (SAP) and their NGO partner Edify.

Edify and Sinapi Aba Trust (SAT)

Edify is an international nonprofit organization whose mission is to improve and to expand sustainable low-cost Christ-centered education in the developing world (Edify, 2001 Annual report). Edify currently works with private schools in the Dominican Republic, Rwanda and Ghana. Edify solicits funds from foundations and individual donors and then works with local lending institutions that provide small loans to local, privately-owned schools. However, Edify does more than provide funding, the nonprofit also provides technical support to schools that receive loans. The types of technical support depend on the needs of the schools and the countries they are located in. Support might take the form of professional development for teachers and/or proprietors or technical assistance about the use of technology, etc. Edify provides capital to local lending institutions that then make loans to schools.

Sinapi Aba Trust (SAT) is Edify's lending partner in Ghana. Like Edify, SAT is a nonprofit organization whose mission is to support the economically active poor to enhance their lives through microfinance and basic business training (www.sinapiaba.com). SAT loan officers work with private school proprietors by providing business management training. SAT also works with other organizations such as the IDP Foundation's Rising Schools Program (<http://www.idpfoundation.org>), which originally supported the creation of the business modules for proprietors.

Data Collection

The first round of data collection took place in the summer of 2011 and included in-depth interviews with school proprietors, and teachers all of which were audiotaped as well as school observations. Additionally, video recordings and photographs captured the daily lives of the school proprietors. Other artifacts collected included school newsletters, handbooks, and microloan agreements. All four schools were private, for-profit schools with two of the four schools being part of a network of for-profit schools called Omega. In summer 2011 an interview guide was piloted. Once data were analyzed and the research questions refined, a more detailed protocol was designed (see appendix). The second round of data is taking place in summer 2012

Data Analysis

The analysis of the interview data followed the four stages recommended by Marshall and Rossman (2006). They include: organizing the data, generating categories, themes and patterns, testing any emergent hypotheses, and searching for alternative explanations. We followed the principles of 'comparative analysis suggested by Strauss and Corbin (2007) to code data. Observations, multiple researches, artifacts, photos and video were used to triangulate data collection.

Findings

In the exploratory phase four needs were identified: 1) better understanding of how to develop strong business plans; 2) how to ensure that students are prepared for the national exam in order to enter senior secondary schools; 3) how to best provide leadership to teachers who have little, if any, training; and, 4) how to communicate with families and attract new students. The second round of data is taking place in summer 2012 and each of these areas, among others, will be further explored.

Conclusion

The Millennium Development goals of universal primary education and gender equity may not occur by 2015 in Ghana. However, some nations such as Ghana will come close to achieving this goal. Few African governments possess the resources required to provide a basic education since the infrastructure and teachers required are not readily available. Thus, the private sector plays a more significant role in many developing nations than in many Western countries. For-profit private schools in Ghana are playing a significant role in helping to achieve both of the MDGs related to education.

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Worldwide Trends in Education in Developing Countries

DRAFT

	Ghana	Other Sub-Saharan Nations	Worldwide
Nations Increasing Resources for Education	Facilities Teacher Training Curriculum/Textbooks	Facilities Teacher Training (Kenya, Uganda, Mozambique, ?)	Facilities Teacher Training (India, Vietnam, ?) Curriculum/Textbooks
Nonprofit and For-profit Organizations' Initiatives	IDFoundation-Rising Schools Opportunity International (OI) Edify Omega	OI (Uganda) Edify (Rwanda) Bridge Academics (Kenya) Teach a Man to Fish (Uganda & Kenya)	OI (Nicaragua) Edify Teach a Man To Fish (Nicaragua & Bolivia)
Technology And Learning	Worldreader African Schools for Excellence (ASE)	ASE (South Africa)	One Laptop per Child Intel Teach, Microsoft Partners in Learning IDP (Uruguay, Brazil, Chile, other SA/Caribbean countries) Magellan Initiative (Portugal)
Organizations Addressing Gender Equity & Empowerment	Street Girls Aid (ACCRA) Camfed International	Daraja's WISH (Kenya) Camfed International (Tanzania, Zimbabwe, Zambia)	The Girl Effect Voice4Girls (India) Educate Girls Globally (India)

Abstract

This paper analyzes the mentors' knowledge base of an Online Mentorship Program conducted by the authors with the collaboration of 10 experienced schoolteachers (the mentors) and 41 novices. The research – of a constructive-collaborative perspective - seeks to answer the questions: How do experienced schoolteachers learn to be online mentors? What is the knowledge base of these mentors? How was it developed? The data sources for this study were emails exchanged between the mentors and their novice teachers, between the mentors themselves and between the mentors and the researchers; the mentors' and novices' reflective journals; and the transcriptions of weekly meetings between the mentors and researchers. The analysis focused on the mentors' processes of building the knowledge base needed to work online with the novice so as to identify its components/elements. Implications of the results to the proposal of processes directed to mentor education are discussed.

1. Objectives and purposes of the research

Although there is agreement on the importance of considering mentoring programs in helping novice teachers' induction period, in Brazil there is no policy and only few experiences about this kind of professional development initiative has been developed. One of them is the Online Mentoring Program of the Portal dos Professores (www.portaldosprofessores.ufscar.br)

from Universidade Federal de São Carlos, Brazil. It may be characterized as an online distance program that implies frequent communication between mentors and novice teachers on its own platform. Its goal is to assist novice K-4 teachers. Each novice teacher is assisted by a mentor¹

(an experienced teacher) throughout the program. Because of its methodological approach, the adopted mentoring model aims at the novice teachers' reflection on their own practices, bearing in mind adults' learning characteristics and professional contexts as recounted by them. The mentors participants are experienced schoolteachers that have little or no teaching educators practice and they participated of the elaboration of the mentorship program foundations, defining with the researchers its curriculum and characteristics. The purpose of this research—

of a constructive-collaborative nature—is to answer the following questions: How experienced schoolteachers learn to be online mentors? What constitutes the knowledge base of the mentors? How experienced schoolteachers learn to be online mentors?

What constitutes the knowledge base of these mentors? How it has been developed?

Its research goals are:

a) To describe how experienced teachers learn to be online mentors; and b) To understand how the experienced schoolteachers' knowledge base—as described by Shulman (1988, 1986)—may be developed when acting as 1 A mentor may be understood as a more experienced professional that guides and assists another teacher in solving practical problems, mitigating dilemmas and doubts related to teaching.

mentors and researchers of their own practice in an online Mentoring Program.

2. Perspective(s) or theoretical framework

Mentoring programs are increasingly common in state policy in USA and Europe, but vary greatly in their design (Feiman-Nemser, 2001). Formal mentoring, which pairs new teachers with their veteran colleagues, is currently one important strategy to address new teachers' isolation, frustration, and failure. It is considered to be a promising avenue for the professional development of inexperienced professionals and of those who work as mentors themselves (Sundli, 2007). It is also a challenging activity on account of a number of factors associated with the interactive processes between mentors and mentees: conflicting ideas and attitudes; lack of confidence; partial information; incompatible schedules; and communication difficulties.

Countries where mentoring processes are part of their educational policies have programs specifically designed for the training of mentors, such as that developed by WestEd (www.wested.org).

In these cases, it is possible to find, besides instructional materials, investigations on their relevance and on the appropriateness of proposals. Conversely, Brazil does not have consolidated public policies² on the monitoring of novice teachers. Moreover, there are few studies on teacher educators and on the professional standing of mentors, and none on the education, activities, and knowledge of mentors, which makes it more difficult to promote their professional development.

Imperatives deriving from modern society's demands should also be included in this problematic. Today's world requires teachers to master the specific content they teach and to adopt teaching strategies appropriate to their students' development level, motivation degree, cultural and linguistic characteristics, learning opportunities, resources and other important teaching and learning variables. It is evident that the quality of an educational system depends on its teachers and their teaching practices and the professional quality of teachers is closely related to their formative processes, which, in turn, have an impact on the quality of student learning.

It is important to consider that in the last decades, research on teaching and on schooling processes has undergone conceptual and methodological changes. With the purpose of studying phenomena occurring in schools, classrooms and teachers' work, researchers have entered classrooms and schools to observe, participate, discuss and investigate teaching and learning with their protagonists: teachers and students.

This kind of research-intervention model implies collaborative interaction between teachers and researchers and emphasizes the importance of establishing multiple purposes and interpretations and dialog that requires the participants' engagement in conversation, exchange and reciprocal professional development. True collaboration allows mutual understanding and consensus; democratic decision-making and common action (Clark et al., 1996, 1998). A constructive sense is rendered by the presupposition that teaching is an ever-changing process.

In this perspective, situations seen as dilemmatic or problematic ask for collective decision-making and problem-solving processes (Cole & Knowles, 1993).

It goes, therefore, beyond the idea, that teachers are subjects, not producers of educational knowledge (Zeichner & Noffke, 2002). Involves conceiving teachers as co-authors of actions carried out to investigate processes lived by 2 The *Bolsa Institucional de Iniciação à Docência* (Institutional Grant for the Induction of Teaching) program was recently proposed by MEC/CAPES (Brazil's Ministry of Education and Culture and Agency for the Improvement of Graduate Personnel). The program, benefiting students of pedagogy and other degree courses from federal institutions of higher education (IFES), aims to encourage the career of teaching in the areas of education with greater shortage of teachers: science and math in grades 5 to 8, and physics, chemistry, biology, and math in high school. Each student covered by the program is to be accompanied by a teacher supervisor from the school where he/she will be training.

themselves and that multiple points of view can be considered (Wasser & Bressler, 1996). This means that teachers and researchers should work together; that they have much to learn from each other; and that the relationship between them is always multifaceted and dispenses with hierarchy.

These actions can promote the construction of a learning community (or community of practice) on the part of teachers (including researchers, depending on the case). This may be understood as a community of professionals, who, through interactions, modify or learn new actions and transform their professional identities. According to Gallucci (2003), members of communities of practice create, expand and exchange knowledge about their practices as well as develop their individual capabilities.

Because of teachers' active participation in collaborative investigation designs, learning may occur at three inter-related levels. Firstly, learning occurs at the individual level and promotes the broadening of one's knowledge base, which may be activated under several circumstances. Then, there is the communal construction of knowledge, given the active participation in shared learning processes that emphasize situations, contexts, interactions, and favor the construction of a teacher learning community at the collective level. Finally, there is the possibility of collaborative investigations fostering organizational learning on the part of its members, including teachers and researchers.

This study considers that the development of the Online Mentorship Program at Federal University of São Carlos, Brazil is a process involving both the mentors and their mentored novice

teachers. It also presupposes that it is essential that the mentors should master a specific knowledge base similar to that of elementary schoolteacher educators. This knowledge base is not static; it changes and expands with the very exercise of mentoring. Regardless of the specificities of their roles, educators, mentors, and novice teachers must have a teaching knowledge base that, according to Shulman (1987), consists of a body of understandings, knowledge, skills, and dispositions needed by the teacher to be able to perform his duties. This base involves knowledge of different natures, all necessary and essential to the professional performance of teaching functions. This knowledge base is not fixed or immutable: it is continually changing.

In the formative processes of the Online Mentorship Program, the actions are tailored to the specific needs of the novice teachers in question and their contexts of action. In addition, it is assumed that: (a) adult learning is more directed to the practical than the theoretical (Darling-Hammond, 1994; Marcelo Garcia, 1998; Calderhead, 1996; Schoenfeld, 1997); (b) reflection on pedagogical actions is a powerful strategy for continued teacher education, which should be rooted in their experiences; and (c) teachers need mental space and time to develop professionally, which should be institutionally secured by public education policies (McDiarmid, 1995). These same ideas were considered in our work with the mentors.

3. Methods, techniques, or modes of inquiry

The construction and development of the Online Mentorship Program at *Portal dos Professores* (www.portaldosprofessores.ufscar.br)³ adopted the constructive-collaborative perspective of research and intervention (Cole & Knowles, 1993), which allows the apprehension, interpretation, and description of the knowledge constructed by the mentors as well as the decisions they made when online teaching novice teachers how to teach. This includes a systematic investigation of consequences of the work carried out to promote changes in social relationships in the context of the community (Aldenán, 1989).

In methodological terms, the apprehension of reflective practice involves in some way the search for information, internal and external to the subjects, by proposing activities that can elicit the participants' knowledge and beliefs. This study has deemed important that the ³ The goal of *Portal dos Professores* is primarily to assist K-4 schoolteachers. It provides its users with information on didactic material, pedagogical support to innovative pedagogical practices, short courses, forums, and publicity of pertinent events.

mentors' conceptions should be primarily apprehended by means of their oral and written narratives about their work with their novice teachers (mentees) and especially through their development of teaching and learning experiences, the focal point of their work. Other sources of data were also used: autobiographical accounts; interviews (individual and with sub-groups of mentors); written narratives; and online interactions with mentees (e-mails). In view of this, this study also acquired a descriptive-analytical nature.

Many of the investigative actions were defined over time, depending on occurrences and analyses of them. In this sense, weekly meetings between the researchers and mentors played a key role since it was then that some features and deployments of the Mentorship Program were defined. Although it was up to the researchers to establish the investigation steps, tools, and analysis, the mentors together with the researchers are responsible for developing the Online Mentorship Program activities.

This study analyzes the cases – considered here as formative-investigative tools –

developed by five mentors about their 4-year mentoring experience. The group of mentors is composed by two teachers with extensive teaching experience in the first grades and in other educational functions, an educator of elementary school teachers, an elementary schoolteacher without a college degree, and an elementary school teacher with experience in school administration.

From October 2003 to 2007, ten experienced teachers, selected on account of their competence as well as their social recognition by the community, have participated in a Mentor Education Program, carried out by the researchers.

During the first phase of this program (October 2003 to June 2004) the experienced teachers defined what they deemed as necessary to play the role of mentor, the presuppositions, the –curriculum, the possible actions and the duration of the Mentorship Program. In this phase the researchers elaborated educational strategies to foster the mentors' professional development as regards mentoring activities.

The second phase (August 2004 to February 2005) implied the mentors' undergoing training in Internet to become capable of using the computer and the web platform adopted by the Mentorship Program.

In the third phase (March 2005 to 2007) of the project—when the mentoring activities began using the Internet—the researchers monitored the mentors' work closely through discussions and studies at weekly meetings and by means written accounts of activities carried out by them and the e-

mails between each mentor and their novice teacher partner. In addition the researchers met with the mentors on a weekly basis to discuss how the Mentoring Program was evolving, and to assist in their professional development.

All weekly meetings have been audio-recorded and later transcribed. After transcription, the meetings underwent an analytical process and some categories were defined.

4. Data sources, evidence, objects, or materials

The adoption of teaching cases as a source of data is based on the fact that its writing may be defined as a narrative that involves the description of real situations, i.e., complex situations experienced by teachers during the practice of teaching (Mizukami, 2006). Teaching cases may be used as a tool in the teaching (and learning) of teachers (Merseeth, 1996), since they help to elicit teachers' knowledge and ideas about teaching. Teaching cases illustrate how teachers articulate dilemmas and conflicts and overcome difficulties encountered in their teaching practices. Through reading, analysis, and construction of teaching cases practicing and future teachers alike can reflect on many issues related to their profession. Teaching cases encourage reflection because they promote visions of human experience, individually or socially, about lived histories. These histories may be seen as a kind of portal through which one enters the world and one's experiences are interpreted and signified. In this sense, a narrative is the phenomenon investigated in inquiry (Connelly and Clandinin, 2006).

When writing teaching cases, teachers can: focus their attention on something they already know; share their knowledge with others; demonstrate the complexity of their problems; and discuss these problems in the solving process. In addition, the development of teaching cases in the form of written narratives may help mentors to put their knowledge into words as well as potentially work as effective learning tools along with the others provided by the Online Mentorship Program. Taking this potential into account implies that teaching cases are capable of providing indicators on the impact of the program on the participating mentors' professional development.

5. Results and/or substantiated conclusions or warrants for arguments/point of view

The teaching cases prepared by the mentors, based on their professional development and participation in the Online Mentorship Program, reveal their difficulties and dilemmas, dealings and expectations about the program, learning instances, contributions and expectations about the mentoring process itself, and doubts about its validity due to its being at a distance.

The analysis of the data shows that the mentors—in the role of teacher educators—have, in addition to online teaching-related knowledge, a multidisciplinary knowledge base at least on two levels: (1) related to the novice teachers they mentored; and (2) associated with the students of these novice teachers (Athanasé & Achinstein, 2005). There was also indication that they hold a multifocal vision about what they need to know to teach novice teachers how to teach, since they simultaneously and permanently articulated and took into consideration their novice teachers' formative needs and

those of their novice teachers' students, the teaching learning processes they (mentors and novices) were subject to, intervening factors, and contexts of teaching practice.

Below is a systematization of the results. It should be remarked that the following organization does not intend to set up a domain taxonomy or even embrace all that a mentor should know in order to help their mentees.

Teaching how to teach via the Internet in the Online Mentorship Program at UFSCar: Mentors' knowledge base (understandings, knowledge, skills, and dispositions)

1) Knowledge of specific content:

a) Knowledge of inner needs or related to self/teaching identity (about professional teaching and its development, in particular in its early stages); b) Knowledge of students;

c) Knowledge of subject matter, curriculum, and program; d) Knowledge of pedagogical strategies;

e) Knowledge of school and educational system;

f) Knowledge of community.

2) Pedagogical knowledge:

a) Knowledge of ends and goals of education;

b) Knowledge of foundations of education;

c) Knowledge of public policies;

d) Knowledge of pedagogical contents related to students, curriculum, and school where novices teachers work;

e) Knowledge of novice teachers.

3) Pedagogical content knowledge

a) Pedagogical content knowledge needed to teach online.

b) Knowledge on how to teach novice teachers to reflect on their own practices.

c) Knowledge about how novice teachers and mentors advance their own professional development.

4) Organizational skills and dispositions.

5) Communicational skills and dispositions: How to handle interpersonal relations.

6) Reflective skills and dispositions:

a) How to analyze and reflect on one's own practice;

b) Self knowledge.

7) Knowledge of ways to promote one's own professional development.

8) Knowledge on how to learn from experience.

The teaching cases analyzed further revealed that the mentors' knowledge base is modeled by: (a) the context to which it is exposed (the context of virtual interaction with the novice teacher or that of face-to-face interaction with the researchers and other mentors); (b) the context in which it is used and practiced (the context of novice teachers' practice or that of their own practice, including herein the correspondence with the novice teachers); and (c) the processes of construction/reconstruction of new/old knowledge. Interactive conversations and written narratives should be highlighted in this modeling process as rich spaces for the construction of new knowledge.

6. Scientific or scholarly significance of the study or work

This study points to the complexity of mentoring activities and, consequently, of educating professionals to perform this function. The results obtained in this study enabled a more detailed conception of what constitutes the knowledge of a mentor or teacher educator in Internet-mediated mentoring processes. The data are relevant in view of the paucity of studies on teacher educators in Brazil. Moreover, the proposed systematization may serve as foundation for the analysis of formative processes of mentors and other educators as well as for their design.

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Introduction

Whilst the quality of instruction is a major contributory factor to positive learning outcomes, there is growing evidence in the literature about the positive correlation between effective leadership and school improvement (Bush, 2009; Fullan, 2010; Hargreaves & Fullan, 2012; Harris 2010, 2011; Harris & Townsend, 2007; Moorosi & Bush, 2011; Muijs & Harris 2007). These authors place the school head in a position to influence and lead change at the organisational level that can significantly improve the quality of provision. But leadership is not confined to only those in formal leadership authority. People take on leadership responsibilities opportunistically and work with colleagues on projects and specific tasks.

Then there is the teacher as leader of a class, group, cohort, etc. These variants of where and how leadership is taken up point to dispersed forms of leadership in the school setting as a common practice. However, Oduro (2003) notes that the exercise of school leadership in the Ghanaian context is driven by cultural bias towards power and authority from a single leader. This has the tendency to constrain agency and stifle innovation and creativity.

This research is taking the stance that individual empowerment and distributed forms of leadership are capable of responding to the pace of change at a time when structural responses are struggling. The paper starts by explaining the context within which primary and junior high school leadership is exercised in Ghana. The paper then considers the interrelationship between leadership perceptions and practice through the findings from a survey, interviews and focus group meeting. The impact of these findings is illuminated further with a discussion on how certain predispositions impinge on leadership practice among school leaders. The paper concludes with a discussion of a sustainable professional development framework for aspiring and practicing school leaders based on the notions of apprenticeship, coaching and networked learning.

School leadership Context

Basic education in Ghana constitutes two years of Kindergarten, six years of Primary School, and three years of Junior High School (JHS). The medium of instruction in Kindergarten and Lower Primary is a Ghanaian language and English, where necessary. From Primary four onwards English replaces the Ghanaian language as the medium of instruction, and the Ghanaian language is treated as another subject on the timetable. Majority of basic education in Ghana is provided by the government through what is known as public schools. On average public schools (kindergarten to junior high school) account

for over 80% of gross enrolment (Education Sector Performance report 2010) with private, not-for-profit schools and other educational settings accounting for the remainder. Public schools are mostly under resourced with many running 2 streams per day which implies shorter teaching and learning times per stream. This implies a significant number of children are likely to experience inadequate learning before they reach secondary school.

The work of the headteacher and other school leaders in these challenging contexts are marred with poor working conditions which subsequently affect morale and the quality of instruction. Practitioners be they teachers or headteachers are the significant majority and have direct relationships with their learners nonetheless their influence on curriculum and pedagogy raises tensions with circuit supervisors. The tension between school leaders and circuit supervisors is noted by MacBeath et al. (2010) who comment that sometimes the tension escalates to hatred. The circuit supervisor role is an administrative one occupied invariably by past headteachers who have been promoted by virtue of their long service. Although this role in part is one of support rather than provision of school leadership, it has evolved into a 'powerful' role that has eroded the influence of the school leaders and headteachers. The headteacher is therefore merely seen as a 'messenger' of the Ghana Education Service (GES), the employer rather than an instructional leader capable of leading innovation and change within their schools.

Methodology

The data was drawn from a small-scale investigative-inquiry. Investigative-inquiry seeks to establish facts or reasoned explanations for the occurrence of any phenomenon- in this case how practices of head teachers influence learning and school improvement. The research employed a variety of techniques (school visits, questionnaires, face-to-face interviews, focus groups and a review of policy documents). The three regions were selected to reflect three different socio-economic regions ranging from low to high standard of living.

The study sought to identify the respondents assumptions on leadership through a questionnaire based on Western (2008) Indicator of Leadership Discourses (WILD), which was then followed by face-to-face interviews to ascertain factors that influence perceptions of the dominant discourse. The questionnaire was distributed to all 36 headteachers that took part. Twelve face-to-face interviews were conducted, and a focus group event was conducted in the Brong Ahafo region with 18 headteachers. The focus group session was designed to allow respondents to discuss their views on each of the key themes in more depth. This provided for triangulation against the survey data. Three municipal administrators

were interviewed as part of the triangulation process and to gain clarification of certain policy documents that were analyzed as part of the research.

This paper does not provide the basis for generalization due to the small sample size. However, it highlights some key issues from the participants' experiences that by and large would resonate with other headteachers in Ghana and other sub-Saharan contexts. The selection of participants from three different regions helps reduce the bias. I acknowledge that a more thorough study may be required with a much bigger sample.

Findings

Headteachers perception of leadership

The WILD questionnaire gives an analysis of one's leadership assumptions and identifies the dominant discourse that underpins their belief. Western (ibid) identifies four leadership discourses: leaders as controller, leaders as therapist, leader as messiah and eco-leader. The controller leader discourse is characterized by technocracy focusing on efficiency rather than human relations. There are a lot of transactional interrelationships where people are rewarded or deprived thereof based on their productivity. This discourse originated from the nineteenth century industrial revolution but has continued to manifest in different ways in different contexts over time. The strengths and weaknesses associated with the controller leader discourse are summarized in the table 1 below.

Table 1: Strengths and weaknesses of the controller leader discourse

Controller leader discourse	
Strengths	Focus on output and task
	Driven by results
	Improves efficiency
	Works with measurable targets
	Decisive leadership in crisis
	Draws clear boundaries between the workplace and home
Weaknesses	Creates employee alienation, resentment and resistance
	Inefficient use of people, ideas, skills and creativity
	Creates inflexible and rigid work relations which often leads to disputes

Source: Adapted from Western, 2008, p.169

The therapeutic leader discourse focuses on individual personal growth and encompasses earlier work by Lewin and Rogers. Leaders use techniques to motivate individuals who then attain job satisfaction which then produces work-group cohesion. This discourse was first associated with human relations discipline with a focus on personal growth as a way of bringing about quality improvement. The underlying assumptions generate the following strengths and weaknesses in table 2.

Table 2: Strengths and weaknesses of the therapist leader discourse

Therapist leader discourse	
Strengths	Individual and team focus aware of emotions builds trust amongst colleagues empowers individual and teams through collaborative working and opportunities for personal and professional growth
Weaknesses	lacks focus and understanding of the big picture lacks dynamism and energy Focuses on individuals rather than the system and has the tendency to be introverted

Source: Adapted from Western, 2008, p. 170

The messiah leader discourse is built on ones vision as the right person to bring about any form of change. This notion became prominent in the 1980s and synonymous with transformational leadership practices where strong emphasis is placed on the central role of the leader. The leader will have some kind of vision of what the future organization will be like, recognize that colleagues must share the vision if it is to be achieved, and work hard to persuade them of it and to work collaboratively towards achieving it. This is why Bush (2011) classes it as a form of collegial leadership. According to Western (ibid) the character of the messiah leader is built on charisma and vision and 'signifies the tension between salvation and destruction, between the technocrat and the moral visionary, and between hope and despair'. (p. 163). The underlying assumptions generate the following strengths and weaknesses in table 3.

Table 3: Strengths and weaknesses of the messiah leader discourse

Messiah leader discourse	
<hr/>	
Strengths	Builds in dispersed leadership and autonomous teams
	Innovative, strategic and visionary
	Builds on strong aligned companies
Weaknesses	Unsustainable over long periods totalizing-fundamentalist cultures
	Conformist homogenous cultures can stifle innovation and creativity
	Self dependent and omnipotent

Source: Adapted from Western, 2008, p. 170

The eco-leader discourse recognizes that all components parts of a system should be considered as one because a solution in one area may create a problem in another. This viewpoint is underpinned by human spirit and social responsibility such that the natural world becomes important to the leader. The underlying assumptions generate the following strengths and weaknesses in table 3 below.

Table 4: Strengths and weaknesses of the eco-leader discourse

Eco-leader discourse	
Strengths	<p>consider employees as part of network, with agency and with autonomy, yet also part of an inter dependent connected greater whole</p> <p>promotes system leadership and self regulation</p>
Weaknesses	<p>very resource intensive</p> <p>reliance on self regulation can be counter productive when the system is deemed to be failing</p>

The WILD survey results revealed that most (56%) of the respondents perceive a leader as controller. Table 5 below is a representation of the spread of responses associated with the various discourses.

	Leaders as controller	Leaders as therapist	Leader as messiah	Eco-leader	Table 5: ranked responses from WILD questionnaire
Number of headteachers who ranked it highest	20	11	1	4	

The findings indicate that headteachers perception of leadership is still driven by “heroic” models of leadership [controller leadership discourses]. This model is noted to be unsuitable for knowledge-led industries and settings including education and training. The complexity of educational leadership today point to more dispersed forms of leadership as a means of driving-up instructional quality.

The data also revealed that lowest ranked discourse amongst the four was eco-leader.

Table 6: ranked responses from WILD questionnaire

	Leaders controller	as	Leaders therapist	as	Leader messiah	as	Eco- leader
Number of headteachers who ranked it lowest	6		2		6		12

This implies that headteachers perceive systems leadership as less significant compared to the other discourses. Ranking this discourse lowest also implies an inherent disconnect with distributed leadership and agency.

Western’s leadership discourse does not necessarily mean these leaders will practice based on their perception therefore interviews and a focus group meeting were conducted following the survey to ascertain how the respondents perceptions influence their practice.

Practices and effects

The data generated from the interviews and focus groups events raised three key predispositions that have significant impact on how leadership is understood and practiced-(culture, system and skills).

Culture; some cultural practices raise anxiety about delegation and distribution of leadership hence the rigid practice through all the ranks. This view is typified by the following comment.

‘.....there is always the fear that they will take up your job therefore you have to always remain in control even if you are not in school’ (headteacher from central region)

Although the exploration of cultural practices is beyond the scope of this paper, it was noted that these practices are manifested through spiritual beliefs, close alliances with senior administrators often referred to as ‘whom you know’ and undermining practices.

System; historical experiences at national and local level have led to a rigid form of command and control leadership associated with ‘heroic’ leadership models. The educational leadership system is built on the respect for hierarchy which constrains bottom-up or middle up leadership. This was well expressed by one of the respondents in the focus group meeting.

'There is always the fear of abuse of power if too many people are empowered therefore I prefer a centralized systems.....remember this is Ghana and we know what people can do when they have too much power'(Municipal Administrator)

Skills; The lack of training or inadequate preparation for school leadership was noted as significant to how leadership was understood and practiced. Headteachers and other school leaders make very little use of student performance data to inform decisions on performance and curriculum quality. Also teaching and learning interventions are reactive rather than proactive. Headteachers and year leaders arranged extra classes to fill 'gaps' in the syllabi resulting from poor teaching and learning. Headteachers were unaware of current debate around curriculum development, innovative teaching and learning strategies, and change leadership and management. The lack of training and professional development was epitomized by the following responses from the interviews.

'..... I haven't had any form of training as a headteacher per se but I think I am doing a good job'
(head teacher in Brong Ahafo)

'.....headteacher role is just extra responsibility and I receive (Ghana cedis 4) per stream for taken that on. (Headteacher from Greater Accra)

'.....I would like some training but I don't even have the time. When I am not in school a lot can go wrong. At the moment teacher A is just helping out as assistant headteacher but she is not officially appointed' (Headteacher from Central region)

I argue that with the following four dispositions school leaders in Ghana and similar context have a greater chance of succeeding and improving their practice which will ultimately have an impact on school improvement.

1. *Leader as a learner* implies a commitment to continuous professional and personal development. When one leads, there is an element of learning usually influenced by everyday challenges and new things are being learned, often by the leader as well as those being led. This supports the assertion, then, that leadership and learning are inextricably linked.
2. *Dispersed leadership* as a way of bringing about improvement. It is important that the ministry of education and local governing bodies develop a culture of dispersed and shared leadership in response to the pressing requirement to build leadership capacity and to develop the leaders of

tomorrow. It is essential that leadership culture in Ghanaian education is one that encourages initiative, tackles difficult problems directly and is genuinely aspirational.

3. *Professional identity formation* as a way of influencing policy and change. Issues of leadership, behaviour and culture are more likely to involve consideration of individual, personal and professional respect issues. Therefore having a group of professionals governed by the same values and norms has the potency to generate a voice worth listening to. These may impinge on career aspirations and development priorities.
4. *Professional accountability* as a means of engendering trust and reinforcing the role of the headteacher and other school leaders. A desire to take responsibility and to accept accountability should be part of the core training and practice. There should be acknowledgement and acceptance that knowledge, skills and standards may be directly monitored against outcomes, measurable achievements and targets.

Discussion: towards a framework for leadership development

What constitutes professional development is a highly contested issue. This is partly because of the complex relationships involved, and partly because of the scope and factors at play in the process of learning and development. There is also considerable overlap between these elements, what West-Burnham (2009) describes as ‘the symbiotic relationship between personal growth, professional growth and effective learning’ and ‘leadership ... and the pivotal relationship between growth and development’ (p. 12). There are the contextual factors of an educational organization, the professional values and influences on the individual’s own perception and understanding of professional identities, overlaid by the myriad ways in which professional development may be accessed.

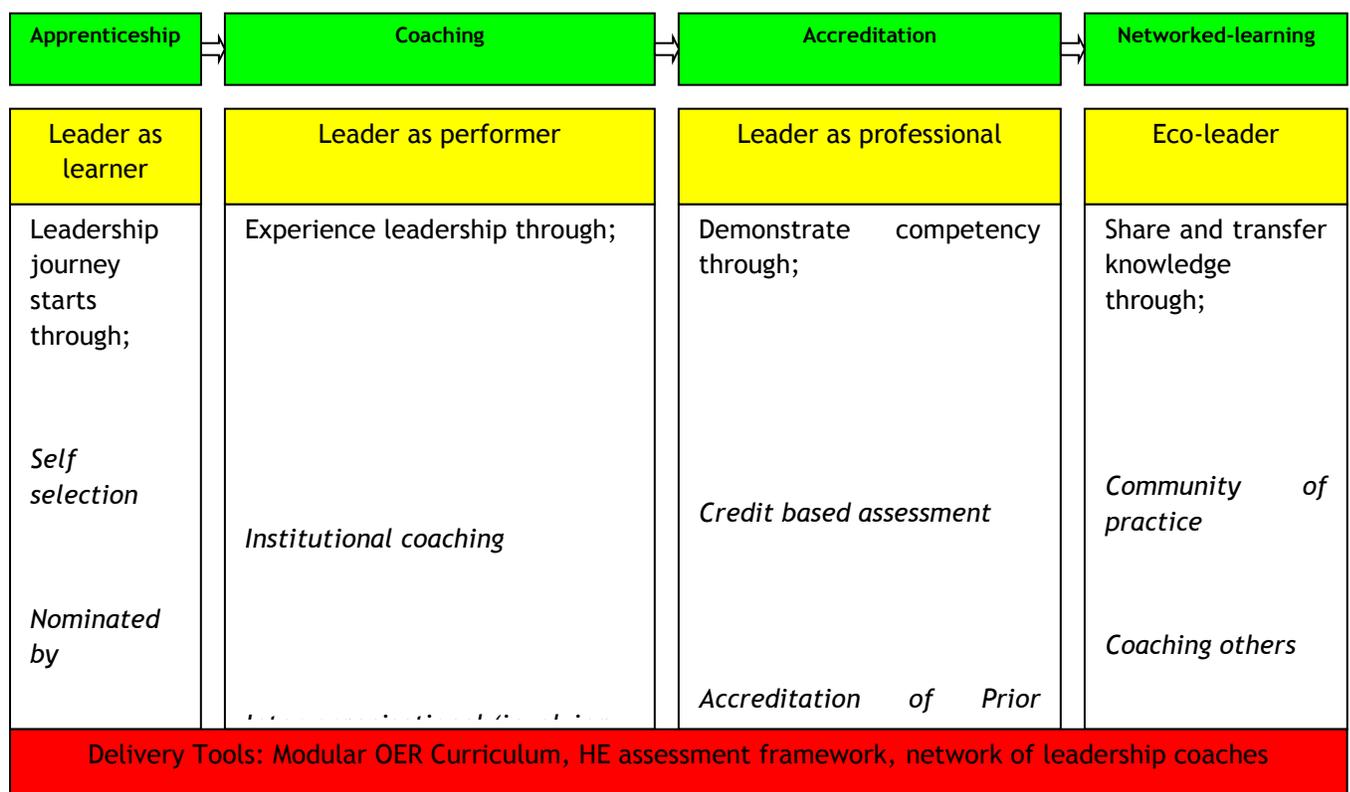
The continuous search for new ideas and frameworks on leadership development is partly driven by socio-economic challenges, globalisation, marketisation and the recognition that one size does not fit all. The recognition that leadership is an important lever in change and quality improvement (Balogun and Hope-Hailey, 2012) implies equipping school leaders with the right skills and as well as influencing dispositions could lead to school improvement. Bush and Oduro (2006) put forward a model for leadership preparation and induction in Africa which is based on six key components; budgeting, preparation capacity, nature of preparation, qualification, funding, appointment and induction. This model suggests structured model of delivery and formal instruction. However, the workload of Ghanaian headteacher and aspiring school leaders makes it difficult and often impossible to commit to any formal and structured form of study. More recent work by McBeath et al. (2010) provide a framework for advancing leadership for learning based on five principles for practice; a focus on learning, an

environment for learning, a learning dialogue, shared leadership, and mutual accountability. These principles were drawn from earlier projects involving schools in Europe, North America and Australia where countries are well developed economically, structurally and have well developed educational systems. Although the authors report reasonable success, I argue that the underlying notion of centred agency using circuit supervisors as professional development leaders (PDLs) constrains the distribution of knowledge, leadership and agency required for school improvement in Ghana. Another point of departure from this model is the fact that these training sessions require physical attendance again a difficult and unsustainable demand on headteachers and organizers.

ACAN framework

The framework recommended below is modeled on practices in apprenticeship, coaching and networked learning as an effective way to deliver in-practice learning through the use of Open Educational Resources (OERs). Figure 1 below is an illustration of the component parts of the framework. Apprenticeship as a model of learning is well established in Ghana through most of the vocational institutions. This is when a trainee works with a person (master craftsman or specialist) or an employer in order to learn a new trade or acquire a specialist skill. This helps to develop existing practitioners as well as harness new talent.

Figure 1: ACAN framework for in-practice learning and development.



Bush (2009a) categorizes action learning, networked learning and portfolios under the broad heading of 'group learning'. Action learning emphasizes the practical and practice elements in a cycle of reflection, and Bush (ibid), as an example, notes its importance in some programmes in Singapore. His consideration of networking is of a structured form, refers to a version of this designated as 'cluster learning' that operates in South Africa for development of principals. The use of credit based assessment and portfolios can link development to specific contexts

Although the impact of this model on school improvement may not be direct –the assumption is that leadership affects student outcomes. The ways in which it does so, and the identification of what exactly is the required development for this to occur, is often debatable. The impact is both in terms of not only the effect on organizations but also on an individual's career development.

Conclusion

In this paper I have argued that improved leadership skills and a change in dispositions are required to improve school leadership in public schools in Ghana and similar contexts. From this perspective I have put forward a leadership development framework delivered through Open Educational Resources. Although I have continuously emphasized the application of the model to contexts similar to Ghana, I acknowledge that to better understand leadership practices in sub-Saharan Africa, further cross-national comparative studies are required to develop frameworks that are context neutral.

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SHIFTING FACULTY PERSPECTIVES: LEADING CURRICULUM CHANGE FOR THE DEVELOPMENT OF GLOBALLY COMPETENT TEACHERS (WILLIAMS)

Many colleges of education have taken up the mission of creating globally competent teachers as they recognized the changing global reality and the central role teachers play in equipping students for a globalized world (Longview Foundation, 2008). Mansilla and Jackson (2011) defined global competence in terms of the skills students need to have, including the ability to investigate the world beyond their immediate environment, recognize their perspectives and the perspectives of others, communicate ideas effectively to diverse audiences and take action. In addition to qualities essential to teaching such as content knowledge, teaching skill, and understanding children, to develop globally competent students today's teachers need to have knowledge and understanding of other cultures, the ability to integrate a global focus into curriculum and the ability to tap the knowledge of skills of others in the community (Asia Society, 2010). Teachers learn much of their pedagogy from teacher education faculty. Recognition of the influence of teacher education faculty has led to call for teacher preparation programs to encourage faculty to change the building blocks of their own practice: their dispositions, knowledge and skills (Stone, 2006; Teekens, 2003) if they are to prepare globally competent teachers.

Demands for teacher educators to change their own teaching practices have been on the rise. For example, Taylor (2010) noted that while teacher education programs may stress the importance of constructivist approaches, the instructional practices of their faculty are often times based on traditional, teacher-centered transmission models. In addition, often teacher educators employ an overly simplistic view of culture, looking at food and festivals. Taylor argued that when their teacher education students begin teaching they will more likely use a similar superficial approach. As Smolen, Colville-Hall, Liang & MacDonald (2006) found, faculty's self-identity, cultural identity and awareness affect their ability to educate preservice teachers. If colleges of education are to develop globally competent teachers, teacher education faculty must have space to reflect on both content and pedagogical practice. Despite the primary place of curriculum transformation to the internationalization, and the central role of teacher education faculty play in curriculum transformation to support the development of globally competent teachers, less is known about faculty perspectives with regard to pedagogical changes. The purpose of this study was to explore how teacher education faculty who participated in the GFDP describe the curricular and pedagogical decisions they made in order to internationalize their courses and support the development of globally competent teachers.

Methods

The purpose of this study is to explore the pedagogical changes teacher education faculty made in order to internationalize their courses and support the development of globally competent teachers after participation in the GFDP. In order to explore faculty pedagogical reasoning, this study used qualitative case study methodology, (Merriam, 1998; Stake 2000). Exploring faculty pedagogical reasoning required participants to give voice to their perceptions and explain their thinking, the assumption being that data from their verbalized cognitions was valid. The underlying assumptions in qualitative case study are that social experiences are given meaning by the participants and that their responses to questions about beliefs, behavior, and effects are valid as evidence of the existence and nature of the phenomena. These assumptions also underlie this research and provided a rationale for our decision to undertake a qualitative study.

Data Collection

Part of a larger study of the GFDP, for this study researchers conducted in-depth, semi-structured interviews with six teacher education faculty. Faculty were asked about their participation in the program and the changes they made to their courses. The goal was to explore how teacher education faculty in the GFDP described their pedagogical decisions and changes to their practice to internationalize their courses and teach for global competence.

Data Analysis

Each faculty member was interviewed and all interviews were transcribed verbatim and then uploaded into a project in NVivo 9. The researchers then met to develop a preliminary list of codes based on their notes from the interviews (Bogdan & Biklen, 1998; Miles & Huberman, 1994), and then each transcript was coded by the researcher who had not initially conducted that particular interview. The preliminary list of codes and categories were used as a starting point to ensure consistency, but as the coding progressed these categories were expanded and other emergent codes and categories were identified. The researchers met regularly throughout the process to compare codes and ensure consistency. After an initial round of coding, the researchers met and agreed on a final list of codes, combining the preliminary and emergent codes, and examined each coded data segment to ensure that it fit the description of the coding category. Each transcript was then re-coded by the other researcher to ensure consistency and thoroughness of coding.

After two rounds of coding, the researchers met to discuss the themes that had emerged from the coding process. Based in the constant comparative method of data analysis (Merriam, 1988), researchers identified increasingly more abstract themes in the data. Researchers also examined themes both within cases (individual faculty participants) and across cases (Yin, 2003) in order to understand faculty reasoning about the curricular and pedagogical changes they made in order to internationalize their courses and support the development of globally competent teachers.

Findings

The results of the study indicated that participation in the GFDP did influence the pedagogical decisions of teacher education faculty participants and the changes they made to their courses. The study found that faculty's pedagogical decisions were rooted in an understanding of internationalization and global competence that was linked with enabling teachers to use culturally relevant pedagogy for today's diverse classrooms. The study also found that while all faculty introduced global content into their courses they did so in different ways and their decisions were shaped by their course goals, personal orientation and experience and their thinking about their students. In the sections that follow we describe, in greater detail, faculty perceptions of their thinking about internationalization and the instructional changes made to their courses.

Linking Internationalization for Global Competence and Cultural Diversity

All teacher education faculty, regardless of subject area, saw broader implications for training future teachers to think more globally. They expressed a commitment to preparing preservice teachers to effectively teach in today's diverse classrooms and understood internationalization for the development of global competence as a vehicle for preparing them to do so. None of the faculty in this study understood internationalization for the development of global competence as an end in itself but rather linked it to preparing teachers to use culturally relevant pedagogy. For example, Julie explained that her decision to change her math methods course sprung from her belief that she needed to prepare future math teachers to reflect on their own cultural perspectives, and how those might differ from the students they would be teaching. Reflecting on her understanding of internationalization as a vehicle for preparing teachers for cultural diversity she said:

Increasingly, they're going to have students whose experiences, either at home and/or if they're immigrants here in their home countries, are vastly different than the experiences that they had.

Faculty internationalization began with their understanding of their goals to prepare teachers for culturally diverse classrooms. They saw internationalization as a vehicle to do this and linked international content to local classroom conditions.

Introducing International Content

All six teacher education faculty members understood internationalization as a means to preparing globally competent teachers who could effectively teach in diverse settings and to this end made changes to their course content. However, faculty adopted different approaches to incorporating international topics into the curriculum. Faculty decisions about the way they would introduce global content into their courses were shaped by their course goals, personal orientation and experience and their thinking about their students. Three approaches were found, a modular approach, whole curricular approach and an authentic assessment approach.

Modular Approach

Donald sought to internationalize his science methods course. He believed that depth of knowledge was what teachers required if they were to feel confident to use the new content in their classrooms and so chose one major global issue rather than several topics and decided to adopt a modular approach. He found that preservice teachers “could learn content in a two-week module that they didn’t have before, and they could learn it in the context of witnessing pedagogy that they would want to use themselves.”

Whole Curriculum Approach

Laura chose to weave international literature throughout her entire multicultural literature syllabus and to teach culture through the literature rather than adopt a theoretical approach reasoning that adding international literature to the discussion of every theme avoided tokenism and conveyed that the literature was on an even footing with the U.S. content. Inclusion in this way made it more likely that the teachers would use the international literature in their own classrooms.

Authentic Assessment Approach

Christina believed that students often focused on assessment and so she could convey the importance of global competence and foster global learning by designing assignments that helped students interact with the internationally diverse communities they served and apply their new knowledge to their teaching. For example, Christina had students consider the areas that their students were from, select an area and research it using both primary and secondary sources. Her intentional inclusion of primary sources required students to go into the community and meet with people with experiences different

from their own. Her goal in using this strategy was to “push the students to really learn about the communities that they were teaching in, and think about how they need to deliver that information.”

Pedagogical Strategies

The study also found that faculty made a variety of decisions about the instructional strategies they would use and these also varied based on their personal orientation and experience and their understanding of their students. Three were most commonly articulated. Faculty relied on developing global content knowledge, they sought to facilitate cross-cultural interactions, and they intentionally challenge stereotypes.

Focusing on Content Knowledge

Two faculty participants chose to make content knowledge the focus of their internationalization efforts and placed more emphasis on learning new material than on unpacking teachers’ assumptions and mindsets. Laura chose to let the literature and discussions about the literature be the centerpiece of her instruction about culture rather than leading with theory. Laura often reflected on her understanding of the learners in her classroom, the context they would be teaching in and their reluctance and fear of addressing things outside of their own personal experience. Her decision to focus less on research about culture and to use the literature as the vehicle to discuss identity and cross cultural interactions was rooted in these considerations. She felt that culture theory might put students off the topic and make them fearful of trying the international literature in their classrooms. By focusing on content Laura believed that the classroom and material was less threatening to students and still gave them the opportunity to examine their thinking using the literature to do so. Donald also chose to rely on the content, reasoning that when teachers are secure in their content knowledge they are likely to teach the content in their own classrooms.

Facilitating Student Interactions Around Global Purposes

Four of the six faculty members saw the need to encourage direct intercultural contact between preservice teachers and persons from another country with the aim of examining multiple perspectives. For example, Andy established a Facebook page to have his U.S. preservice teachers link up with Ethiopian teachers. Christina designed an assignment that required students to meet and interview persons from a different country in order to design a family educational program that met the needs of the selected group. Julie had students interact with Korean teachers and with immigrant students and families in their classrooms. Fostering intercultural interaction with persons from different countries,

either virtually or in person, was viewed as necessary in helping teachers develop the habit of considering multiple perspectives.

Faculty of color challenge stereotypes

Three faculty of color who had significant international experiences worked hard to challenge mindsets and stereotypes of the teachers in their courses. Melody, Andy and Julie had all had significant international experiences prior to the GFDP. Melody was originally from South Africa and had taught in a variety of international contexts. Andy, an African American, had taught and done research in Ethiopia. Julie was Korean American and had a longstanding interest in international education as it related to pedagogy. All three made the decision to include international comparisons throughout the curriculum rather than discuss them separate from the U.S.-focused content with the intention of challenging preservice teachers thinking and assumptions. Melody's orientation reflects that of the other two faculty of color. She already included discussions of illegal immigration and migrant farm workers in the United States in her course, but then broadened those topics to include international comparisons, such as illegal immigration in Europe and the challenges faced by the Roma people in France. Then she had teachers examine their own work with children in ways that would challenge their thinking. She described her approach in this way:

I have them look at things in their own work with children that they hadn't really looked at before, questioning assumptions, identifying prejudices. You know. 'Why does a child with a French accent sound smart and a child with a Spanish accent sound like a poor immigrant?'

Discussion and Research Implications

Faculty Purpose: Internationalization, Diversity and Culturally Relevant Pedagogy

The faculty in this study continued to focus on developing teachers for local multicultural classrooms. Shulman (1987) outlines a model in which pedagogical reasoning begins with comprehension of purpose. The findings of this study suggest that for teacher education faculty, their central goal of preparing teachers for culturally diverse classrooms largely determined their decisions about incorporating global content into their courses. Often the idea of internationalization and fostering global competence is introduced as an end in itself. The findings here suggest that internationalization and discussions of global competence may need to be linked to the local context if they are to be accepted as central to the work of faculty. In addition, advocates of internationalization of teacher education may need to further explore the possibility of an emphasis on the development of global competence being superseded by preparation for culturally diverse classrooms.

Integration of Global Material

In addition to being able to understand the global content faculty spent time considering how to integrate the content into their courses. Banks (2005) identified four approaches to integrating multicultural education into the curriculum that are also relevant to curriculum internationalization: (1) The Contributions approach, which focuses on superficial additions to the curriculum; (2) The Additive approach, in which content is added without changing the curriculum structure; (3) The Transformation approach, in which the structure of the curriculum is changed to enable students to view concepts from diverse perspectives; and (4) The Social Action approach, where students take decisions about social issues and take actions to help solve them. These categories can be misleading perhaps suggesting that only the social action approach is valid and that other approaches do not convey the significance of the new content. The findings suggest the need to problematize the implication of simply ranking approaches, that is implicit in Bank's typology. For example, one faculty member added a module to his course, without changing the curriculum structure. However, rather than simply being additive, the module was a key part of the curriculum and focused in-depth on a topic. The findings of the study also suggest that in internationalizing their courses faculty must spend time thinking about the ways in which they would integrate the global content, paying attention to their goals for the teachers in their courses. This study raises the possibility of gaining valuable learning outcomes from a variety of approaches. However, because this study did not examine changes in teachers further study could be undertaken to understand the impact of different approaches to internationalization on the development of global competence in teachers and in their own use of global content in their own classrooms.

Instructional Selection

All six faculty participants in this study recognized that in order to develop globally competent teachers they needed to be mindful of both content and pedagogy. In science, math, literature and reading, faculty sought to help teachers look at content, practices, events and issues through multiple perspectives. To facilitate the examination of multiple perspectives faculty in this study spoke of the importance of facilitating cross-cultural learning experiences for teachers. The aim was to increase the experiences teachers had with persons different from themselves, and in so doing, to prepare them to teach and interact with culturally diverse students and parents. Faculty perceived the impact of interactions as essential to teachers understanding of diverse cultures and reasoned that cross-cultural interactions were more powerful than reading about different perspectives in a book. When selecting activities for teachers, faculty had teachers communicate with teachers overseas, and talk with international students, immigrant students and parents. The goal was to develop in teachers the habit of thinking about the content from the perspective of immigrant children and families in their diverse

classrooms. These findings echo Merryfield's (1995, 2002) conclusions about successful global educators. In her studies she found that providing cross-cultural experiences and fostering the habit of examining multiple perspectives were key to bringing about the development of global competence.

Role of Faculty Identity and International Experience in Internationalization

While all the faculty in this study sought to increase teachers thinking about diverse cultures and used the strategy of exploring multiple perspectives, three of the faculty spoke explicitly about the fact that their students belonged to the White, mainstream culture, and sought to challenge their thinking about teaching and learning by having them confront their own thinking and assumptions. All three were persons of color who had also had lived and worked abroad and had spent considerable time looking at their own identity and cultural differences. Merryfield (2002) noted that challenging stereotypes and misperceptions that students bring into the classroom is an effective and appropriate strategy of global educators. She argued that it is necessary to make instructional decisions that profoundly influence students' understanding. Cochran Smith (2003) similarly argued that in challenging stereotypes in the classroom, teacher education faculty must face the limits of their own competence and be willing to call into question their own assumptions. Prater and Devereaux (2010) also argued that teacher educators need to examine their own assumptions and develop a more culturally responsive approach. The faculty who were willing to use new global content to explicitly challenge students' assumptions had all spent considerable time examining their own assumptions and considering the values and practices of other cultures. They therefore felt comfortable constructing pedagogy that could challenge teachers' values and take into account cultural diversity. It is important to note that the three other faculty in the study also sought to help teachers learn about other cultures but without explicitly challenging assumptions and values. The findings suggest that the cultural identity and personal experience of faculty may play a role in the pedagogical practices they are willing to use in their classrooms to prepare teachers for the cultural diversity they will face. More study is needed to examine the role that faculty racial identity plays in faculty willingness to challenge student cultural assumptions.

Conclusion

The study found that it is faculty understanding of their purposes that determines how they incorporate global content into their courses and the ends they aim to fulfill. This study found that it was pedagogical reasoning more than the literature and policy rhetoric on internationalization for global competence that shaped the decisions of faculty. Faculty perceived a link between global competent teachers and culturally relevant pedagogy and it was this understanding that guided their internationalization decisions. The differences in the way international content were infused into their courses depended on faculty thinking about course goals, their students characteristics and the

culturally diverse classrooms the teachers would be placed in. In addition, the study found that faculty characteristics such as race/ethnicity, may also play a role in their thinking about the ways in which they use international content to challenge student thinking. Global competence has been advocated as a characteristic needed in future teachers if they are to help prepare their students for the world. This study underscores the need to understand how faculty think about their purposes and how their thinking shapes the changes they make in their courses, instruction and learning goals they have for the future teachers in their classrooms.

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ABSTRACT

The main purpose of this paper is to examine leadership and management of crises in tertiary institutions in Nigeria. The paper is theoretical in nature and examines leadership in tertiary institutions, leadership typology and styles. The major factors that cause crises in tertiary institutions in Nigeria include communication gap, information overload, inadequate facilities and societal influence. The crises management techniques include curative and preventive approaches. It was concluded in the paper that, despite all measures and approaches adopted in crises management in tertiary institutions, many leadership practices constitute potential crises generating factors. In view of the above, it was among other things recommended that leadership of tertiary institutions should accommodate the views and expectations of both staff and students in their scheme of things so as to promote peaceful co-existence in their institutions.

INTRODUCTION

Education is the bedrock of any developing nation and it brings changes to a dynamic society. Everyday the mass media bring word Of some new crises in our institutions. These crises ranging from students unrest, academic and non-academic crises to leadership tussles, student group clashes as a result of power tussles in the institutions are splintered by interest groups, religion and other destabilizing elements. Such occurrences threaten peace in the educational systems.

Consequently, many Nigerians are conditioned to think that crises have become inevitable component of higher education in contemporary Nigeria. The nations' institutions of higher learning are decaying and are fast becoming environment where learning could no longer take place. The story seems the same everywhere; students demonstrate and staff threaten to go on strike or are actually on strike. These unending crises in and out of academic environment tend not only to halt learning but also to endanger national peace.

Furthermore, education in this country has been facing the problems of leadership where every government comes up with different educational policies aimed at actualizing self-ideologies. NO government passes without having interest in education. And that is why Njoku (2007) is of the view that education in our Nation Nigeria is the only sector where we have an operating and successful national policy when everything else seems to have given up. Thus, the issue still remains of who takes over the administration of the country and there will be no crises especially in the educational sector. This can be resolved based on the leadership styles of the government and administrators of these

institutions, knowing fully well that most of these leaders and administrators are products of the tertiary institutions, but discuss only their welfare and allow the educational system, where they passed through, to decay forgetting that education is the cornerstone of development that forms the basis for literacy, skill acquisition, technological advancement as well the ability to harness the natural resources of the environment. This paper therefore looks at most of the leadership styles in the management of educational crises among the tertiary institutions in Nigeria, and how each style of leadership adopted either ignites or checks crisis in our higher institutions of learning.

CONCEPT OF LEADERSHIP

When one hears of leadership as a concept for discussion, one is likely to conceive in one's mind, numerous ideas. Probably, one may think of it in terms of power, authority or influence. One may equally conceive some internationally acclaimed great names like Napoleon, Churchill, Abraham Lincoln, J. Washington, Ghandi, Dr. N. Azikiwe, etc and use the records of those men as a yardstick to measure requisite traits that effective leaders should possess and how they should behave. This indicates multi-facet nature of the concept of leadership. Discourse on leadership occupies a central position in the modern organizations, be it governmental, individual, educational or jointly owned business. The impact of leadership style on the progress of any organization becomes manifest through the performance of the workforce shown through the productivity level of the outfit towards the attainment of its corporate objectives.

The concept "Leadership" is everything in governance and management of human affairs, and history has provided us with instances of specific qualities and attributes that contributed to effective leadership. They include having a clear sense of purpose, missions or specified objectives to be achieved, charisma and the ability to motivate others in a way that favours compliance, dedication and devotion to the fulfillment of the vision and mission of the leader and of course, understanding the environment and having the courage to challenge the status quo when necessary. In other words, leadership could be seen as the ability to inspire, develop and empower a group of people to do their best for a common goal, purpose or result. It is important to view leadership as a combination of strategy and character where both are indispensable to achieve a predetermined goal or objectives. Thus, leadership experts have produced theories involving traits, situational interaction, functions, behaviour, power, vision and values, charisma and intelligence among others.

Leadership according to Kouzes and Posner (2007), is the process of social influence in which one person can enlist the aid and support of others in the accomplishment of a common task. They further see

leadership as the most important; indeed the scarcest resources of a business enterprise. Hersy and Blanchard (1982) define it as the process of influencing the activities of an individual or group in efforts towards goal achievement in a given situation. Similarly, Chandan (1989) opines that leadership is the art of influencing and inspiring subordinates to perform their duties willingly, competently and enthusiastically for the achievement of group objective. Pfiffner and Preresthus 1967 in Ogunna (1999) conceive leadership as the art of coordinating and motivating individuals and groups to achieve desired ends. A critical factor that underpins all these definitions is that an effective leader must be in a position to influence or generate fellowship towards identifiable goals in a given situation. This goes with particular reference to leadership effectiveness.

In other words, leadership effectiveness is necessarily related to a specific situation. This is by and large the view canvassed by contingency theory of leadership. Hence Ocho (2007) concludes by saying that “if one helps a group to define and achieve goals or to maintain the group, he is exercising leadership than person who helps to reconcile conflicts and make people feel happy to belong to the group or organization is helping to maintain the group. The next section deals with leadership typology in academic institutions.

LEADERSHIP TYPOLOGY IN EDUCATION

Leadership typology refers to a leader’s behaviour. It is the result of the philosophy, personality and experience of the leader. Leadership in education according Njoku and Njoku (2010) was introduced to address the needs of students from diverse backgrounds. Education is an important aspect of human life. How we receive and translate it into our daily life largely dependent upon the way it gets passed on. Educational Leadership has been studied over years to address longstanding concern of students, educators and society at large. As the need to understand which types of leadership in education will work best, alone or in combination, it is imperative to understand these types individually in regards to their methods and what they offer. Many educationists have either supported or criticized certain leadership styles, however, which style suits and works best is subjected to a matter of opinion. Education leadership typologies are based on the understanding that certain characteristics such as physical energy and/or social interaction play a part in the way education is imparted. Educational leadership therefore is a school of thought, which guides children, parents and teachers towards accomplishing a common education goal. Also known as school leadership, the ideology demands dynamism and pro-activity from the participants. Effective leadership in education are about strengthening the performance of educational leaders, primarily the educators to improve student

achievement. Hence effective leadership is crucial for teachers and students to enhance performance at the highest level.

Generally speaking, there is no single best way to lead and inspire in the field of education. Each educator, as well as schools, view leadership strategies differently, ascertain situations; features and actions seem far more favourable than others at different level and times. Kouzes and Posner (2007) present three strategies that can be summed as types of leadership in education, which can either, be used individually, or as versatile combination. They are as follows:

a. Hierarchical Leadership

This type of leadership styles are based on the traditional methods of education that lays more emphasis in a top-down approach in which all course of action is asserted and carried out with formal authority and has little scope for participatory analysis. Here the administrative head, namely the Provost, Vice Chancellor carry out all duties of a planner, supervisor, analyst, resources allocation etc. It is a very straight forward type of leadership style, with major emphasis on efficiency, control and routine.

b. Transformational Leadership

This type of leadership is based on the concept of working together to put in place a mechanism that will not only reap immediate benefits but future ones too. Although most decisions are taken individually or by a small group of people, this leadership type opens the door wide for intellectual excitement, motivation through values and a shared vision by participation in leadership activities. A leader who follows transformational leadership fosters a sense of purpose and meaning to unite people for a better cause.

c. Facilitative Leadership

Facilitative leadership very similar to the strategies used in transformational leadership, but more democratic as well as interactive in practice. A facilitative educational leadership works with the entire management, offering them partnership in preparing for the future, and by promoting collective ideas by being a part of the crowd, rather than being at the centre. Empowering the entire education systems is the primary goal of the leader practicing facilitative leadership.

LEADERSHIP STYLES IN SCHOOL MANAGEMENT

All leaders do not have the same attitude or the same way of looking at things. Some leaders foresee freedom as a way to let creativity and independent thoughts blossom, while others believe that a more than just modicum of control is necessary to achieve targets and get the work done. The only constant thing here is that they all strive in their own respective way to achieve organizational goals and get others to help them achieve them as well. These styles of leadership in school management include:

a. Autocratic Leadership Style:

This style of leadership according to Ibeh (2012), Njoku (2000), Nwizu (1997) assumes that the consummation of intelligence needed for the formulation of corporate policies lies in the leader. Consequently, the leader does all the thinking and takes all decisions while the subordinates are duty bound to concede and implement his policies without any objection. This type of leadership relies on intimidation and coercion to win compliance. He does not encourage criticism of his ways. According to Chandan (1989), this leadership style may waste workers' creativity and expertise, and it will fail to motivate and make workers feel committed to their tasks. Hence does generate crises in the institutions.

b. The Laissez Faire Leadership Style:

The assumption here according to Nweke (2004), is that there is no need to keep people under control, dictate for them or direct them towards a given action. Rather, the leader should give the subordinates free hand to discharge their functions as they deem fit. Without any sort of control as this style of leadership presupposes, there will be no discipline and where there is lack of caution, people will not know their limits and anarchy soon sets in. Examples of laissez faire leadership styles according to Ibeh (2012) are observable among mob and riotous group.

c. Participative –democratic Leadership Style:

The third and last of the leadership styles in school management is a mix of the two discussed above. While the first two seem extreme in their implementation; the participative democratic leadership style is a good balance of the two. The role of leadership in school management here is to encourage the participation of his team members in the decision-making. The communication in this style of leadership is decidedly two ways. The leader presents an issue and then requests for opinions, suggestions or recommendations from his subordinates. The presumption here is that there are personal initiatives in the subordinates, which could be useful to the leader in ruling and making his corporate policies.

MAJOR FACTORS THAT GENERATE CRISES IN TERTIARY INSTITUTIONS IN NIGERIA

Crises are understood as any threat or event that creates chaos or stimulate confusion in the environment of an educational outfit. Longman Dictionary of Contemporary English defines crises as “ a situation in which there are a lot of problems that must be dealt with quickly so that the situation does not get worse or more dangerous”.

Every tertiary institutions in Nigeria, be it college of education, university or polytechnic has at one time or the other experienced some kinds of crises. In recent times, such crises have resulted in disjointed or disrupted academic sessions. In some instances, students got aggrieved and went demonstrating and such demonstrations sometimes result in loss of both human and material resources. Generally, the reactions of the management will be to close or suspend academic activities for a while. And later re-open with some rigid control measures, which often times ignite the time bomb finally.

On the other side of the coin, crises also emanate from the staff of the educational institutions, especially when they perceive some infringement on their rights and subsequently react negatively. However, below are some of the major factors that generate crises in Nigeria’s education system.

1. Communication Gap in Education establishments

When the appropriate organ for communication does not provide the required information, substitute communication develops in the form of rumour, gossip and outright falsehood. These are apt to generate conflict within the institution. An example may be found in the submission of Jibril Aminu to Justice Usman Mohamed commission of inquiry that looked into the “Ali-must go crises of 1978. According to Aminu (1986) the commission was informed that one immediate cause of the crises was wild rumours of terrifying fee increases. Generally, the staff of Nigerian institutions of higher learning often complain about the time taken in the bursary to process legitimate claims. Often no explanation is ever given for the habitual delays. Circumstances like these are apt to constitute breeding grounds for crises.

ii. Information Over Load:

Contrary to the situation where communication gap is prevalent, many educational institutions tend to produce information overload. This is a situation characterized by excess information above the ability

of the message receiver to process such transmission. Husman, Luhiff and Hatfield (1977) affirm that human being can handle only limited amount of information at a time. According to Udejah (2001), information in this case, can refer to anything from extra-curricular responsibilities to seeing that the work order for each day, week, semester or session is completed on time.

A problem is apt to arise of the demands placed upon the individual become too great. Such may be the case when an academic staff, concerned with family difficulties does not understand exactly what his superior, the H. O. D, the management, the senate, expects from him – submitting the examination scripts and results on schedule. Consequently, errors, emotional strain, dissatisfactions may set in because of limited time. Hence, Amaefula (1991) concludes that “these channels were not only over loaded but also faulty, hence ineffective for highly populated academic communities of a developing nation like Nigeria.

iii. Inadequate Facilities on Campus

Higher institutions in Nigeria are having difficulties in accommodating the increasing population of students. The personnel is also growing too because of increasing students’ population. This however is not matched with corresponding services and facilities needed for conducive learning, teaching and research on the institutions. This situation can trigger crises if not attended to.

iv. Societal Influence

The Nigerian educational institution is a subsystem of a larger society and as such reflects the society in which it is found. The higher institutions are not immune to the diverse variables that emanate from the larger entity. Accordingly, activities within the academic community embody the psychological, social, economic and political variables prevalent in the outside environment. In other words, activities within the citadels of learning are to be perceived against the general background of the complex social changes taking place in the country. There is no doubt that agitations/crises characterizes various aspects of Nigerian society. The Boko Haram activities resulting in several bombings of some tertiary institutions in the northern part of the country are good cases in point.

At this juncture, a question emerges. Should those responsible for administration of academic institutions allow situations to deteriorate to a damaging phase of demonstration before control measures are introduced? The answer is NO.

CRISES MANAGEMENT TECHNIQUES

The management techniques for crises management in tertiary institutions can be hinged on public relations (PR). Nwosu (1990) defines public relations as that which aim at making friends for an organization and retaining those friends and building internal and external goodwill. PR is at the heart of modern school administration and it is enhanced by communication. Public relation practitioners approach crises in two different ways. Some wait until an event happens, then they try to face its consequences. Others on the other hand take the steps considered necessary to prepare for the unexpected. Hence we have curative and preventive techniques.

a. Curative Approach

To cure means to provide a successful remedy for a disease, ill health; it is to get rid of an evil. On this context, the application of a curative measure presupposes the presence of an abnormal situation, which demands some remedy. The aim of the curative measure is thus to restore wholesomeness in an ailing situation. Some school administrators in Nigerian higher institutions perceive crises as an isolated incident that interrupts the flow of normal activities. Accordingly, they approach a crisis situation relying on some kind of fire brigade approach.

This approach emphasizes the curative remedy to crisis situation. Osundare (1986) believes that most of our campus mayhem could have been avoided if the University chief executives have been more tactful, more humane, and less arrogant. In his words, some university chief executives, unmistakable, exhibit attitudes of treating both the staff and students as delinquent infants whose criticism and whose grievances must be met with aristocratic disdain. There is no doubt that such dispositions tend to aggravate crisis situation and curative measures intended to salvage them often yield insignificant results. Note that it is the thinking of public relation enthusiasts that protests cannot be willed away by executive fiat so long as conditions that provoke such protests exist. Although some management of various higher institutions in Nigeria employ these curative methods in resolving crisis in their institutions, it is not the best because it is like closing the gate when the goat had already escaped and as Macbeth says "the deed had been done".

Preventive Approach

To prevent is “to come before” rather than “to stop or hinder”. It is synonymous with the term “to avert”. The word preventive is a derivative of the stem “prevent”. Accordingly, preventive measures are techniques intended to forestall crisis and save it from erupting. The underlying principle of this approach is the age long wisdom, which affirms that prevention is better than cure.

Modern managers object to the habit of allowing a potential crisis situation to remain until it eventually balloons and engulfs an organization. Rather than devising measures to heal the resultant wound, managers seek to prevent crisis. The application of the functional principles of public relations (FPPR), which advocates readiness and ability to use pro-active thinking to prevent a potential crisis from erupting is the concern of this work. Thus, the FPPR techniques encourage preventive actions before any damage is done to the reputation or corporate image of an academic institution. Its emphasis on system approach makes every unit of an institution participate in the responsibility of averting crisis in the educational environment. FPPR skills can be learned. Education for crisis prevention begins in school and continues in the form of training and development programmes throughout public relations career. There is no substitute to crisis prevention for it is an important skill for development in all sectors.

CONCLUSION

A nation’s peaceful existence is directly linked to the availability of accurate and functional principles for averting crisis. In Nigeria’s complex, fast-paced academic institutions, crisis-preventing skills constitute significant force that binds the educational system with the society and saves it from disintegration.

Leadership permeates every organizational related concept or process for a manager to serve effectively, it is necessary that he/she possesses clear and wholesome values, communicates skillfully, possesses human relation skills to work successfully with/within groups, makes nitty decision and establishes conducive organizational climate. Thus, any leader that adopts an autocratic style of leadership may end up causing an unending crisis while democratic style of leadership and the likes carries the staff and students along thereby creating a conducive environment and harmonious relationship.

Recommendations

Since management is the process of involving people in the things done by the manager for the realization of the organizational goal, it is expected that our educational leaders should be people that have professional training and experience to deliver. The researchers therefore recommend as follows:

1. The management should plan ahead to accommodate the views and expectation of both staff and students in their scheme of things instead of living things to chance.
2. The management should be in a position to know which line of action taken would yield positive results through appropriate consultations.
3. Ensuring that necessary facilities are provided and as at when needed to avoid crisis.
4. Making funds available for the execution of all educational programmes.
5. School heads should seek the cooperation of teachers, so that they can both chart the course of influencing the lives of their students positively through effective communication.

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Introduction

After forty years of research, policy and practice changes, leadership has become an influential, though contested, set of understandings about schools and how they might impact on the lives of their students. MacBeath (2012, p 38) argues about leadership that 'so engrained is it in popular conception that it appears to be beyond challenge'. It is this critical element of school activity that is the focus of this paper.

In this paper I wish to focus on two types of leadership, ones that have gained traction in different parts of the world. The first is Instructional Leadership (see Hallinger and Murphy, 1985), which has become a dominant term for school leadership, with origins in the United States but later picked up in many other countries; and the second is Leadership for Learning, which has been used for more than a decade in the United Kingdom (see, for example MacBeath and Dempster, 2009; Townsend and MacBeath, 2011). These two terms have been used by some as if they are the different sides of the same coin. In fact both Hallinger and Murphy, who began using the term instructional leadership in the mid-1980s, have both recently, and separately, used the term leadership for learning in their writing (see Hallinger & Heck, 2010 and Murphy et al, 2007).

I argue the two terms have few similarities and that to confuse the two leads to an unhelpful conclusion, one that assumes that measures of leadership should be focused primarily on improving student achievement in standardised tests, and that other foci act as a distraction and go beyond what is reasonable to hold school leaders accountable for. To do this I will draw on data collected from a recent study in the United States where both school superintendents and principals considered the impact of the *No Child Left Behind* Act (NCLB) on their work and their relationships within their schools.

Instructional Leadership

The emergence of the term instructional leadership may be dated from around the 1980s (Hallinger and Murphy, 1985; Hallinger and Heck, 1996; 1998). It proposed three dimensions for this role: *defining the school's mission* (which included framing and communicating school goals), *managing the instructional program* (which included supervising and evaluating instruction, coordinating curriculum and monitoring student progress), and *promoting a positive school learning climate* (which included protecting instructional time, promoting professional development, maintaining high visibility, providing incentives for teachers, enforcing academic standards and providing incentives for students). When put into practice, this view of leadership becomes hierarchical and lends itself to the view that the school leader is the authority figure that oversees changes within the school and implements decisions made further up the hierarchy. Most decisions focus on student learning and, by doing so, improving the school, as measured by student achievement by an increasing array of local, state and national tests.

This suggests that school leadership, which is mostly exercised at school level, plays an important role in student achievement, but there is an indirect rather than direct relationship between the two. This research clearly shows (Hattie, 2003) the impact of teachers and what happens in classrooms as substantially more important than anything school leaders can accomplish by themselves.

This term 'Instructional Leadership' has been used almost universally in a way that construes it as having a positive effect on the nature of 'instruction', or more accurately on the nature of achievement, defined by what happens in classrooms. So both transactional (hierarchical) and transformational (organic) leadership can both be seen as a form of instructional leadership. This is suggested by Hopkins (nd) in the paper entitled *Instructional leadership and school Improvement* (written for the National College for School Leadership) where he writes 'During the past decade, the debate over educational leadership has been dominated by a contrast between the (so-called) transactional and transformational approaches' (which he equates as being the difference between centralised and decentralised systems (p. 1). Both, however, seem to fit comfortably within the concept of Instructional Leadership.

Although the first US research into instructional leadership adopted what might be considered a direct effects model, where the assumption made was that leadership had a direct effect on student performance, in more recent times a more complex view of how leadership and student achievement interact has been proposed. In a recent article Hallinger and Heck considered four different models of how leadership might impact on student achievement in their study of 192 schools in a single state in the US. The four models considered were.

- A direct-effects model in which leadership is conceptualized as the primary driver for changes in student learning;
- A mediated-effects model in which leadership drives growth in student learning by shaping and strengthening the school's capacity for improvement;
- A reversed mediated-effects model in which the school's results – i.e. changes in student learning outcomes – drive changes in school improvement capacity and leadership;
- A reciprocal-effects model in which leadership and school improvement capacity are conceptualized as a mutual influence process that contributes to growth student learning.

(Hallinger and Heck, 2011, p. 468)

The results of this study suggested that the hierarchical model, although it may have been attractive initially, did not generate the results that were underpinned by the initial 11 leadership tasks. The research instead found a much more nuanced relationship between leadership, especially collaborative leadership, and learning.

...the overall pattern of results favored a perspective on school improvement leadership as a mutual influence or reciprocal process. This is a potentially important finding in that we believe that the reciprocal-effects model is also the most theoretically compelling of the four models. It does not make untenable assumptions about the heroic role of leadership, and presents leadership for learning in dynamic relationship with other organizational processes. (Hallinger and Heck, 2011, p. 479)

After 25 years of research Hallinger and Heck have started to consider the term 'leadership for learning' but have identified it as being a hybrid of instructional leadership.

In recent years, the phrase 'leadership for learning' has gained international currency (MacBeath et al., 2008; Robinson et al., 2008). In our view, this approach to school leadership represents a blend of two earlier leadership conceptualizations: instructional leadership and transformational leadership. (Hallinger and Heck, 2010, p. 657)

Murphy too, has recently used the term 'leadership for learning' (Murphy et al, 2007, p. 179)

This type of leadership can best be labeled 'leadership for learning', 'instructionally focused leadership' or 'leadership for school improvement.' The touchstones for this type of leadership include the ability of leaders (a) to stay consistently focused on the right stuff - the core technology of schooling, or learning, teaching, curriculum and assessment and (b) to make all the other dimensions of schooling (e.g. administration, organization, finance) work in the service of a more robust core technology and improved student learning.

This new terminology comes with a new list of things for school leaders to undertake:

The knowledge base of leadership for learning is captured under eight major dimensions: vision for learning, instructional program, curricular program, assessment program, communities of learning, resource acquisition and use, organizational culture, and advocacy. (Murphy et al, 2007, p. 179)

Yet if we ask what is different between the 1985 list (Hallinger and Murphy) and the 2007 list (Murphy et al) we find the answer is 'not a lot'. Vision for learning might be considered as the school's mission; the instructional program, curricular program and assessment program are subsumed under managing the instructional program (supervising and evaluating instruction, coordinating curriculum and monitoring student progress); communities of learning, organizational culture and advocacy together might be considered as promoting a positive school learning climate; so perhaps the only thing that is different is resource acquisition and use and perhaps this has occurred more because of changes in school system policies than anything to do with what leaders would like to be doing. Now, because schools no longer have the resources they once enjoyed, supplied by state and local taxes, they have to establish ways of garnering resources themselves. As an example, the New York Times on 20th February, 2012 (Alvarez, 2012, online), reported that the Florida State legislature had cut funding to public schools by \$1.3 billion last year and had also cut higher education by 24% since 2008 bringing funding back to 2003 levels.

So the use of the term 'leadership for learning' is not so much a change in what leaders are expected to do as an appropriation of a term that might seem more all-encompassing. The last sentence of the quote above where the focus of the leader has to be '...more robust core technology and improved student learning' perhaps gives the game away. The underlying purpose of this form of leadership for learning is to direct all attention towards student achievement, in exactly the same way that instructional leadership did.

The Impact of NCLB on US education

Instructional leadership, the hierarchical approach to improving individual schools, seems to be an appropriate leadership style in the United States during the decade from 2000 onwards, especially under the federal school improvement programme No Child Left Behind, which seems to be a hierarchical approach to improving school systems.

To consider how the recent policy of No Child Left Behind seems to fit with instructional leadership as the approach to leading schools, we will use some of the data collected by the Voices 3 project, a project supported by the Universities Council for Educational Administration in the United States. In this research school superintendents and school leaders were asked about their views of the impact of No Child Left Behind on aspects of their work.

The data have also been reported elsewhere (Acker-Hocevar et al., in press), but in this paper I want consider how NCLB promotes a particular way of leading schools.

From the data collected, NCLB has made a number of positive contributions to educational change, including providing a strong focus for school improvement:

In some ways, it has made life simpler as a leader because you can look at your staff and say..., 'No choice; it's in there; gotta do it' (Principal 81, high school Midwest, 2006).

NCLB also made it clear that it wasn't just the average performance of a school that would count, but that sub-groups within the school all had to perform at a satisfactory level.

We can't ignore the African American subgroups or the special education population or any other minority populations. (Middle School Principal 66, Midwest, 2005)

However, the way which NCLB has been implemented has created problems for both districts and schools alike.

I don't know how much longer we can keep doing all of these things to meet NCLB with no money. That's a real problem. (Superintendent 16, small district, southeast, 2006)

In theory, NCLB provided a framework for improvement that people in the study agreed with. Many of the underlying concepts, of equity, of social justice and of achievement, are hard to argue with.

However a policy framework is an enabling device, not a guarantee that something will happen. The purpose of policy is to set up conditions that will enable things to occur, those that will provide an understanding of the rationale for and possible avenues towards improvements. But the implementation of policy relies on many things - the resources that are available to activate the policy, the people who will implement the policy and the acceptance or otherwise of the policy by the people on whom it will have an impact. These three things are important for educational success and can be considered, from another viewpoint, as the curriculum being 'delivered', the resources (teachers, materials, infrastructure) to support delivery, the method in which the content of the curriculum is delivered and the environment in which the delivery takes place. What we have seen with NCLB is perhaps not so much a failure of policy but, because the outcomes expected were not matched by the inputs needed, with a paucity of resources being provided to ensure success, and a negative and punitive environment surrounding the changes needed, this might be considered as a failure of implementation.

NCLB and Instructional Leadership

There are three elements associated with NCLB leading to the view that 'instructional leadership' defines the way in which American school leaders should undertake the task of leading a school. Instructional leadership has taken pride of place for nearly 30 years and now the importance of instructional leadership is referred to in almost every state standard for leadership.

Northouse (2010) suggests that leadership is a process whereby an individual influences a group of individuals to achieve a common goal. This process contains two dimensions, the people and the power relationship between them, and the task to be accomplished. To this we could add a third dimension, which is what happens at the end, when the task is either achieved or not. This dimension creates a background environment that could be considered as either supportive (rewarding good outcomes) or oppositional (punishing outcomes deemed to be not good enough). It could be argued that the same sorts of conditions apply to virtually every human interaction. Townsend (2009, p. 376) puts it this way:

There are three dimensions to human relationships, the way in which we interact, the content of the interaction, and the circumstances in which the interaction occurs.

These three dimensions fit neatly with the three aspects of instructional leadership reported by Hallinger and Murphy (1985) and discussed earlier in this paper. Defining the school's mission looks at the task to be undertaken; managing the instructional program considers the way in which people interact to undertake this task; and promoting a positive school learning climate can be equated with the background environment in which the interaction occurs. Let us consider these three factors as they have been influenced by NCLB and how leaders must act in order for NCLB to be implemented.

Defining the school's mission

NCLB directs schools, districts and school systems towards a very narrow range of student outcomes by only providing resources if these are directed to this purpose. Although it has been argued by many that the role of the school should encompass a broad range of outcomes, from specific basic skills, understandings of the requirements for citizenship, preparation for employment, right through to the development of values and attitudes towards self and others in the world, those outcomes that must be focused on are defined by the NCLB law itself and the level of resources available to schools to deliver their programme. In an environment of scarce resources, it is likely that those resources will be spent ensuring that the mandated (and measured) part of the curriculum is delivered. Only after these aspects

have been attended to and if there are resources left over, can other things become part of the curriculum. In some better resourced schools a wide range of outcomes is available, but in less resourced schools, or in those where students struggle to learn the mandated curriculum, little time is left to consider the development of other human skills. The Voices 3 data indicate the narrowness of what is being 'delivered' to many American students.

It's just all tasks. There's no creativity, and when you stifle someone's creativity, they don't want to do that. (Superintendent 18, medium-sized district, southwest & west, 2006)

We're spending about 100 per cent of our time in demonstrating test score proficiency on NCLB and we're graduating a senior with about 75 per cent of what they need to know in the real world. (Principal 80, high school, Midwest, 2005)

The instructional leadership literature also focuses on specific tasks that leaders should engage in to ensure their teachers promote high levels of student achievement. We mentioned previously Hallinger and Murphy's (1985) '10 instructional leadership functions.' Viewed uncritically, these can too easily result in a series of what might be called recipes for leadership success. Such a narrow perception fails to take into account the uniqueness of every school. McGaw, et al. (1991, p. 15) argued:

There is no definitive how of effective schools and so there can be no one recipe for every school to try. Schooling is too complex a business for a recipe.

If we spend most of our time memorising the answers to multiple response questions, then there is little time left over to devote to those higher level human skills of critical thinking, value development and analysis. A further problem with the narrowness of the curriculum for many students, together with the pressure brought about by having to perform, is that sooner or later some students are identified as failures. How many times does a student need to be tested and failed before that student decides that school-based learning is not for him or her and simply retreats to computer games, where these elements of life are under his or her own control? Or perhaps he/she resorts to classroom activities that might prevent others from learning too?

Managing the programme

It is useful to consider the various language options available to us when it comes to describing how we see the world. For instance the set of tasks identified for instructional leaders under the term 'managing the program' may provide a different series of images for some people than if we had used the term

'leading the program'. There are many different interpretations of the differences between leadership and management. One put forward for consideration is:

- Leadership is setting a new direction or vision for a group that they follow, ie: a leader is the spearhead for that new direction.
- Management controls or directs people/resources in a group according to principles or values that have already been established.

(Team Technology website, <http://www.teamtechnology.co.uk/leadership-basics.html>)

While recognising that any such definition is open to discussion, if we use this definition of leadership and management then we might argue that NCLB and instructional leadership is a match made in heaven. If part of the work of instructional leaders is to 'manage the program' then there is a level of directing or controlling what people do. The word 'instructional' gives us a hint as to how this term might be applied. To give an instruction is to tell people to do something, so instructional leadership tells others what to do. NCLB is also a 'telling' piece of legislation, outlining requirements (mission), focus (task) and sanctions (management). Having been told how to manage education by NCLB, the states then tell school districts what to do, school boards tell superintendents what is required and school superintendents tell principals how they are going to be judged, all of which results in the principal telling teachers how to do their work, with the teacher telling the students what to do being the end of the chain. The people most responsible for the learning outcomes of the United States education system (the students) and the person most likely to guide, encourage and teach them (the teacher) are, ironically, the least powerful people in this chain. They have no flexibility, can ask no questions and do nothing that is not mandated by someone further up the ladder. This 'managing' of the educational process is supported by the data from Voices 3 on numerous occasions.

So there're too many things that I may spend a couple of meetings trying to get you to buy into it, and then I'm going to tell you that that's the way it's going to be. (Principal 20 elementary, Southeast, 2005)

Even when there is encouragement for people to voice their opinions, final decisions are made by senior leaders.

And so, I think their voice is important, but the decision doesn't reside there. The decision resides with me. And so, voice is important, but it's not the decision - you know, this is not a democratic decision. (Superintendent 68, southwest, medium-size)

...in our district there is almost an absence of principal dialogue in decision making.' (Elementary Principal 51, Southeast, 6/8/2006)

In a hierarchical system it is always easier to make the decision yourself than to engage others in the process. Yet the downside of this is that it leads to less happy followers. Most of us have grown up in a 'telling' environment. Our parents told us what to do, our teachers told us what to do, the boss tells us what to do. So when government tells us what to do we simply comply. Of course the United States is not unique in terms of this form of management. MacBeath (2012, p. 39) reports on one school leader's view of shared leadership in the United Kingdom:

I think teachers have got to feel that they're making decisions but what I suppose I am forcing them to do is make those decisions

It is not because we *can't* make decisions for ourselves, it is that we *choose* to allow others to make those decisions for us or we are coerced into it. We have become habitually compliant. Compliant people do what they are told to do without thinking, yet every aspect of our meaningful learning has come about not because of being told but because we ask questions, because we make decisions for ourselves. This principle is most in evidence in the creation and use of technology which have had such a major impact on our lives.

Randall Clinch (2001) argued that 'there are two types of teachers: The askers and the tellers' and he suggested that it is in those classrooms where most of the time teachers use questioning and explaining as a mechanism for getting the message across, that learning really happens. If we extrapolate to the school and district level, we might suggest that school leaders who question policy or question processes (ie, be a spearhead for a new change), rather than simply telling people below them what they must do (controlling people according to identified principles), might have a better chance of developing a learning community than those that don't. It seems pretty clear that the system described by both Superintendents and Principals in the Voices 3 data is one where messages from above are shaped marginally by the next level and then passed down to the one below it. It is a case of management and control towards a minimal set of standardized outcomes, rather than leading towards an increasingly diverse future.

Promoting a positive learning climate

The third element that is associated with instructional leadership, especially under the conditions of NCLB, is the environment in which all this activity takes place. The overall environment in which schools are operating is mostly determined by people outside the school and many of the factors that are associated with this are at best only overseen by leaders inside the school. Despite the fact that the instructional leadership literature argues for the leader to develop a positive learning climate it might be suggested that the leadership shown at district, state and federal levels don't seem to view this the same way. The climate surrounding NCLB is punitive, not supportive, identifying sanctions for schools that don't succeed thus making it almost impossible for districts to manage. Add to this the reduced funding levels, the changing public attitude towards the status of teachers and the consistent attempts of both politicians and press to find someone to blame for the perceived lack of success and it is hard to see how any school leader can generate a genuinely positive school learning climate without resorting to some form of smoke and mirrors to do so.

At the base level, the climate generated in any public system of education will be based on our response to the question 'Do we trust our school leaders and teachers to do the job of educating our students or not?' We employ people to do a job in a range of other professions with the expectation that the people employed will complete the task as required. However, it is pretty clear that in many parts of the world at the moment, we don't trust our teachers and school leaders with the task and as a result of this there is a constraining of the levels of freedom that is being allowed at the school level. The lack of trust is demonstrated by some of the responses quoted here. School leaders don't believe they are trusted.

I think it's (NCLB) set up to make public schools fail. I think that's the goal of it. I think that's always been the goal of it. (Superintendent 4, mostly small districts, Midwest, 2006)

Is it the case that we are simply continuing to look for someone to blame if everything is not perfect, when perhaps no single person or group can be responsible for the outcomes being expected? In a recent newspaper article, headed 'Teachers: Blame only where blame is due' (Hurst, 2011, online), it was argued that of the 16 factors that can affect student achievement (see below) referred to in ***Parsing the Achievement Gap II (ETS, 2009)***, only six are within the control of the teacher.

- Curriculum rigour
- Teacher preparation
- Teacher experience

- Teacher absence and turnover
- Class size
- Availability of instructional technology
- Fear and safety at school
- Parent participation
- Frequent changing of schools
- Low birth weight
- Environmental damage (i.e., lead, mercury)
- Hunger and nutrition
- Talking and reading to babies and young children
- Excessive television watching
- Parent-pupil ratio (number of parents)
- Summer achievement gain/loss

This balance between what teachers can impact on and what they have no control over is succinctly summed up by Imig et al (2011: 402) who report: 'Classrooms experienced sharply increased class sizes and reductions in supporting staff and aides. School calendars were shortened and more than a hundred thousand teachers were "pink slipped" or told their contracts would not be renewed for the 2011-12 school year.' Clearly all of these changes would impact poorly on student learning, but none are in the control of the teacher.

As discussed previously, the rhetoric of enabling teachers and school leaders to make decisions at the local level, based on what they know about their students, is severely curtailed when the only way in which school leaders, teachers and schools themselves are judged by the public is on the basis of a narrow range of curriculum activities tested under conditions that seem to be antithetical to learning. In what way does a month (and sometimes more) of test prep increase student learning, especially since there seems to be a correlation between the length of test prep undertaken and the level of performance of the school? The less successful the school is, the longer the period of test prep to try and resolve this. Thus much of time that used to be spent learning new things is now used to study a narrow range of things upon which school success is measured. This appears to be directed more towards teachers and students in schools that have usually been identified as failing in the first place than in schools that are more highly achieving.

Grace (2000) notes the leadership–society relationship defines what it is to be an educational leader which suggests that ‘educational leadership is always set within a framework of possibilities and constraints derived from the cultural, political and economic contexts of education’ (Thomas and Watson, 2011, p. 189). We could also argue that what is happening in society also shapes the way in which schools and school districts behave.

There are so many special interest groups out there. Not just the academic type or the money type, but now the cultural type issues are emerging as well. For those in larger districts, the demands from different ethnic groups are unbelievable. (Superintendent 70, Midwest, 2005)

Since much of the environment in which school leaders work under NCLB is determined by factors outside the school, by people in government or at state or district levels, then if the negative environment starts there, it becomes hard for school leaders to adopt positive strategies. The Voices 3 data demonstrate conclusively that the current implementation of NCLB has created a negative atmosphere. This atmosphere impacts at the classroom level where it narrows the perceptions of what schools can do ‘When it really comes down to funding, it really comes down to us continuing to exist—we will teach to the test’ (Superintendent 35, Small Midwestern district). In a worst case scenario, this might lead to the situation where ‘teachers admitted that cheating was standard procedure’ (Nicholls & Berliner, 2007). At the school level school leaders also have to respond to these pressures: ‘if I have a unique situation, and I think it’s in the best interest of their kids and their learning, I break the rules’ (High School Principal 83, Midwest, 6/18/2006).

It is interesting to note that in the Finnish education system, identified by many politicians as the benchmark because of their performance on PISA, there is no standardised testing until the completion of secondary school. Unlike many other education systems, consequential accountability accompanied by high-stakes testing and externally determined learning standards has not been part of Finnish education policies (Sahlberg, 2007).

Having examined the three elements associated with instructional leadership, especially as it has been applied under NCLB, we may suggest that the current US education system is typified by a very narrow focus (on measurable and testable areas of learning), with rules and decisions simply passed down from one level to the next with little latitude for teachers as professionals to have a tangible impact on what is valued most in teaching and learning. They experience the deep frustration of operating within a negative framework that focuses on punishing those that do not succeed rather than looking for ways of encouraging success in its most profound form.

What we try to show in the next section is that leadership for learning, as an alternative form of school leadership goes a long way beyond simply a focus on student achievement, tries to encourage everyone in the system to become actively involved in decisions about learning and attempts to promote a positive environment that still focuses on learning, but learning for everyone in the system. It is trying to promote leadership that empowers everyone, students, teachers, parents and administrators, towards a better understanding of what learning is and how it might best be implemented:

Schools work best when the principal acts, not in an individualistic way, but in a collegial, supportive and co-operative manner, building relationships with staff and working alongside them as a fellow educator (Multheron, 2011).

Leadership for Learning

In the year 2000, when the Leadership for Learning Network was established in the University of Cambridge, the terminology seemed fresh and was yet to become a common epithet. Each of the three words was underpinned by a proposition which would lie at the heart of the network's research and development activities. One of the first activities of the network was to initiate an international partnership with schools, school leaders and policy makers in seven countries. Its key aims were to address the question - What different understandings are brought to the conceptions of 'learning', of 'leadership' and the key connecting preposition 'for'? The Carpe Vitam project, named after its Swedish commissioning body, extended over three and half years, holding successive annual conferences in cities in four of the participating countries - Cambridge, Copenhagen, Innsbruck and Athens, each step bringing participants closer to a shared understanding of learning, leadership and their interconnections.

Over the three year term a key set of principles emerged, was discussed, tested and refined by principals and teachers from the 24 participating schools. The five principles are:

- *A focus on learning* where leadership for learning practice involves maintaining a focus on learning as an activity in which everyone (students, teachers, principals, schools, the system itself) is continuously learning. The efficacy of learning is highly sensitive to context and to the differing ways in which people learn, while the capacity for leadership arises out of powerful learning experiences which create opportunities to take initiative, to challenge prior assumptions and way 'we do things round here'.
- *Conditions for learning* where leadership for learning practice involves creating the conditions favourable to learning in which the culture nurtures learning for everyone, affording

opportunities to reflect on the nature, skills and processes of learning and the physical and the social spaces stimulate and celebrate learning. Safe and secure environments enable everyone to take risks, cope with failure and respond positively to challenges equipped with tools and strategies are used to enhance thinking about learning and the practice of teaching.

- *Dialogue* where leadership for learning practice involves creating a dialogue in which LfL practice is made explicit, discussable and transferable. There is active collegial inquiry focusing on the link between learning and leadership. Coherence is achieved through the sharing of values, understandings and practices. Factors which inhibit and promote learning and leadership are examined and addressed. As the link between leadership and learning is a shared concern for everyone, differing perspectives are explored through networking with researchers and practitioners across national and cultural boundaries.
- *Sharing leadership* where leadership for learning practice involves the sharing of leadership in which organisational structures and procedures support participation in developing the school as a learning community. Shared leadership is symbolised in the day-to-day flow of activities in the school. Everyone is encouraged to take the lead as appropriate to task and context. The experience and expertise of staff, students and parents are drawn upon as resources. Collaborative patterns of work and activity across boundaries of subject, role and status are valued and promoted.
- *A shared sense of accountability* where leadership for learning practice involves a shared sense of accountability in which a systematic approach to self-evaluation is embedded at classroom, school and community levels. There is a focus on evidence and its congruence with the core values of the school. A shared approach to internal accountability is a precondition of accountability to external agencies and national policies are recast in accordance with the school's core values. The school chooses how to tell its own story taking account of political realities with a continuing focus on sustainability, succession and leaving a legacy.

These five principles, adopted in theory and tested in practice in cultures as distinctive in schools as geographically and culturally diverse as Brisbane, Seattle, Oslo and Athens, proved to be powerful levers for school self-evaluation and improvement. These principles have since then travelled across national borders and been tested in places as far removed from the Nordic climate as equatorial Ghana. Five years on the five principles are embedded in government policy and professional development for school leaders in Ghana where they have had a profound impact on the pilot 125 schools who signed up to the programme. This cohort of leading edge principals were chosen by the Ghana Education Service as effective administrators, looking after the day-to-day business of their schools in challenging circumstances, running schools deemed by the GES to be as good as anywhere in the country. Yet

taking a direct day-to-day interest in learning, of pupils, teachers and the school as a whole, was not how they conceived their role, at least not with learning in its deepest and most encompassing sense. There appeared to be little incentive or latitude to go beyond the need to keep a close weather eye on the timetable, assigning homework and testing teachers' diligent marking of pupils' exercise books on a routine daily basis. The opportunity to stand back from their schools for an extended period, to engage with their colleagues, and with the five principles of leadership for learning offered them new ways of seeing and a practical evidence-based framework to take back their schools.

Of the five principles the third principle – of dialogue - proved to be the catalyst for addressing the other four. The school leaders' new openness to sharing, to learning from their teachers, proved to have a powerful impact on teachers' ownership and sense of agency. Taking the principle of dialogue into the heart of the classroom so that children would be less afraid of asking questions, speaking out of turn or being wrong was captured in this report from a researcher conducting an evaluation of the impact of the Leadership for Learning programme:

For teachers, it meant a radical change of behaviour, from an autocratic and punitive relationship with students to a more positive stance, rewarding and encouraging good behaviour. As was consistently pointed out in the course of interviews, teachers had been used to caning, harassing, intimidating, and insulting students in order to maintain discipline. It was also said that after the LfL programme there had been a change in mindset with a consequent impact on student behaviour. Beginning to show an appreciation of students' work and efforts had produced almost immediate returns. Punishment had been replaced by praise and reward and a new focus on learning. (Malakulunthu, 2011)

The Essence of Leadership for Learning

MacBeath and Townsend (2011, p. 1250) tease out how leadership for learning might move to restore the priority of leadership over managing the narrow task of maximising student achievement. They argue:

Whereas much of the instructional leadership literature reduces learning to 'outcomes', leadership for learning embraces a much wider, developmental view of learning. Nor is its focus exclusively on student achievement. It sees things through a wide angle lens, embracing professional, organisational and leadership learning. It understands the vitality of their

interconnections and the climate they create for exploration, inquiry and creativity. Its concern is for all of those who are part of a learning community.

Whereas instructional leadership seems to focus on 'student outcomes' to 'support growth with a focus on results' (Pedwell et al, 2011, p. 613), leadership for learning is concerned with learning beyond the student body. In instructional leadership the task of the leader is to improve student outcomes on those standardised tests associated with the school being successful or not. By contrast, it is argued that leadership for learning is designed to create learning at all levels within the system, student learning, teacher learning, organisational learning and leadership learning all at once. The task is to look at where the school is now, make some decisions about where it wants to be and then to enable these to: '...unfold from within the fabric of school life, reflect and respond to the conditions that prevail in the school, and be authentically connected to the daily work of teachers and students.' (Mitchell and Sackney, 2011, p. 977)

In the final analysis, the differences are one of emphasis, of language and of attitude. MacBeath and Townsend (2011, p. 1251) conclude:

In the competitive pressure on targets and accountability learning and teaching are constrained by the demands of organisational convenience, and slowly and insidiously become absorbed by students into the intellectual and emotional bloodstream. Learning comes to be seen as what happens in classrooms and leadership is seen as the province of those who make the big decisions about the future. All too easily, learning as a vibrant shared activity, ceases to be the main consideration. All too easily the potential to lead learning is left to others.

By contrast learning-led schools are places in which student learning is inseparable from professional learning and the culture is one in which learning flows across boundaries of role and status. The professional learning environment sets the stage for the student learning environment. It is a stage set generously. It is one in which the continuing quest for knowledge and understanding is embedded in the culture but also with an impact on structures so that they no longer constrain but liberate.

From Instructional Leadership to Leadership for Learning: From the Tellers to the Askers

What can be seen from these two brief descriptions of different forms of leadership is that the underlying focus is different. In the Murphy et al description of leadership for learning, it is the school leader that takes responsibility for 'vision for learning, the instructional program, curricular program, assessment program, communities of learning, resource acquisition and use, organizational culture, and advocacy' all for the express purpose of 'improved student learning'. The Carpe Vitam project with its *focus on learning, creating the conditions for learning through dialogue, through shared leadership and a collective sense of accountability to promote an environment in which everyone (students, teachers, principals, schools, the system itself) is continuously learning* just does not seem to be the same thing.

As discussed briefly above, our view of the difference between instructional leadership, especially within the limits set by NCLB, and leadership for learning, is that instructional leadership has a tendency to atomise a very complex set of interactions into specific indicators, competencies or activities, then tells teachers how to apply them, within an underlying environment that suggests that neither teachers nor school leaders can be trusted to make decisions by themselves.

By contrast leadership for learning promotes the understanding that successful organisations are driven by questions, dialogue and collective responsibility. Questions such as 'How well are we doing?' 'How do we know?' and 'What do we do next?' which are the three classic questions that underpin school self-evaluation (MacBeath, 1999) or questions such as 'Who is not learning?', 'Why are they not learning?' and 'How can I help them learn?' three questions that teachers should be asking themselves every day.

Secondly, Leadership for Learning focuses on developing concepts and processes, rather than limiting itself to the specifics of student outcomes. It considers concepts such as professionalism and cooperation and processes such as those involved in developing a professional learning community. We have seen in Voices 3 that school leaders have attempted to do this, but the underlying framework for undertaking this exercise is still that narrow base of outcomes judged as being important by NCLB. Under instructional leadership the questions are likely to be different, more specific. Instead of 'How well are we doing?' it is likely to be 'What is our grade?' and 'Who is not learning?' morphs into 'Who is failing?'

Finally, leadership for learning actually trusts the people involved to do the job. It makes sure that teachers and others within the school are well trained and supported and it is assumed that they are dedicated enough to act professionally in all aspects of their work. It promotes a collective sense of accountability and allows teachers to be involved in dialogue about how improvement can be promoted. It is this active engagement between school leaders and teachers that leads to improved outcomes for students. Robinson et al. (2009) found that promoting and participating in teacher learning and development was the most important thing a school leader could do if improving student achievement was the goal.

If we consider the three elements associated with instructional leadership and reconsider how leadership for learning might use them, then 'defining the mission' moves from a narrow focus on specific outcomes to a broad understanding of learning in all its forms. 'Managing the programme' moves to leading the programme, and telling people what to do and managing their progress moves to asking questions, engaging in dialogue and encouraging self-evaluation. When we move from treating teachers as technicians, so limiting the focus and the range of learning opportunities they exercise in the classroom, we can focus on what is needed to create a positive learning climate. When we establish a climate in which we trust teachers as professionals, we encourage them to develop as far as they can and we support their need to work collegially with both students and others to maximise their achievements.

The challenge

Schools as they are currently structured, managed and operated are not sustainable in the longer term. NCLB has not fulfilled its ambitious promises to close the gap between advantaged and disadvantaged students, nor is it approaching its goal of all students being proficient by 2014. However, it has created an environment and a system that encourages teachers to think more about all students, and not simply to think that if a student is not successful then it is the student's fault. It has provided the impetus for much more teacher interaction, for the development of professional conversations. It has provided teachers with the knowledge and skills they need, to look at data, to analyse it, and make sensible decisions about how to proceed.

However, there remains one major obstacle to overcome, the widely held belief that if schools were more business-like in their approach to education then success must follow. It is worthwhile paraphrasing a story by Bill Cirone (2011, online), County Superintendent of Schools in Santa Barbara

County. He tells of a local business man, one that was renowned for his company's successful marketing of blueberry ice cream, who gave a speech to a group of teachers. He told them that:

...public education needed to change. He felt schools were designed for the Industrial Age and not in tune with modern needs. He also felt, strongly, that educators themselves were a major part of the problem, resisting change, protected by tenure, bureaucratic. He thought if schools looked to a business model, they could improve dramatically: zero defects, total quality management, continuous improvement... when a teacher in the audience raised her hand. She praised his ice cream and asked about the premium ingredients. He responded with pride about all the particulars. She then asked, 'when you are standing on your receiving dock and you see an inferior shipment of blueberries arrive, what do you do?'

...He replied truthfully that he sends the blueberries back.

The teacher pointed out that teachers can never send back blueberries. 'We take them big, small, rich, poor, gifted, exceptional, abused, frightened, confident, homeless, rude, and brilliant. We take them with attention deficit hyperactivity disorder, junior rheumatoid arthritis, and English as their second language. We take them all. Every one. And that is why it's not a business. It's a school'. (Cirone, 2011, online)

The failure of NCLB lies in treating the education of students in a way that suggests that all the blueberries can go through the process and can become a premium ice cream. It tries to manipulate the conditions within schools to make it a fail-safe activity when it isn't. It has created the circumstances that rely on surveillance and punishment rather than support. It could be argued that instructional leadership under NCLB places priority on task, achieving a narrow range of student outcomes, whereas leading for learning places the focus on people and the development of everyone through a focused learning process. It could be further argued that by focusing on learning for all, student learning, teacher learning, leader learning and system learning, rather on outcomes, is the best way of actually improving those outcomes anyway, because it relies on interacting with one's environment rather than simply remembering discrete elements of it. It moves from atomism to holism, from remembering to understanding and from a focus on failure to a focus on success.

So how might we move forward? How might US education use the power of the policy of NCLB to improve American education? And what can others learn from this experience? To that we return to the blueberry executive in Cirone's story. After his meeting with the teachers and his recognition that

not all students have premium backgrounds, he changed his attitude towards schools completely. He recognised the difficult situation that schools, and the people in them, face. Later he wrote:

Schools reflect the attitudes, beliefs, and health of the communities they serve, and therefore, to improve public education means more than changing our schools; it means changing America. (Cirone, 2011, online)

NCLB has helped teachers to develop new understandings, of what they need to do and perhaps better understandings of how to go about doing it. What has happened is that teachers and school leaders know so much more than they did in 2000, but it might also be true that they are being held back by the focus on too narrow a task. It could be argued that this focus on a narrow range of outcomes, with standardised approaches to measuring them and with real consequences for schools that don't measure up, the so-called 'high-stakes' mentality that is now seen in many countries is the problem.

The real question for the future is do we trust our teachers? If we removed the high-stakes punitive nature that underpins NCLB and other assessment regimes, do we trust our teachers enough to expect them to continue to use what they have learned in the last decade, to continue to focus on all students, but to encourage a broader range of outcomes that better suit the needs of a diverse range of students? Do we trust them enough to use their new knowledge of data, collection, analysis and decision-making, for the benefit of all, rather than some? If we trusted our leaders and teachers, then these punitive measures could be repealed and what has been learned in the past decade could continue, but not in the environment of fear.

It may mean that we need a new conversation, between all the stakeholders, on what we see as the purpose of schools and then what we need to do to get there. Essentially leadership for learning is about building the capacity of everyone involved in the activity of learning. To do this well, it is necessary to have agreement on what the longer term outcomes are to be. As Elmore (2007, p.2) argued, we need first to trust in the people we have asked to do the job. The outcome could be:

From the ministerial level, through the department level, to the operating level of the public schools office, into the regions and then into the schools, there is broad agreement on the essential message that the strategy is fundamentally about investing in the knowledge and skill of people.

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Introduction

This paper emanated from a thesis titled, “Female Zimbabwean school heads as curriculum leaders in disadvantaged school contexts,” and aims to unpack the challenges that female school heads in Zimbabwe encounter and the strategies they adopt in solving these challenges as they lead in curriculum implementation. The thesis itself is part of a larger South African Netherlands Partnership for Alternatives in Development (SANPAD) study titled: *Women Leading in Disadvantaged School Communities*. The SANPAD Project aims to explore how female school heads navigate the curriculum in disadvantaged school contexts. The paper originated as a result of the findings from the study which revealed that while female school heads navigated the curriculum in disadvantaged school contexts (DSC), they encountered numerous gender related challenges and adopted a variety of strategies in trying to even out the situation. It was out of the realisation that while few people can read a dissertation, many can have access to a paper and can get more enlightenment concerning curriculum implementation in disadvantaged school contexts by female school heads in Zimbabwe. Hence my supervisor and I decided to come up with this paper. The above notion of sharing is echoed by de Poy and Gitlin (1998 in Bermant 2012:325) who comment that “... research, in essence, is not complete unless it is shared with others who can benefit from it”.

Background

Triumphs without difficulties are empty. Indeed it is difficulties that make triumph. It is no feat to travel the smooth road (Author unknown). The above saying seems true when applied to the status of women in leadership. For time immemorial, women have encountered social, psychological and professional barriers into leadership and have battled to break the glass walls and glass ceiling into leadership. The struggle to breaking the barriers into leadership was difficult but as the saying goes, ‘sweet comes from sweat’. It is only through the fight to breaking the glass ceiling that women’s success and potentialities can be witnessed. The term glass ceiling is a metaphor which was introduced by the Wall Street Journal to mean the invisible barriers which emanate from people’s attitudes and prejudices that prevent women from getting to positions of leadership (Carli, College and Eagly, 2001&inandi, 2009). While women have to deal with barriers to get into leadership, on the contrary, men have encountered a glass escalator which has assisted them to move rapidly into positions of leadership (Brinkerhoff, White,

Ortega and Weitz, 2008). As such, it is only through determination that the success of women as leaders can be registered and evidenced.

According to Jose, Moreno and Carrasco (2010) the changing status of women is improving the world over due to:

- (i) the changing perceptions of society towards gender roles
- (ii) the liberal attitudes towards both the traditional division of labour and the women's positions in work organisations and
- (iii) the equal opportunities legislation the world over

Gone are the days when women were restricted and subjugated to inferior domestic roles and to subordinate positions in work organisations, hence more and more women are climbing into the echelons of school leadership. However, research (Coleman, 2007; Coleman and Fitzgerald, 2008; Chabaya, 2004, 2009; Chipunza, 2003) has shown that the entrance of women into leadership has been achieved only to a limited extent as is evidenced by the gross under-representation of women in such positions. Furthermore, the entrance of women into the male dominated school leadership domain has heralded a number of challenges which need to be championed by the few who manage to make it.

Challenges that encroach on female leadership can be classified as external or internal (Fitzgerald & Weitzman, 1992; Betz & Hackett, 1997 in Jose et al., 2010). While external challenges refer to factors which are outside the individual such as environmental or societal, internal challenges refer to those which are within the individual and these could be psychological.

Theoretical underpinnings

The study adopts critical feminism as the theoretical base on the premise that it focuses on the emancipation of leaders and followers from social injustices and oppression of established power structures (Gunter, 2001). It is concerned with the issue of power and women's roles and experiences in society and tries to explain the issue of gender inequalities and the social structures that perpetuate them (Qin, 2004; Hughes and Kroeler 2005). Critical feminism therefore offers explanations to questions related to female leadership and oppression in both formal and informal organisations (Lengermann and Niebrugge 2007) and thus highlights the realities of women in organisations.

Society as an impediment towards female leadership

Coleman (2007: 384) comments that gender is a "... key factor denoting a leader as an outsider". Some scholars (Chipunza, 2003; Kruse and Prettyman, 2008; Jose et al., 2010; Couse & Russo, 2006) have cited how gender as an attribute has worked towards the demise of women as leaders. According to Coleman and Fitzgerald (2008) gender inequalities and the stereotype of men as leader persists in education. Patriarchal traditions and cultures reinforce inequalities between the sexes with the result that women's work remains associated with the private sphere (Coleman and Fitzgerald *ibid*). As such, the concept of leadership employs dominant discourses of masculinity. In line with the above view, Chipunza (2003) argues that society tends to resent when roles commonly associated with one sex are assumed by members of the other sex and warns women not to expect men to relinquish their privileged positions easily.

Attitudes and reactions of colleagues at the work place

According to Cockburn (1991 in Chipunza, 2003), men view educational management as a male hierarchy with women in it hence they often resent women's leadership and are unwilling to accept their authority. Kruse and Prettyman (2008) comment that although women lead effectively, the masculine traits and characteristics determine "what leadership is and who is able to lead" adding that such cultural practices which are even perpetuated by media help to "produce and sustain discursive patterns that position women in relation to leadership and power in particular ways influencing our perceptions and acceptance of women leaders". Madden (2005) adds another dimension whereby incongruity between leadership roles and female gender roles can lead to prejudiced judgements and actions and in most cases men are viewed as being more competent than women.

Quoting Oram in Acher (1989), Chipunza (2003:4) alludes that men resent working under "petticoat" government on the premise that "A master should not serve under a mistress" a point which is also alluded to by Priola (2007). Chipunza (2003: 5) notes that men sometimes "create undercurrents that undermine the authority of female heads noting that successful women are often met with ridicule, hostility and resentment. Kruse and Prettyman (2008) observe that women who break the gender expectations are often viewed as trouble. Furthermore, they are labelled as bitches (Reynolds, 2005 in Kruse & Prettyman, 2008). Such negative and stereotypic attitudes form part of the dilemma for most women because even for those who have managed to overcome the gender scripts, the cultural context especially the cultural values and norms make it problematic for them to exercise their leadership dispassionately.

Coleman (2007) comments that women face resentment from all fronts noting that there are instances when women resented the success of other women. Coleman and Fitzgerald (2008) observe that in countries such as Turkey, Trinidad & Tobago, female teachers preferred male principals over female ones. They note that such attitudes seem to be fuelled by religious and cultural values and practices which consequently determine the respective roles and careers for men and women. Smulyan (2000) notes that both colleagues and superiors expected women to fail in terms of discipline and authority and gave them less credit than they would give to a male leader. In some cases, successful women protect their territories jealously and prevented other women from getting promoted into similar positions a condition generally known as the queen bee syndrome (Rindfleish, 2000; Ellemers et al., 2004).

Coleman (2007) says that in a climate where the status of women as leaders is questioned, all problems which emanate in their schools will be seen as failure on the part of the leader. On the other hand (Ellemers et al., 2004) comment that where they succeed, credit is not given to them but is attributed to luck. Such a situation forced them to work hard in a bid to prove their worth as leaders. Coleman (ibid) quotes a study in England where 70% of women secondary heads confirmed that they had to work hard to prove their worth as leaders. Research (Couse and Russo, 2006; Coronel, Moreno & Carrasco 2010) found that women needed a lot of political skill to manage career barriers and stressors which manifested in the form of glass ceiling, maternal wall and tokenism, exclusion from informal networks and lack of developmental opportunities. They argue that women are sidelined and excluded from various forms of organisational support and quote lack of access to mentors as a major concern which can influence the general well being of the female leader.

Apart from challenges emanating from gender role expectations, working in disadvantaged school contexts presents its own challenges. Disadvantaged contexts in this study refer to poor socio-economic communities within which the schools operate. Ylimaki, Jacobson and Drysdale (2007) associate disadvantaged school contexts with bullying, gang fighting in the school grounds, poor nutrition, inadequate health services, high rates of illiteracy, criminal and unruly behaviour and general poverty. They comment that such contexts facilitated high rates of student transience, absence from school and indiscipline and consequently affected academic achievement all of which caused a daunting task for the school head. Talking about the influence of social contexts, Perumal (2007:13) comments that although it is not definite that:

Individuals or institutions located within particular temporal and spatial frameworks are inevitably predestined to be products of their time and space frameworks there may be connections between individual and institutional formation.

Perumal (ibid) quotes Bourdieu who suggests that habitus or the way we think and act is to a large extent influenced by our social world. Other features associated with disadvantaged contexts are students dropping out of school, a community of people with poor levels of educational attainment which manifested in low income and unemployment, pupils with poor health, lack of recreational and learning facilities and spaces (Wilson and Hack, n.d. and Michalak & Jones, 2010).

Michalak and Jones (ibid) further allude to the fact that disadvantaged contexts set conditions of hopelessness, cynicism and anger possibly emanating from the communities' perceptions and negative experiences, lack of academic achievement all of which may manifest in resistant cultures inside and outside the school and challenging behaviour from both parents and pupils. In Bourdieu's terms, such communities lacked the "social capital" (Michalak & Jones ibid: 6) which is essential for school success. Where social capital is lacking, motivating participation and cooperation might be an overwhelming task for the school head.

The school contexts in which this study was carried out

As already alluded to, the study was carried out in disadvantaged school contexts. The three schools in Masvingo town were disadvantaged in that they were all situated in Mucheke, the oldest suburb of the town. The community for the catchment area was generally poor and guardians were basically old grandparents who depended on handouts and vending and were too old to take care of the educational needs of the children. Most of the children lived in old congested flats or the poorest houses in the town. These schools hosted children from the squatter homes, children of the blind and those of no fixed abode who resided at the bus terminus and many orphans.

At one school they had over 400 orphans out of a school population of about 1 027 and these also hosted a special class of mentally challenged pupils some of who had been neglected by their own parents and were being taken care of by their relatives. This was the only school in town which did not have computers. The other school was adjacent to the biggest bus terminus in the town and had to deal with the noise of the buses and the behaviours of the touts and vendors at the terminus. Since this was a church school most of the poor from the community sent their children to this school in the hope of being assisted by the church, well-wishers and donors. The third school had problems with old sewer pipes which constantly burst in the school premises. This school did not have standard classrooms as it was constructed out of old dormitories of the then Cold Storage Commission of Rhodesia. The classrooms were therefore small hence children were squashed in the classrooms. Furthermore the

toilets constantly broke down and worse they were close to the classrooms thus the pungent smell could be smelt from some of the classrooms.

The two schools in the rural areas were in the farming areas. Most of the parents were not formally employed and depended on subsistence farming for their survival. This means that in terms of drought they would risk facing starvation. One of these schools was a recently established school which in Zimbabwe is known as a satellite school. Such a school operates under the mentorship of a mother school which will assist in solving the teething problems of the school. In this case the school did not have adequate infrastructure and children were squashed in small rooms which were used by the previous farmer as chicken incubators and most did not have window panes to shelter children from the chilly winter conditions. Some grades were composite classes where two grades shared one classroom and were taught by a single teacher. In one class, children sat and wrote on the floor while the “lucky ones” at least wrote on small tables while standing due to shortage of chairs. Most of the children were not in uniform not to mention warm clothing. Material resources were scarce and the school had to scavenge for books from other schools.

Aims of the study

This paper aimed to unravel challenges that female school heads in Zimbabwe encountered and the strategies they adopted in trying to facilitate curriculum implementation in disadvantaged school contexts. Specifically, the aims that guided the study were to investigate the:

- (i) Challenges that female school heads in Zimbabwe encountered in implementing the school curriculum in disadvantaged school contexts.
- (ii) Strategies they employed in trying to solve such challenges.

The research design

This is a multiple case study which adopted the qualitative research design. The choice of a case study was necessitated by the desire to understand the nuances of how female school heads navigated the curriculum in disadvantaged school contexts. We preferred the qualitative design because it enabled us to study the school heads “in situ” (Nieuwenhuis, 2010:51) and to extract the experiences as lived by the school heads thus giving us a chance to understand how they negotiated challenges of curriculum leadership in DSC.

The research sample

This study was carried out in five disadvantaged schools. Of these three were in the oldest suburb of Masvingo town while two were in the farming area. Only female headed schools were sampled. Five

school heads, four deputy school heads and three Teachers-In-Charge were purposefully sampled for the study. Purposive sampling was adopted on the strength that it enabled the researchers to collect the data that would answer the research questions (Silverman, 2001; Nieuwenhuis, 2010).

Data collection, presentation and analysis

The researchers had individual in-depth interviews with all the twelve respondents and the data were recorded on an audio recorder so as to maintain originality and to enhance validity. Punch (2005) highly recommends the use of interviews for qualitative research arguing that it is strong in accessing peoples' perceptions and their definitions of situations so as to come up with meaning and reality. The data were presented using narrative vignettes, direct quotes and comments from the respondents. They were analysed using critical discourse analysis. Focus on critical discourse analysis lies on discourse structures and involves reading of texts especially the ways in which speakers draw from culturally available explanatory frameworks to construct the objects they will be speaking about (Edwards & Potter, 1992; Parker, 1992 in Avdi, 2005).

Ethical Issues

Any credible researcher should always take note of ethical issues (McBurney and White 2004). In this study we got informed consent from The Ministry of Education Sport and Culture in Zimbabwe and from the participants before we collected the data. We also ensured our participants of the anonymity and confidentiality of the data collected.

Credibility and trustworthiness

Authenticity of data was ensured through making an accurate record of data collected. Interviews were recorded verbatim and the presentation and analysis of data were done through the use of narratives from the participants. The use of interviews and observations helped in enhancing data credibility.

The challenges as highlighted by the school heads

The following excerpts capture sentiments of some of the female school heads concerning challenges of leading in disadvantaged school contexts:

Leading in DSC is challenging. It needs you to be on your knees if you are a Christian, pray to God to assist you solve the problems you will encounter from the kids, from teachers and from the community. You can't do it alone. You need prayers from friends and colleagues so that you can solve problems especially these orphan problems. They have many problems. You can't even eat your lunch if you think of the hungry kids who do not have something to take in the morning and in the afternoon. Sometimes you have to share your fruit with them, sometimes your lunch box if you are in the

classroom. You just put it to God to assist you be a good leader of these underprivileged schools (Cathrine a deputy school head).

Another head (Sandy) also had the following to say:

Leadership in a DSC like this one becomes very difficult when you have very good ideas which you want to implement but you find that your ideas will not be put into practice because you are in a disadvantaged area or community. If we were in an affluent area, where all things being equal and parents would be forthcoming with money and whatever, we would be flying high. For example my heart bleeds for these children who do not have computers....

Yet another one (Pamela) said:

It's a big challenge to lead a school in a disadvantaged school context but someone has to do the job. We cannot all be at advantaged schools. These disadvantaged schools need people. However, once you know the children, you have done assessments; I think it will be easy for you to handle situations.

The excerpts above suggest that leading in a DSC is a mammoth task which needs resilience for one to succeed working in this type of environment. The school heads in this study echoed a number of challenges they encountered and the strategies which they adopted in solving such challenges.

The biggest challenge which the heads presented was lack of material resources. Lack of resources manifested in shortage of books, furniture and infrastructure and it hampered the development of the schools and achievement of school goals. Although all the schools in the sample were given text books for the core subjects namely Maths, English, Shona and Social Studies by a donor, they have to provide for the other five subjects which are considered as minor. In one farm school, the head said that they were struggling and found it difficult to manage since they had to depend on teachers' books only so she told her teachers to scavenge for whatever books they could get from other schools. She also said she used books from her children's library for the benefit of the school. This school was the hardest hit because in some classrooms there were no chalkboards to write on hence teachers depended on improvised small boards about one square metre big making the writing of long passages difficult. Children wrote while kneeling on the floor while those who had chairs or benches used these as tables to write on.

In the second farm school they had an acute shortage of classrooms so children learned outside under the shadow of trees for half the day. The school had improvised some benches out of logs but these were uncomfortable to sit on for a long time so the children preferred to sit on bare ground as they learned. Since it was difficult to do written work on bare ground, the school decided to conduct all oral,

written and practical lessons outside reserving the written work for the classroom. However this strategy did not work on rainy days as two classes would have to share one classroom making it difficult for two teachers to compete teaching in one classroom.

Obstacles cited above made it difficult for the teachers to complete the syllabus hence the school had to devise other strategies such as giving children homework, morning work or even dismissing a little late in order to cover the syllabus; they had to organise and re-organise the school activities and programmes whenever need arose. Re-designing the organisation is a strategy which was found to be effective for running schools in DSC in USA, England and Australia (Ylimaki et al., 2007). Ylimaki et al. (ibid) found that schools in high poverty areas found it difficult to maintain coherence of the curriculum as students constantly moved in and out of the classrooms adding that such movements disrupted instruction leading to low levels of academic achievement. This is problematic in that such schools are expected to excel in terms of results just like all other schools which do not face similar circumstances (Cunnings & Dyson, 2007).

Most students in this study came from low socio-economic backgrounds. Most of the parents and guardians were not formally employed. While those in the farming area depended on subsistence farming, those in the urban area depended on fruit and vegetable vending. In both these cases, children assisted in subsidising the family income by working in the fields or vending. This meant that such children did not have adequate time to study at home. Worse still, some of the parents had low level education making it difficult for them to assist children with home work.

In most cases, the children did not have adequate food and school provisions in terms of books, school uniform and school fees. This caused emotional labour for the heads as they found means and ways of assisting the children. One deputy school head commented that

Sometimes children came to school without eating anything. During this cold season some cannot afford to have a warm jersey or jacket. They are always shivering from morning till afternoon, on empty stomachs.

According to Maslow, once someone's basic needs have not been met, one is pre-occupied with thoughts of the essentials needed (Department of Psychology-University of Johannesburg, 2009) hence this negatively affects performance in class. In addition, Michalak and Jones (2012: 2) associate poverty with "poor health, housing, local facilities, environment, access to public transport and under-performance educationally". A strategy which was used by all the heads to assist the children was the

engagement of Non-Governmental organisations and well-wishers. Some of the schools were on a feeding scheme.

The other major challenge highlighted in all schools was failure to pay for school fees by the parents or guardians. Failure to pay school fees was caused by many factors. Firstly, there were parents who were genuinely poor especially the old grandparents who had no regular source of income and were struggling to have ends meet. There were other parents who just had a negative attitude towards school and had developed a culture of not paying school fees. Some of these would evade paying fees and they bragged about it. Some just relaxed from paying school fees and gave excuses and if the heads were firm they complained and grumbled. One of the heads actually commented that sometimes the dressing of the parent can tell you that they can afford but they do not want to pay. To confirm the school head's suspicion, such parents could afford to pay for holiday lessons for their grade seven pupils so that they got prepared for the final and national exam but they could not pay a small amount for the fees and levies. The other group had developed the donor syndrome. Since most of these schools sometimes got donations, the parents always expected their children's fees to be taken care of by the donors or well wishers. According to Michalak and Jones (2010) such negative attitudes and resistance from parents was a feature of disadvantaged contexts and these could negatively influence achievement of school goals.

To solve the problems cited above, the heads got firm and sometimes sent the children back home to collect the fees. This made them unpopular as the community compared them with former male school heads that were very lenient with them. One of the TICs comments:

The community says these women like money more than men do. We say no we cannot run a school without money you should bring the money then there comes the problem 'these women are a problem'.

One of the heads even remarked that she was unpopular even with her own staff when it came to payment of school fees because the axe started with them. She said that at one time the community went to report her to the regional office that she was too strict but she remained firm. She stood her ground and told the regional office that she could not run a school without money. Most parents ended up paying the fees. Also some organisations like the NGOs, Red Cross Society, the church and well-wishers assisted in one way or other. For example all the schools were in the feeding scheme programme. In relation to resistance as mentioned above, Drake and Owen (1998) comment that

female school heads who tried to establish different procedures and mechanisms which differed from their predecessors usually met with resistance.

The other problem was the red tape whereby government policy forbade children from being sent away from school to collect fees so the head was caught in between. The other problem was that even if the school sent children home to collect the fees, some parents never paid the money. The heads showed us debts dating as far back as two or three years. Furthermore, some of the children would take long (5-6 days) to come back as they will be selling firewood, firezits and fruits to get the money. By the time they come back, they would have lost much on educational concepts learned during their absence. In extreme cases some children were “pushed out” and dropped out of school as they never came back. The heads’ plight was worsened by the negative attitudes of some parents who did not care much about the education of their children. In one case a head (Sandy) quoted a parent who was bragging to say “if you send my child back home, the child will just sit at home as I do not have the money”. She never made an effort to save the situation. A study in Zimbabwe by Makura (2009) established that parents resisted female leadership by being uncooperative, boycotting paying school fees for their children or even transferring them to male headed schools.

Waterhouse (2010) emphasises the importance of parental involvement in directing and shaping the child’s self-concept as well as in helping the child to set high aspirations and to achieve. Parental cultural capital and the ability to engage in stimulating activities, to motivate and to impart positive attitudes to children were viewed as fundamental because children were as a result of their lived experiences. Where the parents do not value education, children could adopt similar sentiments.

The school heads made it very clear that they instilled positive attitudes in pupils through counselling them on the importance of education and good behaviour as well as establishing disciplinary committees to deal with indiscipline. They also adopted the use of “auntie” and “uncle” counselling sessions where trained teachers in counselling would advise students on life issues and these sessions were scheduled on other school programmes.

Sandy also commented that some teachers exacerbated the situation by clandestinely re-admitting debtors into classrooms without the consent of the administration because they wanted to promote their class pass rate. In Zimbabwe poor pass rate reflects badly on the teacher as it is an indicator on teacher effectiveness by both administration and community. In addition, more often than not excellence in terms of teaching leads to promotion to the ranks of TIC or deputy school head. The heads

therefore had to be firm with the teachers and warned perpetrators of the need to follow and implement school policy.

The other problem which the heads cited was negative attitudes from their colleagues, and community which manifested in the forms of opposition and resistance. In this study it was observed that some male teachers initially resisted female leadership and did not observe deadlines for work assigned an act which female heads classified as insubordination. The heads said they were firm and insisted on what they wanted. Sometimes they had to educate the males. Cathrine a deputy school head commented:

Some resented being led by a woman for example by not doing delegated duties but we called them to the office, discussed with them and enlightened them that these were the winds of change. They had to follow the changes which were current. After some time they submitted and complied and appreciated what was happening.

On the other hand, females tended to pull each other down. Sandy cited a case at her first school as deputy head when some female teachers went behind her back and reported her to the regional office that she was too strict. It was after the officials came to investigate and found everything in order that the culprits were exposed. Coleman (2007) argues that there are numerous documented instances where women resented the success of other women. The heads in this study said women had a tendency of gossiping, complained when they were cautioned and gave negative remarks for example remarking that the head was trying to show off. Some of them were jealousy and looked down upon the female heads. They did not meet deadlines, were insubordinate and in some cases challenged the heads. Pamela one of the TICs comments:

If you give them some work to do and they do not meet deadlines, and you ask but why madam; I asked you to do this and that but you didn't do it what is the problem? 'Ah I don't have the time. You can do it you are also a teacher'.

Strategies cited for coping with this type of behaviour were having 'a chat' with the individual in the office. In the case of persisting insubordination, a written warning could be given or a disciplinary hearing where minutes were taken could be called for. The heads said their colleagues respected them after a struggle. Makura (2009) found out that in Zimbabwe female school heads met with resistance from both male and female teachers adding that staff tended to be uncooperative, verbally abused the heads and tried to frustrate their efforts. In some cases male teachers connived with parents to work for the downfall of the head. Resentment of female leadership elsewhere is also well documented in literature (Smulyan, 2000; Reynolds, 2005; Coleman, 2007 & Kruse & Prettyman, 2008).

Work overload was another challenge cited by all. In the two rural schools, both the school heads were full time teachers and one deputy school head actually taught a composite class. This dual role as teacher and administrator was too demanding as it had many roles to be performed. One of these school heads said it was heavy to teach, attend to office issues, undertake school supervision and attend workshops and meetings. All the heads said they had to plan their work to avoid chaos and they had to stick to routines. When the going was tough, they worked over weekends, came early to do office work, dismissed late and often took their work home. They also delegated some of their work. Sandy confirmed this:

Work is just too much. Some people say if you find yourself with an overload it means you are not able to delegate. I delegate but I still find myself with lots of work to do, a lot of thinking and a lot of this and that.

Commenting about work overload, Wildy and Clarke (2008: 470) say that “balancing with competing pressure, as well as dealing with dilemmas and tensions which are integral to these pressures adds to the complexity of the work of the principal”.

The heads said that some of the work overload occurred as a result of the need to prove themselves. Commenting on her own behalf and other school heads in the urban area, Sandy said they were doing well because *‘you are performing from a position where women are already looked down upon and you simply have to prove that I am able to do this’*. This need to prove oneself was cited by all the heads in the study. They even carried out demonstration lessons for the teachers so as to guide, lead by example as well as well as show the teachers that they can also do the work. The need to prove oneself is in line with a study that was done in England where 70% of the secondary school heads said they were ‘forced’ to work extra hard in a bid to prove their worth as women leaders..

To ensure that school objectives were achieved the heads utilised the structures established by the Ministry of Education, whereby the TIC was in charge of grades 1-3; the deputy grades 4 and 5 and the school head grades 6 and 7. All the school heads said they always worked with their members of staff, consulting on issues before they acted and based their decisions on the views as suggested by their staff. They had supervision schedules which showed the days when official records were to be submitted to the office for assessment by the teachers. There were schedules for staff development programmes at the school and dates for submission of pupils’ books for inspection and duty rosters for various activities and programmes. All books were inspected and assessed regularly. They were

stamped and detailed comments with regards to the quantity, quality of written work, and quality of marking and the feedback given to the pupils in terms of comments given. This served as a monitoring mechanism of the actual curriculum which the children experienced in their respective classes.

Conclusions

Based on the findings, the study concluded that:

1. Apart from having to deal with acute shortages of resources, female school heads had to deal with negative cultural stereotypic attitudes from both their work colleagues and the community.
2. Female school heads overworked themselves in a bid to prove their worth as school leaders.
3. The general welfare and lack of resources for the children caused emotional labour for the school heads leading in DSC.
4. The school heads adopted a variety of strategies for dealing with specific issues in their schools.
5. The strategies which the female school heads adopted were similar in many respects.

Recommendations

The study recommended that:

1. the government should, through the social services department, channel more resources towards the wellness of the needy
2. The community should be encouraged to participate fully in providing for the wellness of the needy rather than wait for subsidies from the government and well-wishers

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Four million extra teachers are needed across Sub-Saharan Africa by 2015 if the Millennium Development Goal of universal access to primary education (UPE) is to be met (COMED/ADEA 2011). In addition there continues to be urgent need to improve the quality of teaching of existing teachers in primary classrooms. There is not sufficient capacity to meet those demands through teacher training or continuous professional development (CPD) courses at Higher Education Institutions (HEI)s and teacher training colleges. In many countries in Africa, particularly but not exclusively in the rural areas, in-service training or CPD outside the school is difficult for teachers to access or to finance. In any case, the school itself has increasing importance as the locus of professional development for teachers. School-based CPD can focus directly on teaching practices and the practicalities of improving the quality of teaching. There is a substantial literature on the benefits to sustainability and long-term change of professional development which arises directly out of classroom practice. The Open Educational Resources (OERs) created by the Teacher Education in Sub-Saharan Africa (TESSA) community have been developed to help teachers improve practice, and they lend themselves to this type of school-based professional development. However, leadership is critically important for this kind of schoolbased teacher education. Without the direct and strategic support of school leaders, it is difficult to organise and sustain this kind of CPD. This paper explores the ways in which Egerton University, Kenya, is working directly with headteachers, deputy headteachers, subject panel heads and teachers in collaborating schools to encourage them in their use of school-based professional development using the TESSA OERs. This paper conceptualises and discusses the kinds of leadership practices which are in evidence and which are helpful to increasing and sustaining this kind of school-led teacher education.

Introduction

In primary schools across Sub-Saharan Africa, teachers need support to develop their own skills and to improve the quality of teaching in the classroom. With the rise in numbers of children attending primary school across the region as a result of UPE and EFA, countries have struggled to cope with the extra numbers of teachers needed to accommodate them. A shortage of teachers, and large classes, particularly in the early years of primary school combine with lack of classroom resources for teaching and learning (e.g. Glennerster et al 2011). Estimates of the

proportion of unqualified primary schoolteachers vary, (where 'unqualified' is defined as 'not holding the certification required in the country to be considered a qualified teacher' e.g. Mulkeen 2010), but between one third and one half of the region's primary schoolteachers may be unqualified on that basis (Anamuah-Mensah et al 2009). Shortages of qualified teachers leads to the widespread use of unqualified teachers (e.g. Mulkeen 2010), particularly at primary school level, as shortages at secondary level are often filled by qualified primary teachers. Further, in some countries, increases in the proportion of qualified teachers have been as a result of the lowering of the standard of qualification (UNESCO 2007b). Pupilteacher ratio (PTR) at primary level averages 45:1 across SSA, the highest of all regions in the world, and this figure increased by 8.2% 1999-2005 (UNESCO 2007a). The challenge is to improve the quality of teaching in classrooms which are overcrowded and under-resourced.

Current forms of teacher education cannot cope with the demand and the attrition rate of those leaving the profession. Current programmes are skewed towards initial teacher education (ITE) to the neglect of the needs of underqualified or lessqualified teachers already working in schools. Such ITE programmes, lengthy and campus-based are supplying only a 'modest inflow' of highly qualified teachers. To exacerbate this, part-time in-service programmes mimic the organisation of initial teacher-training, so that teachers are in general not given credit for their existing experience but are expected to start training as if from the beginning (Wolfenden 2011). Furthermore, despite there being, in many countries, lower entry qualifications for the in-service 'upgrading' of qualifications, it is suggested that 10% of current teachers would not have the required entry qualifications, and additionally that the modest scale of in-service programmes means that it could take between 10 years and 50 years to upgrade the qualifications of all untrained teachers (Mulkeen 2010).

In-service programmes often are either officially or de facto distance education, so that teachers can obtain teacher certification while working in school. However assessment of teaching practice from the teaching provider can be the weakest parts of the programme with, in some programmes, no observation or assessment of practice at all (Mattson 2006). In Kenya for example, a significant number of P1 teachers, who in many areas make up the majority of teachers in a primary school,

have taken the 2 year Primary Teachers Certificate through a programme of distance learning and residentials during school holidays. Such an approach to acquiring qualifications in-service can at best combine the advantages of acquiring an academic underpinning to their practical experience of teaching; at worst there can be a disjuncture between the two, with the theory of subject knowledge and pedagogy bearing little if any resemblance to the practicalities of the classroom. Mattson (2006) distinguishes between distance education programmes and what she calls 'field-based' models of teacher education, with the potential for local support for school-based training – which might include for example, support from a local HEI or teacher training college, school-based mentors, Teacher Resource Centre tutors, visiting tutors, and/or the leadership of teacher education by headteachers.

The typical primary school

A typical primary school in Africa may have a shortage of teachers. For example Wachira et al (2012) suggest that 40,000 extra primary teachers were needed in Kenya in 2009. Such a school may include a significant proportion of unqualified or underqualified teachers whose opportunities of improving their teaching skills and the quality of their classroom pedagogy can really only come from professional development within the school itself. In this scenario a teacher who has had fulltime initial teacher education (ITE) will be a minority figure deployed to the school, perhaps when new to the profession. Such a teacher will have been trained in subject knowledge and theoretical pedagogy but is less likely to have had extensive training in the practicalities of classroom practice, of working with large classes, or of teaching in schools with very low levels of resources.

Primary school headteachers will also often be unqualified – in the sense of lacking either a professional qualification in headship or a degree (Bush and Oduro 2006). In some national contexts primary headteachers face the conundrum that because they do not have a first degree, they are not eligible for postgraduate educational administration courses (Onguko et al 2012). For example, in a recent study which involved 328 headteachers across schools in Kenya 38.7% of headteachers were qualified with P1 and only 7% were degree holders (Wasanga et al 2010). Headteachers in Africa may have substantial teaching experience, as this is often the background to promotion to headship (Oduro and MacBeath 2003, Mulkeen

2010) but they may also be political appointments or appointed without having applied (Onguko et al 2012). Headteachers thus may lack what, for example Bush and Oduro (2006) refer to as 'instructional leadership': leadership in/of teaching, curriculum, pedagogy.

For primary schools there is typically strong centralised bureaucratic control in the deployment/employment of headteachers and teachers and a prescribed national curriculum (Glennerster et al 2011), with the rationale that this assures standards and provides a framework for teaching and learning which is adhered to and understood. Such top-down control is also exercised within schools which operate within tight hierarchical structures and with headteachers and other leadership figures (e.g. deputy headteachers, senior teachers subject panel heads) involved in day to day administrative and managerial matters. Pressure exerted from above constrains the time for the longer-term supervision, mentoring and leading the professional development of their teachers. A 2009 study of headteacher skills in secondary schools in Uganda for example (DeJaehgere et al 2009) found that school size affected the extent to which headteachers were directly involved in leading on learning, with headteachers in smaller schools likelier to have time to discuss lesson plans and classroom strategies. There is pressure on primary schools to improve the quality of teaching and learning in ways measured by examination results or numbers of their children moving onto particular kinds of schools. For example, in Kenya results in the Kenya Certificate of Primary Education (KCPE) determine whether children can enter national, county or district secondary schools and this largely determines their subsequent chances of entry to tertiary education (Oketch and Somerset 2010).

Concurrent with this centralization however, there can also be significant decentralisation in matters such as the monitoring and evaluation of teaching and professional development of school staff, which are often organised and evaluated at district or local level. This may mean very unequal provision and standards across a country. Mulkeen in her 2010 study for example, reports that on average schools in the 8 countries included in the study were inspected less than once a year. Bush and Oduro (2006, p, 370) refer to headteachers "enjoy[ing] little support from local or regional bureaucracy". Mattson (2006) reports regional and district office mainly involved in regulation and administration, with district officials

“playing a mostly supervisory role in relation to teachers” (Mattson 2006, p, 10). Oduro and MacBeath (2003) report that headteachers in Ghana, especially in the rural areas, find themselves stretched by both teaching and supervising teaching, with little external support. Onderi and Croll (2008) report on in-service training in Kenya being funded by the school and the individual teacher rather than by local or national government. The school is pressured to respond to district and national guidelines in terms of teaching to the curriculum and examination performance, but with limited resources to improve the quality of teaching among its own staff.

CPD in schools

Continuous professional development (CPD) is increasingly accepted as key to developing the skills of teachers, keeping them abreast of new curricula and refreshing knowledge (e.g. Mulkeen 2010). Definitions of CPD vary: in some cases it is used interchangeably with ‘in-service training’ where teachers take short courses or attend workshops outside the school (e.g. Onderi and Croll 2008); or the definition includes the much longer term upgrading of qualifications by teachers. For some (e.g. Hardman et al 2011) there is a worrying conflation between CPD and upgrading, as upgrading involves a focus on improving academic qualification rather than pedagogic skills.

In this paper our interest is on CPD within the school and we use the term CPD to focus on that more informal, more frequent and more regular ‘on the job’ professional development in school which can occur as part of the everyday working lives of teachers. A key premise in this paper is that it is a long-term, coordinated and sustained focus on CPD which is key to improving the quality of classroom pedagogy. A further premise is that improvement in quality entails new teaching practices becoming embedded in teachers’ approaches to their pedagogy: that they become an everyday part of what a teacher does.

The need for the CPD for teachers is clear.

Kenya may need to adopt specific pedagogical techniques to address problems common in their schools such as large class sizes, varied educational levels and family backgrounds, irregular student attendance and weaker motivated, poorly trained teachers. Current teaching methods are failing very large numbers of children who attend school regularly but learn very little. The curricula may not be adapted to local challenges and needs. Too often it presumes competencies that

many of the first generation learners do not have ... The central questions therefore are how to devise pedagogies adapted to students' needs and how to get teachers to implement them. (Glennister et al 2011 p, 40-41).

The headteachers' role

In this paper we are arguing that the headteacher is key to the success of schoolbased CPD, in organising and supporting it. It may not be that in every case the headteacher leads on the professional development of the staff - though this would have obvious benefits for both the teachers and the headteacher – but the support of the headteacher is needed for the success of any initiative. This support might include the practicalities of setting aside time for staff meetings which focus on CPD, approving the use of rooms, providing funding for resources, and so on: altogether making CPD an important part of 'what the school does'. In a study of secondary school headteachers in Kenya 7 out of 10 saw the development of teaching methods and subject knowledge as key in-service training needs for their teachers and overwhelmingly the study found that there are major financial constraints on this when such in-service training involves teachers going out of school (Onderi and Croll 2008),

A typical challenge is that headteachers may not feel confident in organising and arranging in-school professional development (Onderi and Croll 2008). Onguko et al (2012) in a study in Tanzania report on the general lack of leadership preparation for headteachers. with no specific training given, and the informal experience in previous posts of working with a headteacher the best preparation offered. The reports of the seven school leaders suggest the dominance of an informal apprenticeship style of professional learning. It seems that it is up to the headteacher and teachers in school to determine how to learn from each other and how to support one another (Onguko et al 2012 p, 99)

To enquire in detail what helps headteachers in their own professional development is something outside the scope of this paper and is worthy of separate consideration. However we would want to suggest here in general terms that there are benefits in school leaders leading on learning and that there is not always professional development in place for this.

We wish to take up the idea of headteachers supporting the continuous professional development of teachers in their schools in relation to an informal network which has developed between Egerton University, Kenya and local schools. We do this in the context of the Teacher Education in Sub-Saharan Africa (TESSA), programme drawing in particular on insights gained from a Hewlett Foundation-funded TESSA research project in which we are investigating the use of OERs in teaching and teacher education in terms of the complex relationships of their use in classroom, school and HEI. We are also in this paper drawing on research material and general insight from other projects within the TESSA programme

TESSA OERs are a toolkit of pedagogical resources for teachers, designed collaboratively by universities and teacher education colleges across Africa, to develop practical teaching skills in the classroom. They have been created to map onto national primary curricula, to provide innovative and active teaching and learning, and to deal with the challenges of teaching in schools with large classes and few resources. They are made available on the TESSA website

(<http://www.tessafrica.net/>) for download, on CDs, and on university intranets.

However they are mostly used in Africa in paper copies.

CPD development in schools: Egerton University

Egerton University is one of seven public universities in Kenya and runs its Faculty of Education from the Njoro campus in the Rift Valley. Egerton has been a member of the TESSA community since its inception in 2005, helped to develop the TESSA OERs for use with student teachers on its courses, and to version them specifically for Kenya. The Faculty of Education uses the OERs in several of its programmes.

Egerton draws many of its Education students from the local area, particularly those who are engaged in in-service programmes to upgrade teaching qualifications. It has also developed strong relationships with a wide network of local primary schools, (where 'local' is roughly defined as 'within 300 kilometres'), for example in situations with schools which host student-teachers each year for their teaching practice on pre-service teacher education programmes. Members of the Faculty visit the schools regularly to observe teaching practice as part of the assessment of the teaching qualification. As well, the districts around the Egerton campus have formal headteacher committees which meet regularly. Strong relationships between Egerton and the local District Education Offices are also important. Graduates of Egerton's primary B.Ed primary programme (which uses the TESSA OERs) have in

one or two cases become Teacher Advisory Centre (TAC) Tutors who lead on professional development in schools in a district. And of course Egerton graduates working in local schools are in a position not only to use TESSA OERs in their own classrooms but to help influence fellow teachers in the school to do likewise. At some point a critical mass of interest has been reached, and Egerton University and the local districts have over the past two or three years begun to lead workshops for local headteachers, deputy headteachers and subject panel heads in the use of TESSA OERs for CPD in the schools. For example in February 2011, Egerton and the Molo district ran a workshop on TESSA OERs for 50 Science subject panel heads; in October 2011, Njoro district organized a workshop for 90 primary school headteachers on the use of TESSA OERs. In August 2011 a more wideranging workshop was held, involving District Education Officers and TAC tutors from 5 districts as well as the Director of Education from the Rift Valley and representative of the Ministry of Education. The interest of all involved is to find workable methods of supporting teachers in the classroom and improving the quality of teaching and learning: that is to provide practical and inexpensive CPD for those working in their schools.

The reach of OERs for CPD in schools

We illustrate the potential for in-school CPD using TESSA OERs with the results of some small-scale data gathering carried out recently by Egerton University as part of the Hewlett-funded TESSA research project. The surveys have been undertaken in local schools which are using TESSA OERs, and the purpose of using this data here is principally to demonstrate how many teachers could be reached, how the use of these OERs could spread, and what the wider potential might be, given an appropriate catalyst.

In one sample survey of headteachers carried out by Egerton in 2012, of 11 local primary schools where the headteachers are actively supporting the use of TESSA OERs, there is an indication in the following table of how many teachers in their schools are using this form of CPD.

(N.B. The information in the table just below is not intended to imply that any particular proportion of teachers in a school are using TESSA OERs, nor is it intended to suggest that, say, a teacher in School 1 using the TESSA Literacy OERs

is a different teacher to the one in School 1 using the TESSA numeracy OERs.)

No of teachers using TESSA OERs across 11 primary schools sampled by Egerton University 2012

Schools

Modules

1 2 3 4 5 6 7 8 9 10 11 Total

Numeracy 19 6 5 - 37 4 8 15 8 20 5 127

Literacy 38 6 8 - 37 3 10 16 12 20 8 158

Science 19 5 5 6 37 6 7 15 8 20 7 135

Social Studies/ Arts 19 5 6 - 37 6 11 14 7 20 6 134

Life skills 19 17 10 6 37 5 19 17 10 20 6 166

One reading of the data in the table above is of the significant number of teachers in any one school who are benefiting from this kind of CPD, for example in School 1: 19 teachers, 38 teachers, 19 teachers, 19 teachers, 19 teachers using the Numeracy, Literacy, Science, Social Studies/Arts and Life Skills respectively. It would seem important with the schools in this survey that a certain enthusiasm for using the TESSA OERs has developed within the school: their use by significant numbers of teachers depends on their being seen within the school to address needs, to work, to make a difference in the classroom. We could speculate that such enthusiasm might be generated by Egerton graduates, by the headteachers seeing effects on classroom practice, by subject panel heads seeing how the OERs can assist teachers within a department and so on. Many factors of course will affect how strong that enthusiasm is and how long it lasts, and significant improvement in the quality of teaching will only come about if changes in practice last and becomes embedded. But it is interesting to consider how many teachers this kind of CPD could benefit if the level of use suggested in the table above could be replicated across many more primary schools.

The 11 headteachers in this same survey were also asked the open question 'how do you rate effectiveness/usefulness of TESSA materials'?

Headteachers' rating of effects of TESSA OERs on teachers and students

For teachers Responses

(Frequency)

☑☑ Teaching has become enjoyable and pupil oriented 05

☑☑ Good and able to improve performance 06

General

Improved pedagogy (delivery of curriculum) 11

Very involving programme 01

Many learning displayed (create good learning environment) 11

Helped to improve mean score in all subjects 08

Pupils

Motivating and involving them in active learning 11

Their responses are grouped in the table above and as can be seen, the headteachers are very positive, and particularly value the improving pedagogy, the motivation of the students and the creation of a good learning environment. While it might perhaps be expected that headteachers who have actively involved their schools in using TESSA OERs would respond positively to questions about their use, it is interesting, given the heavy pressures on headteachers to focus on finance, administration and on student performance that their responses focus significantly on teaching and learning.

Teachers' responses to the use of TESSA OERs

In another sample survey conducted by Egerton University in 2012, of 35 teachers in schools where TESSA OERs are used, the teachers were asked about their use.

In the first table below, teachers were asked about the dissemination of TESSA OERs (N.B. teachers could tick more than one box)

How TESSA OERs are shared

Sharing of TESSA Materials with Other Teachers : within School

Responses Frequency

Staff meeting/seminars 23

Subject panel 15

Class conferences 07

Common preparation of learning materials 12

As can be seen from the table above, dissemination at staff meetings and departmental meetings were the most frequent ways the OERs were being shared. If these findings were replicated on a wider scale, this would reinforce judgements on the extent to which in-school CPD and the development of pedagogy need to take account of the structures and hierarchies which exist in schools and work with school and subject leaders. (That is not to say that there is no potential for more

egalitarian professional development: the numbers shown here, for example, who are involved in the 'common preparation of learning materials' might suggest that there are interesting avenues in peer-led professional development to pursue).

In the same survey, the 35 teachers were asked whether and how their headteachers create a positive and supportive school culture and if so what would be some examples of this.

Headteachers and a supportive school culture

Headteachers Creates Positive and Supportive School Culture

Responses Frequency

☑☑Yes 35

☑☑No 0

How?

Responses Frequency

☑☑Being a role model (leads by example) by using TESSA materials 26

☑☑Provided needed materials 19

☑☑Motivating teachers to use TESSA materials 15

☑☑Understanding and assisting teachers with problem(s) 03

☑☑Encourage participatory culture 17

It is interesting here that 26 out of the 35 teachers describe their headteachers as what might be termed 'lead learners', role modeling the use of the TESSA OERs.

Also significant is combination of practical and motivational support given by the headteachers in this sample; generating enthusiasm for improving pedagogy and providing financial and material resources for teachers to actually engage in this development. And the culture of the school – the school's own accepted ways of doing and being - affects teachers' own attitudes to changing their practices

Leadership support for the embedding of in-school CPD

What has been described above of course is a small and selective snapshot. And this is not to overlook the challenges of embedding new practices in schools. In other responses in the Egerton surveys of headteachers and teachers already discussed above, the majority of teachers (30/35) remain concerned about finding the time to incorporate new/different approaches into their lessons. Almost half of them would like more training in the use of TESSA OERs and 24/35 would simply like more copies of the TESSA materials. For the headteachers, financial support for CPD is an overwhelming concern. And both teachers and headteachers point to lack of computers and/or electricity as a significant challenge.

The challenges just mentioned will be familiar. But it is a measure of resilience and of a professional enthusiasm among teachers, headteachers and across schools that those involved in education in challenging circumstances nevertheless are engaged in change and development. To summarise the discussion of the data which Egerton have collected, there is interest and enthusiasm among headteachers and other school leaders in the widespread take-up among their staff of materials and ideas which will improve the quality of teaching. Interest can be generated for example by one or two teachers using new materials, but the explicit support of the headteacher creates the conditions in the school for new approaches to gain widespread purchase. Our purpose in examining this small amount of data is to begin to explore what would be needed to embed within any one school a sustainable form of in-school CPD, and how, with leadership support, an enthusiasm for improving pedagogy becomes 'what the school does', so that new teaching practices become embedded in all teachers' own pedagogy.

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Introduction:

The launching of the UBE which made provision for first 9 years of free and compulsory basic education has not only led to increase in school enrolment but has put a lot of pressure on the skills of teachers, who hitherto, have come under heavy criticism due to their ineffectiveness. However, in the last one year enrolment has improved greatly due to some positive steps taken by the government not only in abolishing school fees but in providing school uniforms and textbooks, paying teachers' salaries regularly and renovating some dilapidated school buildings. In spite of these efforts, the absence of any clear policy on continuing professional development of these teachers Izuagba & Nwigwe (2010) and the inability to realign teacher education curriculum to the needs of the 21st century, Obanya (2004) has adversely affected the quality of output at the lower and middle basic education levels. Research findings also reveal that the main goal of these levels of education is yet to be achieved as learners graduate without being able to read and write, Bakari (2009), while Nwangwu (2008) decried the poor management of teaching practice, which is critical to the professional development of pre-service teachers. Izuagba & Afurobi (2010) and Omojuwa (2007) confirm that teachers' poor knowledge ICT and their inability to integrate it in teaching has affected graduates ability to access the knowledge driven economy.

It is in order to bridge these gaps that the Imo State Government of Nigeria recommended the use of mentors in grooming teachers in the lower and middle basic education levels in order to enhance their professional and personal development for the improvement of teaching and learning. This innovation is being resisted by teachers and some policy implementers who are skeptical of its prospects in facilitating the professional and personal development of teachers for the achievement of the UBE goals.

Quality teachers is the desire of every nation not only because of they do not only correctly and effectively implement the curriculum , but their positive influence of the professional development of new teachers they work with cannot be quantified. For effective teaching, the teacher must have sound pedagogic content knowledge and a good personality. As a matter of fact, teachers do not enter the classroom as finished products, most new teacher do not possess the knowledge and skills they will need to become highly effective, but with experience, novices can become better teacher. Scholars suggest the establishment of inductions programs for beginning teachers in order to guide them through

the crucial first years of teaching.. This implies that no teacher should be thrown into a classroom without the support he/she need to be successful as doing this will have adverse consequences on the learners they teach. One of the ways of helping new teachers to grow is through mentoring. Teachers that serve as mentors are usually experienced and skilled who are able to quickly diagnose the needs of struggling, new teachers and can consistently relate to and support them; helping them improve their instructional strategies and skills: help them develop the curricular, and offers other forms of professional help.

According to Wkipedia , the concept mentor originated from a Greek word: *Μέντωρ / Méntōr*; gen.: *Μέντορος* and was used in Homer's great literary work "Odyssey". The important role mentor played led to its adoption in English as a term that refers to someone who imparts wisdom to and shares knowledge with a less experienced individual/ colleague. However, the term mentor gained wide popularity in the business world during the 1970s and, other professionals began to promote its use (Odell, 1990). In education, it is widely used to support novice teachers in order to reduce attrition rates (Feiman-Nemser & Paker, 1993), but its use as an ongoing in-service activity to help new teachers to acquire professional skills and improve their instructional strategies has not been greatly explored especially in Nigeria, (Nwamuo, 2012)..

Given the current pressure for educational reforms more especially, the need for teachers to change from the teacher centred approach to the learner centred approach. Mentoring can be an effective way to train teachers to adopt this new practice and learn to net work with others in other to improve on their practices. Change cannot arise spontaneously from externally imposed expectations or mandates, or solely from one-time training sessions or one-shot in-service courses, professional development practices such as mentoring that provide one-to-one guidance and ongoing on-site support can be more successful because learning depends on the collegiality among teachers, (Barth, 2001). A sense of collegiality also makes less experienced teachers feel safe to make mistakes, study themselves, and share learning with each other to create excellence in their delivery (Dantonio, 2001).

Mentoring has far greater potential to reform the educational system, especially when the "mentoring is to support and encourage new and inexperienced teachers to maximize their potential, develop their skills, improve their performance and become the person they want to be. Mentoring is a powerful personal development and empowerment tool given the fact that a mentor is a guide who can help the mentee to find the right direction and help develop solutions to career issues. Mentors rely upon having had similar experience to gain an empathy with the mentee and an understanding of their issues. Mentoring is a powerful developmental technique that socializes learner to the larger context of an organization. Mentoring provides the mentee with all opportunity to think about career options and

progress. A mentor should help the mentee to believe in her/himself and boost her/his confidence. However, the extent a mentee accepts to be mentored depends of his/her perception of the mentoring programme. Many Scholars (Peacock 2005, Audi 2006, Cassam 2007 and Strawson 2008) believe that perception and knowledge are intertwined. In fact, the concept "perception" cannot be explained without reference to knowledge which is a function of one's educational level, experience, exposure , philosophy and for a teacher theory of teaching and learning, Taiwo (2009). These variables are responsible for how and why people's understanding or views of things/issues differ. Constructivists rightly pointed out that experience and beliefs influence the way people perceive , understand or approach issues, Izuagba & Ezenwa(2010) , if experience is seen as the product of variables like sex, educational attainment, one's personality, exposure and the person's interaction with the environment. It implies that the perception of teachers can affect the mentoring programme.

It is on this premise that this study sets out to determine whether sex, years of experience, level of education of teachers are responsible for any negative or positive perception of their professional and personal development through mentoring.

Specifically, the research sets out to do the following:

1. Find out if years of service has an influence on perception of teachers towards enhancing their professional and personal development through mentoring.
2. Determine if teachers' level of education has an influence on the perception of teachers their professional and personal development through mentoring
3. Find out if sex has an influence on the perception of teachers towards enhancing professional and personal development through mentoring.

Based on the above, the researchers will be guided by the following research questions:

Research Questions:

1. What is the perception of teachers towards enhancing their professional and personal development through mentoring?
2. To what extent do years of service influence teachers' perception of enhancing their professional and personal development of through mentoring?
3. To what extent does level of education acquired by teachers influence their perception of enhancing their professional and personal development through mentoring?
4. To what extent does sex influence the perception of teacher towards enhancing their professional and personal development through mentoring?

This study is a simple survey designed to elicit information from primary school teachers on their perception towards enhancing teachers' professional and personal development through mentoring. It is limited to Imo State of Nigeria where the mentoring programme is initiated at the UBE level by the new administration in 2010/2011 academic session. Imo State is one of the 36 States in Nigeria and the enrolment in its education system is one of the highest in the country but in the last five decades the quality of teaching and learning has been very poor as reflected in high drop rate, poor academic performance, low transition and completion rates of pupils in the lower and middle basic education levels.

The population of this study will comprise all the 11,874 teachers in the Imo State lower and middle basic education (1,387 males and 10,487 females). From this a sample of teachers will be selected using the stratified random sampling technique.

METHOD

This study is a survey designed to elicit information from primary school teachers on their perception towards enhancing teachers' professional development through mentoring. The population of the study consisted of 11,874 primary school teachers in Owerri Educational Zone. The simple random sampling with non-replacement balloting technique was employed. Stratification was also used for sex, years of experience and level of education. A sample size of 900 respondents was used representing 7.5% of the population. According to Owie (1996) when the population is large a sample of 5 – 10% can be used.

Instrument constructed by the researcher was a structured questionnaire which sought to measure the variables under investigation. The instrument used was a 22 item three – point scale questionnaire, which sought information on primary school teachers' perception towards enhancing their profession development through mentoring. The total score for all items was taken as the index of perception. The instrument was validated by experts in mentoring and teachers professional development. The Spearman Brown's Coefficient of correlation of 0.86 was realized when subjected to a pilot study using primary school teachers in Okigwe zone.

The instrument was administered on a face to face basis over a four week period. A total of 920 questionnaires were distributed but 8 was lost in transit. Another 12 were incorrectly completed therefore were discarded, leaving 900 copies. Data generated will be subjected to descriptive statistics of frequency and percentages.

RESULTS

Research Question 1: What is the perception of teacher towards enhancing their professional and personal development through mentoring?

Table 1: The nature of primary school teachers' perception towards enhancing their professional and personal development through mentoring.

LEVEL OF PERCEPTION	NO OF TEACHERS	PERCENTAGES
Negative	556	61.8
Mildly positive	150	16.7
Positive	194	21.5
TOTAL	900	100

Table 1 shows the nature of primary school teachers' perception towards enhancing their professional and personal development through mentoring. To show the true nature of their perception, scores were divided into three levels namely negative, mildly positive and positive. The result in the above table shows that 61.8%, 16.7% and 21.5% of primary school teachers' perception tends towards negative, mildly positive and positive perceptions respectively.

Research Question 2: To what extent do years of service influence the perception of primary school teachers towards enhancing their professional and personal development through mentoring.

Tables 2: Percentage response of the influence of years of service on primary school teachers' perception towards enhancing their professional and personal development through mentoring.

YEARS OF SERVICE	LEVEL OF PERCEPTION			TOTAL
	NEGATIVE	MILDLY POSITIVE	POSITIVE	
5 – 12	308 (34.2)	56 (6.2)	98 (11)	462 (51.3)
13 and above	248 (27.6)	94 (10.4)	96 (10.5)	438 (48.7)
TOTAL	556 (61.8)	150 (16.7)	194 (21.5)	900 (100)

Table 2 shows that primary school teachers with 5 – 12 years of service showed 34.2%, 6.2% and 11% of negative, mildly positive and positive perceptions respectively towards enhancing their professional and personal development through mentoring, while those with 13 and above years of service showed 27.6%, 10.4% and 10.5% of negative, mildly positive and positive perceptions respectively.

Research Question 3: To what extent does level of education acquired influence primary school teachers' perception towards enhancing their professional at personal development through mentioning.

Table 3: Percentage response of the influence of level of education acquired on perception of primary school teachers towards enhancing their professional and personal development through mentoring.

LEVEL OF EDUCATION	LEVEL OF PERCEPTION			TOTAL
	NEGATIVE	MILDLY POSITIVE	POSITIVE	
NCE	265 (29.4)	66 (7.3)	89 (9.9)	420 (46.8)
B.ED	291 (32.4)	84 (9.4)	105 (11.6)	480 (53.4)
TOTAL	556 (61.8)	150 (16.7)	194 (21.5)	900 (100)

Table 3 shows that primary school teachers with NCE showed 29.4%, 7.3% and 9.9% of negative, mildly positive and positive perceptions towards enhancing their professional and personal development

through mentoring, while those with B.ED showed 32.4%, 9.4% and 11.6% of negative, mildly positive and positive perceptions respectively.

Research Question 4: To what extent does sex influence the perception of primary school teachers towards enhancing their professional and personal development through mentoring?

Table 4: Percentage response of the influence of sex on perception of primary school teachers towards enhancing their professional and personal development through mentoring.

SEX	LEVEL OF PERCEPTION			TOTAL
	NEGATIVE	MILDLY POSITIVE	POSITIVE	
Male	261 (29)	79 (8.8)	90 (10)	450 (50)
Female	275 (32.8)	71 (7.9)	104 (11.5)	450 (50)
TOTAL	556 (61.8)	150 (16.7)	194 (21.5)	900 (100)

Table 4 shows that 29%, 8.8% and 10% of male primary school teachers showed negative, mildly positive and positive perceptions respectively towards enhancing their professional and personal development through mentoring, while 32.8%, 7.9% and 11.5% of female primary school teachers showed negative, mildly positive and positive perceptions.

DISCUSSION

This study used primary school teachers in Owerri Educational Zone. Table 1 shows that primary school teachers show a negative perception towards enhancing their professional and personal development through mentoring. A good percentage of 61.8% showed a negative perception. This shows that primary school teachers are not aware of the benefits of enhancing their professional and personal development through mentoring.

Table 2 shows that a total of 556 or 16.8% of all respondents presented a negative perception towards enhancing the personal and professional development through mentoring, while a total of 194 or 21.5% showed a positive perception. An appreciable percent of 16.7% showed a middle positive perception. The indication from the finding is that teachers have a negative perception towards enhancing their personal and professional development through mentoring by years of service. This finding point to the fact that years of service is a determining factor of teachers' perception.

Table 3 shows that there is a little disparity in the perception of teachers by level of education. 29.4% of the teachers with N C E certificate showed a negative perception while 32.4% of those with the Bed certificate also showed a negative perception. The differences in their perceptions were not seen as significant. This finding indicates that the level of education is not a determining factor in their perception. It could be concluded that there is a possibility that the concept of mentoring is not quite clear to them hence the skepticism

In answer to research question 4, table 4 shows that both male and female teachers" showed a negative response with high perception of 61.8%. The indication is that sex is not a determining factor of teachers" perception towards enhancing their personal and professional development through mentoring. Both male and female were in agreement in their perception.

Conclusion

In view of the foregoing analysis and discussions the researchers drew a number of conclusions. Primary school teachers in the area of study are not aware of the benefits of enhances their professional and personal development through mentoring.

It was also concluded that teachers in this areas of study have a negative perception towards enhancing their personal and professional development through mentoring. Thus, it could be deduced that there is a possibility that the concept of mentoring is not quite clear to them hence the skepticism and that years of service, level of education of teachers and sex have no influence on the perception of teacher towards enhancing their professional and personal development through mentoring.

Recommendations

The following recommendations were made based on the findings of the study?

1. There should be a review in current developmental programmes of the teacher to incorporate the mentoring system.
2. Government and agencies that are concerned with teachers' development should ensure the use of mentors in grooming teachers in the lower and middle basic education level in order to enhance their professional and personal development for the improvement of teaching and learning.
3. Teachers should not teach in isolation, rather methods such as team teaching which encourages mentoring where teachers learn to net work with others in other to improve on their practices.

4. To improve teachers' perception towards mentoring, professional development practices such that provide one-to-one guidance and ongoing on-site support should be carried out regularly because learning depends on the collegiality among teachers.
5. Principals and headmasters should establish friendly and co-operation prone environment in their schools to encourage teachers to have self-confidence in themselves as well as feel free to consult each other at difficult moments without fear and feeling of complex.

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Introduction

This paper is based on three months of research into kindergarten curriculum implementation in Ghana. The interest was necessitated by the fact that Kindergarten stage is critical in laying strong, firm and solid foundation for future success of every child. The Ghanaian *Kindergarten (KG) Curriculum* is designed to give administrators, teachers, and teacher educators guidelines and resources to effectively implement its components in a high-quality kindergarten programme. Based on research, best practice in the field, as well as position statements authored by the National Association for the Education of Young Children (NAEYC, 2004), the KG curriculum clarify appropriate kindergarten structures, practices, and environments. The KG curriculum in this regards is the planned and unplanned programmes and activities for an institution. Kindergarten Curriculum is intended to advance a comprehensive and seamless educational continuum from preschool through primary schools in Ghana.

The Government of Ghana launched a comprehensive Early Childhood Care and Development (ECCD, 2004) policy and established an ECCD Secretariat, and Ministry of Women and Children Affairs (MOWAC, 2004). The main aim of MOWAC is to develop programmes for children from birth to age eight; (0 – 8 years) to protect their right to develop full cognitive, emotional, social and physical potentials. The policy was predated by child protection legislation in the 1992 Constitution, the Ghana Children’s Act 1998 (Act 560) and the United Nations Convention on the Rights of the Child.

Following the Report of the President’s Committee on Education Reforms Review (2002), the Ghana Government White Paper (2004) provided guidance for the mainstreaming of KG education into the regular basic education school system. This policy framework has led to the implementation of a number of high-profile initiatives geared toward improving KG teaching and learning. Such initiatives include: development of a KG curriculum, early learning and development standards and assessment tool, implementation of a National Literacy Acceleration Programme (NALAP), (a mother-tongue approach to language learning with content for KG1 and KG2), capitation grant, one free balanced meal a day, free school uniform, fee free schooling at basic education level, mainstreaming, and increasing inclusion of child-centred approaches, hands–on and activity based approach to KG curriculum and instruction.

Several programmes have supported the development and production of materials for Kindergarten pupils. The National Literacy Acceleration Programme and Teaching and Learning Material Programme, (TLMP 2009) supplied teaching and learning materials to kindergarten; and assessment tools were developed in 2009. Teacher guides have been designed to strengthen implementation of specific aspects of the KG curriculum while the KG child has become the focal point in lesson delivery process. The ECCD policy and the recent Zero Draft of the National ECCD Coordinating Committee, Ghana Education Campaign Coalition (NECC), Early Childhood Strategic Plan 2012-2015 have become drivers for KG education in Ghana. The policy documents seek to develop guidelines, institutional framework to guide stakeholders, to assign

responsibilities, and put in place co-ordinating and monitoring mechanisms for promoting early childhood development in Ghana (ECCD Policy, 2004).

The KG curriculum has the following thematic areas; language and literacy; environmental studies; mathematics/science and technology; creative activities; music dance and drama; physical development; and psychosocial skills are areas of learning experience. To teach is to understand purpose, subject matter, and ideas within and outside the discipline. Kindergarten teachers need to understand what they teach and the ability to teach effectively depend largely on the technical know-how of the facilitators and caregivers (Otami, 2011). Ghana education sector has a lot of non-professional teachers at kindergarten settings. The fact is unlike in Sweden where 60% of ECD teachers are Degree holders, and in Norway (30%) are degree holders, unfortunately, the majority of Ghanaian KG teachers are non-professional approximately 37,000 of which teachers are untrained (see <http://ecrp.uiuc.edu/v1n2/alvestad.html>).

Problem statement

KG curriculum implementation achieved greater momentum with the integration of KG education as part of the 11 year basic education system. A lot of investment has been made but there is little information on teachers' voices after nearly five years of implementation. As the existing syllabus is due for review little specific research information is available on the views of teachers who are central to the implementation of the KG curriculum. Teachers' views are needed to inform the content of the curriculum and training needs for effective implementation but there is little research knowledge in this area. Therefore, the purpose of the research that informed this paper was to explore Kindergarten teachers' perspectives on the curriculum content and its implementation in Ghanaian schools.

Research objectives

- ⦿ Ghanaian kindergarten curriculum and its implementation process among kindergarten teachers.
- ⦿ Curriculum implementation challenges among kindergarten teachers of Ghana.

Research question

From the literature, there is a gap around teachers' perspectives on KG curriculum implementation in Ghana. The key questions to be addressed are:

- ⦿ What are Kindergarten teachers' perspectives of the Ghanaian KG curriculum and its implementation processes?
- ⦿ What challenges do Ghanaian kindergarten teachers encounter during the implementation of the KG curriculum?

Significance

The results and findings from the study will, hopefully, expose Ghanaian ECD programme coordinators and curriculum developers to review curriculum related issues in scaling up Kindergarten education. Arguably, the results would provide a point of reference to the Ghana Ministry of Education, the Curriculum Research and Development Division (CRDD) of the Ghana Education Service and Ministry of Women and Children Affairs (MOWAC) in the processes of Kindergarten curriculum review in Ghana. Findings may also raise the concerns of scaling up the caliber of teachers at this crucial level of development.

Conceptual framework

Contemporary models of Kindergarten education place the teacher as central in preparing younger students for future schooling which makes it important to examine the voices of teachers about the KG curriculum (see De Vries & Kohlberg, 1987; Jones & Reynolds, 1992; Van Hoorn et al, 2003). Although there is not one definite conception of what is the 'best' curriculum, the teacher is regarded as central in the entire range of experiences that children have at school (Ailwood, 2003). Sherley (2011) explained that teachers' personal experiences combined with the primarily sociocultural focus of the early childhood curriculum made children benefit from the teaching and learning process. One key role of a Montessori teacher is to demonstrate how materials are to be used and the child accomplishing a given task using the materials (Montessori, 1914).

As a continuum this paper proceeds from the framework that the teachers' perspectives are critical to the implementation of the curriculum. Literature from elsewhere provided knowledge that High quality programs adopt a holistic view of children's development and well-being, and enable teachers to adopt flexible pedagogical approaches rather than focus at narrow academic objectives (OECD, 2001; New Zealand Early Childhood Curriculum Framework). High quality curricula are based on positive teacher-child relationships; in a sense, these relationships *are* the curriculum (Lloyd-Jones, 2002). The argument is that learning in the early years must be based on quality, developmentally-attuned interactions with teachers and opportunities for play-based problem-solving with other children that stimulate brain development (McCain & Mustard, 1999). It is therefore important to explore teachers' views about the relevance of the curriculum content and its implementation.

Founders of Early Childhood Education such as, Pestalozzi, Froebel, Dewey, Maria Montessori, Rousseau, Chomsky, Vygotsky, Piaget, all explain various ways young children learn and curriculum materials required that have relevance for teacher training (Roopnarine & Johnson, 2005). Brewer (2007) argues that the teacher is an indispensable factor in young children's education. The question for Ghana concerns how kindergarten teachers support and implement such curriculum (Esa, 1999). Pestalozzi (1746 – 1827) argues that even though children can learn something in the process of education, they need teachers' support to be able to learn something significant. However, how teachers view and implement the Kindergarten curriculum to benefit the child as a holistic individual is not a subject of concern in the educational literature on Ghana. The conception here is that implementation of the KG curriculum will be very challenging to the teachers with little training in early childhood education.

A Kindergarten teacher must possess certain qualities to implement the principles of child-centred approach (see Maria Montessori (1870 – 1952) cited in Brewer (2007)). The father of kindergarten education, Froebel (1782 – 1852) indicates that teachers of young children are vital in the learning experiences children receive. Crain (1980) explains that teachers have a role in determining whether the learning task is too difficult or appropriate at their level of development. The role of the KG teacher is therefore very important in laying the foundations for effective curriculum implementation. However, the reality in the Ghanaian KG settings is not known and this requires more systematic analysis of the voices of teachers and headteachers of kindergarten about how they see the curriculum and its implementation.

The evidence is that Education Sector Annual Reports (2006, 2007, 2008, 2009,2010) indicate quantitative increases in KG participation but have consistently not highlighted curricula and pedagogical issues from the point of view of teachers. Similarly, a cursory look at the Education Sector Annual Reports reveal a relative lack of attention to issues around teaching and learning materials within KG education. However, Studies of public policies and programmes focused on enriching early childhood development have highlighted the relevance of exploring teachers' perspectives (Engle, 2007; Love, 2005; Young, 2007; from UNICEF, 2010). As such, there remains a lack of rigorous evidence of teachers' voices in kindergarten curriculum implementation in Ghana which laid the basis for this paper.

Methods

The qualitative approach which focuses on in-depth examination of peculiar discourses with the aim of discerning patterns, trends and relationships (Grix, 2004) was used for the study. The design was therefore more exploratory than experimental and methods of data collection included interviews and focused group discussions. The data was collected mainly through on-site interviewing (Denzin & Yvonna, 2003; Yin, 2009) which seeks participants' perspectives, views and meanings through ongoing interaction (Creswell, 2003; Stake, 2005). The targeted population – for the study - included all kindergarten teachers who are in active service in Ghanaian schools. As the target population is not always readily accessible and can only study that part of it that is available – the study population or the sample (Kazerooni, 2001). For this research the study population was made up of 15 kindergarten teachers and two (2) Early Childhood Coordinators, totaling 17 participants in Koforidua district, eastern region of Ghana.

The participants were selected using purposive and convenience sampling techniques. Purposive sampling was used to ensure what Tongco (2007) described as deliberate choice of an informant due to the qualities the informant possesses. It was used together with convenience sampling because it allows the researcher to decide what needs to be known and sets out to find people who can and are willing to provide the information by virtue of knowledge or experience (Bernard 2002; Lewis & Sheppard 2006). Thus, the 17 participants were selected because of their specific experience and associations with the implementation of Kindergarten curriculum either as classroom teachers or coordinators of kindergarten education.

Data collection procedure and analysis

A permission letter was sent to the Regional Director of Education to seek permission for the collection of data from her staff. The selected KG teachers were contacted and had one –on –

one structured interviews with them to solicit their experiences in terms of using the curriculum and the challenges they encounter. Thereafter, focused group discussions were organized based on the understanding of the curriculum content, lesson delivery strategies, active participation of children and the use of Teaching and Learning Materials. Data collected was analysed using thematic analysis. The themes were developed based on the research question and other themes emerging from the data collected.

Educational background of participants

This is the breakdown of qualifications of kindergarten teachers who participated in the study:

Qualification	Frequency(number)	Percentage (%)
MPhil (Special Education)	1	6
B.Ed (Home Economics)	1	6
Diploma in Basic Education	5	30
Teachers' Cert 'A'	4	23
GCE/SSCE	4	23
MLSC/BECE	2	12
Total	17	100

It is deduced that none of the participants had any form of certificate in early childhood education. The question is how effective will they be in the implementation of the Kindergarten curriculum.

Discussion of Findings

The findings from interviews and focus group discussions indicated that teachers have access to the kindergarten curriculum but lack understanding on how to effectively implement it. That is pedagogy issues which compel them to skip some topics.

Teachers' perspectives on the Implementation of Kindergarten Curriculum

The discussion of teachers' perspective on the KG curriculum here is intended to unearth challenges in the content of the curriculum and its implementation from those on the sites of practice.

Teachers' perspectives on curriculum content

The teachers' perspectives on curriculum have implications for the implementation process. As relates to the curriculum content, one teacher succinctly explained that,

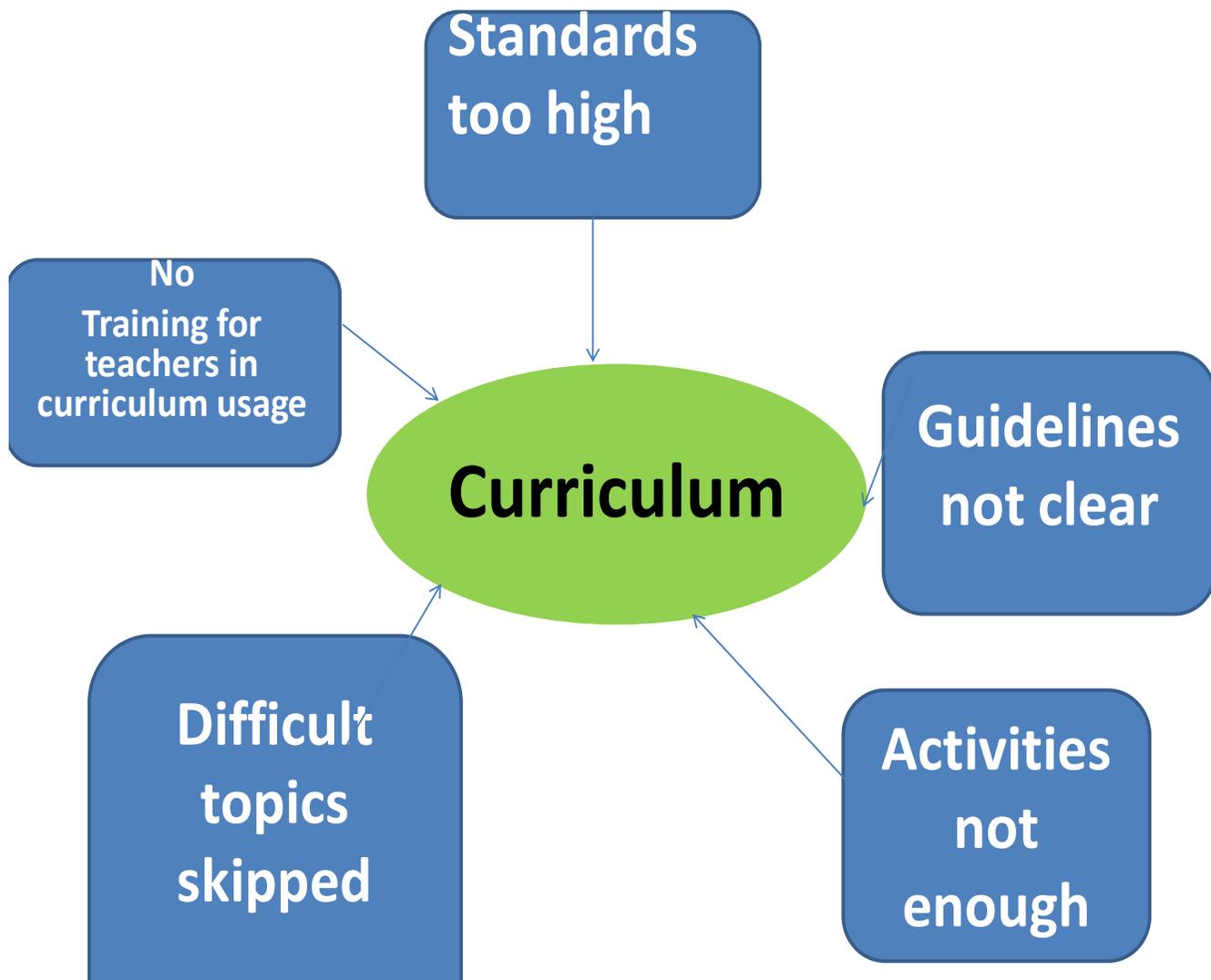
the KG curriculum is good because the content covered areas appropriate and adequate for KG 1 & 2.

This point is made variously by other participants who used expressions such as *the content is okay; the curriculum is basically good; it is good, I think the content covers the essential learning areas*. On the question of the specific content, one participant made the point in stating that,

The areas covered in the Standards include Health and Physical Development, Social and Emotional Development, Creativity, Language and Literacy Logic and Reasoning, Mathematics, Science, Religious and Moral Development. I think it is okay.

The teachers expressed concerns about *the curriculum has little emphasis on hands-on activities which they lack understanding on how to effect such activities in the teaching and learning process*. The argument is that there is little emphasis on practical activities in the curriculum. How Ghanaian KG teachers support the implementation of the curriculum is of great concern (Esa, 1999) Also, the teachers were worried about the lack of support facilities for the inclusion of ICT in the KG curriculum. This was recommended in the Report of the President's Committee on Education Reforms Review (2002) but was, arguably, not possible because the curriculum was developed before the Government's White Paper was published. Besides, the teachers asked that some of the prescribed activities in the curriculum were unsafe for children. The activities teachers listed include children *using sharp objects* such as *needles and scissors*. As one teacher explained,

the prescription that children use objects such as needles and scissors is not safe. I think curriculum planners should think through some of those activities because some teachers will do that without effective supervision and may expose children to risk.



The views of teacher on the kindergarten curriculum

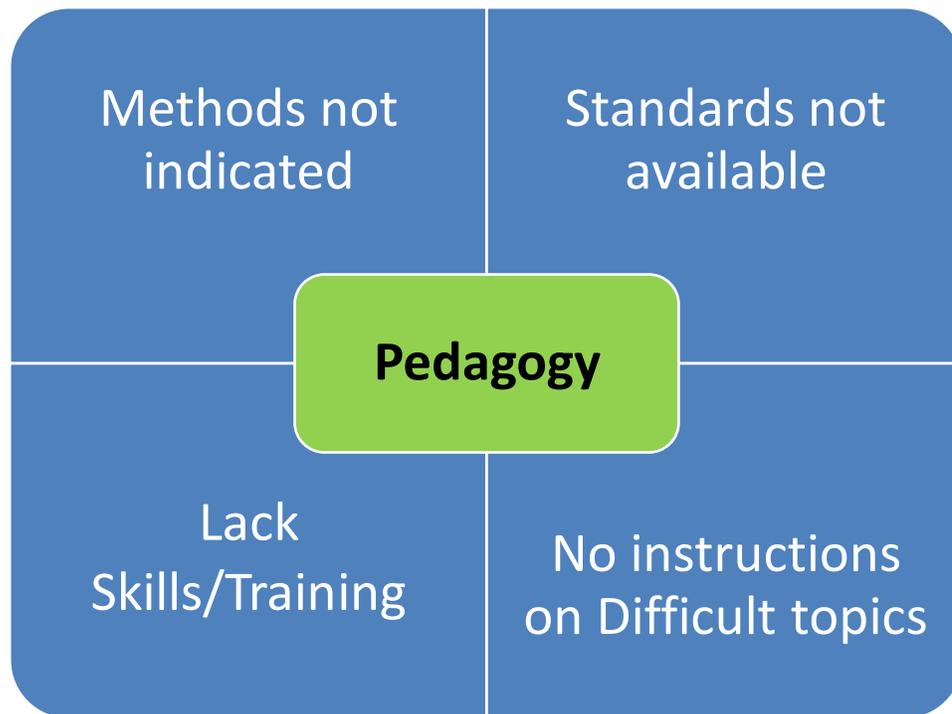
Teacher Training for curriculum implementation

One theme around which discussions were held with the participants was teacher training for curriculum implementation. The teachers generally noted that the training was organised on the contents of the curriculum. Early Childhood Curriculum Framework enables teachers to adopt flexible teaching methods and approaches rather than focusing on the narrow academic oriented curriculum. Teachers were with the view that those who attended the trainings used words such *appropriate* and *adequate* to describe the contents of the trainings. Montessori, (1952) opines that teachers of young children must possessed certain qualities that will help them ensure child-centredness approach in KG classrooms. Yet, the focus group discussions revealed that some did not receive any training in using the curriculum while those who received training felt that the training period was too short. The problem was outlined by a participant, who noted that,

The content of the training is good and appropriate for me but the problem is with the training period. The period is too short and not adequate to support quality teaching and learning. It does not cover the content of the curriculum and everyone too.

The teachers noted that the training they receive is mostly short orientation workshops organized over one week, five days, three days and in some cases, two days.

The views of teachers on lesson delivery skills and techniques



The focus group discussions reveal that the main reason teachers were concerned about was the period of training, is that, it does not support the development of skills to teach topics that teachers find very difficult to understand. In contrast to Maria Montessori's views, one teacher indicated she cannot teach *estimations*. Froebel, (1782 – 1852) indicates teachers in the life of young children play a vital role in their developmental process into holistic individuals. However, another teacher explains that she is not alone there are other colleagues who *avoid the teaching of other difficult topics such as multiplications*. Pestalozzi, Piaget, Chomsky Dewey, pioneers of early childhood education all talk about best practices at the early stages of life are very critical to a child's development, growth and learning. So, the problem here is teachers' knowledge about the subject matter prescribed in the curriculum and the quality of training they are offered to deal with the teaching of difficult topics in the curriculum is inadequate. De Vries & Kohlberg, 1987; Jones & Reynolds, 1992, Van Hoorn et al, 2003, indicate that the teacher is at the centre of the curriculum implementation, yet, the KG teachers in Ghana explained the training is woefully inadequate to equip them for effective lesson delivery, and looking at their background, they lack skills in the field of early childhood education.

The issue of training for curriculum implementation also concerns assessments processes and tools. Some of the teachers came out with the challenge of curriculum assessment measures by

Circuit Supervisors and district Coordinators. These persons look out for quantity of work done by these young children and not the quality of work done. McCain & Mustard, (1999) argue that teachers should create opportunities for hands – on activity based learning, where children can be observed as a form of assessment. Some of the KG teachers indicated they have never seen the assessment tools. A participant stated this clearly that, *some of us do not have the assessment tool* while another said, *I am not aware that we have this assessment tool in my school*. On the other hand, some of those who have seen the assessment tools do not receive any training on how to use it. The repetitive comment in the focused group discussion was *I did not receive training*. A participant explained, for example, that

the Assessment Tool is developed based on whole years' work and we the untrained teachers have difficulty in how to break it into terminal assessment units or use it for weekly assessment of children.

As it turned out, the only training programmes organised were UNICEF sponsored Trainer of Trainers (TOT) in five (5) regions. This UNICEF training was only attended by participants from selected districts in those regions who never really organized local trainings for colleagues in their respective districts. As one participant explained,

I attended the ToT but never had the opportunity to organize any training for other people [kindergarten teachers] in my district.

Other teachers were mainly concerned that the orientation given to trainer of trainers was good but inadequate to address the broader needs of the KG teachers in the classroom. Sherley, (2011) explains the importance of teachers personal experiences, and their benefit to young children. In contrast, these teachers lack these basic skills that will enable teachers to be of great benefit to the young children they teach. The teachers concerns were that most KG teachers in Ghana are not trained professionals, so they needed training to implement the curriculum requirements.

Availability of curriculum materials

Three teachers from three different schools came out with another emerging theme about the availability of teaching materials. They argued that these materials make the children to enjoy the lessons they teach. Teachers indicated they usually make their own local materials because basic materials are not available. Teachers explained that simple materials such as crayons and blocks are not available in the schools. Teachers should demonstrate how teaching and learning materials should be used by children (Maria Montessori, 1914). The teachers' recommendation is the supply of picture charts, crayons, paper, radio, skipping ropes, balls, colours, musical instruments, puzzles of all kinds, clock face, and outdoor equipment for schools. A teacher explained,

they lack of materials for play and learning is a matter of great concern.

A teacher explains that it is impossible to follow kindergarten classroom formations due to lack of materials. Therefore classrooms are regimented and the children are taught as though they were adult learners. A teacher explained that, *in our school we do not use group work or individual method*. Another explained that,

teachers in my school scarcely use demonstration, role play, individual, play method, and other participatory activities (group discussions or group work) which facilitate learning for children.

All but two of the teachers involved in this study said they never saw or used the kindergarten Assessment Tools. The teachers say they mostly use written question and answers as forms of assessment. Other teachers say they use written work or ask children to do something or perform an activity as ways of assessment. However, the teachers say they received no training on how to use the assessment tool. As such, some participants described the assessment tool with words and phrases such as, *not simple to use, difficult, too technical*. The participants are concerned that no children's copies of assessment tools were supplied alongside to make it easy to use. Besides, there is nothing to guide them on how to use the manual. This has made it difficult for teachers to use the tool. The teachers were clear that,

it is not easy to assess the children using the Assessment Tools provided. A teacher indicted that *we cannot assess the children using the assessment manual* because the materials are limited in supply. As such, some teachers produce photocopies for the individual children if they want to assess using the Manual. The two teachers who have seen the Assessment tool explained that they always have to make photocopies with their personal resources anytime they wanted to use the Assessment tool.

Another concern about assessment is that the achievement record card is based on a rating scale that is difficult to translate. According to the teachers, the grading system, for example: Very good, good, needs attention, needs special attention are based on qualitative indicators such as 5/5, 4/5 which is difficult to translate in terms of child development and learning.

Concluding comments

Teachers' perspectives on the Kindergarten curriculum implementation in Ghana reveal challenges in three key areas. The first relates to the curriculum contents being bookish, above the KG standard and some topics being risky for children. The second concerns teacher training for effective implementation which participants suggest is defective. The third relates to non - availability of curriculum materials. The issues of availability concerns sustainable supply of developmentally appropriate locally relevant materials and Assessment manual.

Recommendations

Teacher training on the curriculum is important. The proposal here is that training should be provided to classroom teachers on the curriculum to facilitate effective implementation.

Provision of curriculum materials for teachers and schools is important. Outdoor equipment such as merry-go-round and other materials are needed to make the curriculum experiences of children more interesting and richer.

Training on curriculum usage should be given to classroom teachers themselves. In particular, the Assessment tools should be supplied in required quantities to all schools in user friendly formats.

Acknowledgment

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CULTURis fosters the development of collective knowledge, where the primary concern focuses on citizens of all ages and social conditions integrated in a common regional network, to desirably communicate with formal and informal learning and development spaces. Within a collaborative action research methodology, pervasive and ubiquitous technologies (Fernandes, Machado & Carvalho, 2007) are adopted to make tangible the concept of leadership for learning and innovation.

What is evident from the project, as part of the paper that we propose, is the relevance of generating contextual activities for learners in areas of personal and collective action, where the family assumes a nuclear environment of belonging and, as such, the key for involving learners in natural contexts of learning that the community/city can provide in a creative, entertaining, constructively critical, transformative and inclusive way. These activities contextualized within natural environments of belonging, mean structuring niches of daily multiple and significant learning experiences (in the work of Dunst, 2001), configured for *glocal* innovative postures. Capable of providing, quality and diversity meaningful life opportunities that enable transmuting life with joy, with confidence, while structural axes for plural and global integrated learning and development of citizens, of learners, assuming in itself a concept of leadership and inclusion (Viana & Serrano, 2010).

CULTURis propose creates spaces that represent different learning styles, needs and interests of learners and a contextually model of teacher's training, which generates learning beyond institutional walls. The Information Systems enables the teachers and learners to have access/visibility from the place where they are and leverages their education/training.

So, this project contributes to improve the knowledge and skills leaders must have to meet the expectations for 21st century challenges (ET and EU 2020, DL. 281/2009), enriching and creating a space of learning opportunities (new spaces for learning – encouraging development and learning). In the management of information resources, the project coordinates and integrates critically the various media – people, information sources and technologies – ensuring the quality of information and the use with quality (effective), allowing informed decisions. The role of information systems as part of construction of meaning in leadership for learning – a creative and innovative response to the challenges of inclusion, constitutes a major challenge about knowledge on the role of teacher and education for 21st century learners.

Methodology

The methodology approach of this study, with characteristics that are close to the Participatory action research ones, promotes reflective and critical construction of knowledge (Stake, 2003) by all key informants (cluster of schools, parents, enterprises, local development associations). Its development will use the most advanced Information Technology and Communications, including web technologies and social service-oriented (service-oriented architecture and cloud computing). Based on this technological infrastructure, the leadership for learning will be supported by a multilingual ubiquitous technology. These systems are characterized as having a potentially large number of heterogeneous interactive embedded/mobile computing devices to collect, process and transmit information. Moreover, they are the target of technological innovations (Fernandes, Machado & Carvalho, 2008). This multilingual ubiquitous technology will respond, in an integrated manner, to the different needs of learners/citizens at different stages of education. It aims to continuously construct, in a participative and shared manner, the sustainable development of intelligence, characterized by the ability of every citizen

participants in the city/learning to identify and develop the necessary skills for his/her wellbeing as active and creative citizens, in an inclusive perspective aiming to promote a culture of participation and lifelong learning in which concerns to urban education. It also aims to be a process that provides policy-makers, professionals, families, teachers, within a multidimensional space (local, national and global) and transparent common goals in the Community action plan regarding programs, strategies, education, learning and training of professionals (Viana & Machado, 2011).

Key idea

The creative interaction between Education/Training and Quality of Life generates a process of reciprocity, which promotes a smart sustainability (an intelligent sustainability) from which emerges the Creative City. This is the motor of the Urban Education – Intervention and investigation with/in the city. The **Leadership for Learning supported by information systems** framed in the Creative City is a space capable of generating educational proposals, which influences the configuration of the city as well as how to live in it, in order to empower its inhabitants to promote lifestyles and life conditions to construct sustainable cities. These are structural axes for plural and global integrated learning and development of citizens and learners, assuming this way a concept of leadership and inclusion (Viana & Serrano, 2010).

Contextualization - framing the problematic - active innovation with information systems

CULTURis fosters multidisciplinary discussion and research on technology to leverage leadership for learning, approaches the dialogue individual, collective and organizational with a global vision. Promote a good opportunity to holistic and multidisciplinary discussion on technology-enhanced leadership for learning in the *glocal* and collaborative space. It aims to provide a sharing ideas and know-how on technology-enhanced leadership for learning.

CULTURis propose to investigate and discuss strategies on how information systems enhance leadership for learning and this way, promote sustainable educational development. With this vision:

- * Claims from education a critical action to serve the progress of communities - improving the living conditions to transform society in a civic society;
- * A vital role is assigned to the community/city in educating its citizens (recovery and development of culture) – asks for behaviors and attitudes framed by *glocal*, to ensure a better integration of action in professional space and personal/community space;
- * To facilitate the ownership of several roles and harmonious relationship with the different contexts where they live.

Within an innovative context, where school is called upon to respond, based on Curriculum Projects, this study plays a role for understanding and discuss changes of curriculum management practices in schools and in formal/informal context, and their impact for improving students' learning.

Weiser (1991) wrote, some time ago, about computer of XXI century, the author considers that the most significant technologies are those that disappear, which are developed in the permeability of the day to day until they became part of it, which ultimately belong to it.

Today, the citizenship literacy understands the constant element of technology and it is not feasible to think about active, shared and meaningful life, without considering it.

This is a scenario that enquires us about the effective ownership context of the computer, what role it plays in access to information and in knowledge management?

How to explore and develop information technology capable of answering the needs of digital literacy of its users? How is it capable of responding to their lifestyles? How to develop and organize it in order to integrate, significantly, the life contexts, understood as formative environments, enabling and promoting the leadership for learning?

Weiser (*idem*), citing authors from different disciplines, states that the common denominator is the idea that technology just begins to belong to the natural environment when we are free to use it without thinking. However, this consensus questions us about how virtual reality portrays life, how it portrays the contexts we inhabit?

The author refers to it as a map and not a territory. The computer facilitates human interactions, allows the development of learning community networks, enabling to construct the memory, i.e., promotes Paulo Freire (1982) quote: *All Tomorrow is created, in yesterday, through today. [...] We must know who we are, to learn who we will be!*

Valuing and empowering this perspective, we propose the education leveraged by information systems, as a resource capable of enhancing sustainable development at a social, cultural and economic regional level, once they develop as catalysts of innovation and sharing of knowledge.

Information systems, according to Machado et al. (2007), characterize contexts based on requirements in order to adapt technologies to the exploratory contexts. Requirements elicitation (Zowghi & Coulin, 2005) comprise a complex task of discovery the interdependencies with meaning for the players and for the users, so the authors argue that this is a dynamic process:

Typically, the confrontation of stakeholders with static requirements models is not enough, since stakeholders with non-computer science education are not able to discover all the interdependencies between the elicited requirements (Machado et al., 2007: 5).

The quality of interaction with contexts depend on the quality of the requirements models, i.e, its quality depends on the ability of the models to rebuild contexts. It is a process that one wishes allowing

the exploration and development of technology to meet the needs and interests of users, projecting them and empowering them, for example, in a leadership for learn, capable of substantiate inclusive education. This perspective is to be achieved through appropriate technology to the specific contexts and people, regardless of age and cultural resources.

Within the school context, the curricular decision makers used the Project to support the processes of teaching and learning, and to understand how Curricular Project influences the organizational and professional development of teachers.

Within this scenario, the project represents a strategic process capable of adding value to information technology interface and leadership for learning, as they develop via a useful proximity dialog, first, to the exploration and management of knowledge and, secondly, the development of technology in the context of use.

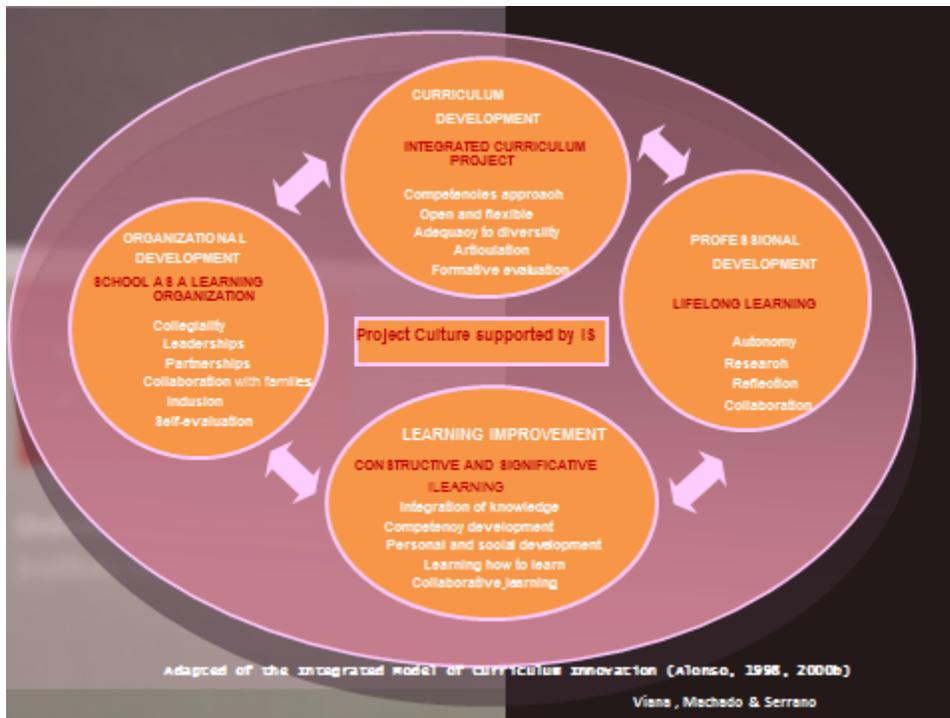
The continuously changing environment that we live in space education/training, triggered mainly by the conflict that exists between the current curriculum guidelines and current practice in schools, training spaces, causes discomfort and creates a certain anxiety, particularly within class teachers (Viana, 2010):

The legislative requirement to build curricular projects, with varying degrees of coverage and the value of a structured curriculum in skills development, brought to the school a lively discussion around the concepts and the ways transform the national educational guidelines into real practice. Move from a logic of teaching content in properly designed programs and supported by textbooks, to a logic of learning, where each student develops a range of competencies, according to their potential and difficulties from the perspective of complex integration of knowledge's and actors within pedagogical I action, is not an easy task, particularly because it involves the development of a real Curriculum Project, through a collaborative work where all school dimensions have a voice of its own. "(Candeias & Viana, 2004:75).

From our point of view it is through the project work, characterized by interdisciplinarity, that we can achieve greater systematization of knowledge and a stronger capitalization of the most meaningful experiences of the different individuals in different contexts (Dewey, 2002). These are situations that call for reflective practitioners, capable of giving other (s) sense(s) to educational processes.

With this vision, Guidelines to improve Education:

- To promote school inclusion as a principle;
- To promote curriculum reorganization of Education in order to involve participants;
- To empower teachers to be curricular decision makers, using the Project to mediate the process of learning;
- To empower students/learners to be project decision-makers improving their own learning.



This integrated model of curriculum innovation tries to situate an area of inquiry substantiated in the project and structured around creative decision-making processes, leveraged by information systems, able to address the unpredictability, which ultimately lead to disorder, a disorder that balances in creativity and invention of interdisciplinarity.

Enthusiast – looking for ideas, "manufacturing" ideas/problems, survival/emancipation – re-imagining learning

We live faced with a culture-world continually transformed by technologized environment in which we operate, such as designated Lipovetsky (2011, p. 20), reposition ourselves in a new relationship with distance and time:

Culture-world means, from an anthropological point of view, a new relationship experienced with distance, an intensification of consciousness of the world as a planetary phenomenon, as totality and unity. In this sense, globalization is a new objective reality in history and at the same time, a cultural reality, a fact of consciousness, perception and emotion. New technologies, mass media, the Internet, the speed of transports, environmental catastrophes, the end of the cold war and the Soviet empire, all this led not only 'unity' of the world, but also its consciousness of new ways of seeing, thinking and living. Now, what is produced across the globe raises in place where we are reflections and fears, hatreds and currents of empathy. The culture-world matches, in this sense, with 'the understanding of time and space', with the erosion of boundaries, a new experience of the relationship between the here and abroad, national and international, the near and the distant, the location and global.

Thus, we enter a dimension of global *cybertime*, that cannot mean the dissolution of cultural diversity. The development of *cyberspace*, beyond generating opportunities to be informed of what happens in the world, adds value if it is organized to develop inclusion and social cohesion.

This is a scenario that, if accomplished, projects education beyond technical training, allowing all learners to develop cognitively and creatively knowledge (Viana, 2011), in a rhythm and involvement capable of understanding and grasping, collaboratively, a culture of inclusion.

CULTURis fosters the construction of individual and collective knowledge, where the primary concern focuses on citizens of all ages, cultural and social conditions integrated in a common regional network, to desirably communicate with formal and informal learning and development spaces for leadership for learning. Within a collaborative action research methodology, pervasive and ubiquitous technologies (Fernandes, Machado & Carvalho, 2007) are adopted to make tangible the concept of leadership for learning with creativity and innovation (Viana, Machado & Brito, 2011). This position integrates Education/Training of children and youth (regular education, framed by the (normative order n.º 13-A/2012, exercise of autonomy, administration and management) and training of young and adults as a government policy to improve the skills and qualifications of all, (New Opportunities). Creates entities to take responsibility for quality, innovation in training and accreditation.

Recognizes an image/idea as a value for the integrated development of re-imagining the curriculum/learning and the city relational as a cultural, plural, creative and glocal territory, driven by citizens. The city takes:

- Culture;
- Education;
- Training;
- Entrepreneurship.

A relationship between education and information/knowledge society, develop and mobilize processes/languages that monitor/intervene in a responsible way – where carefully observation cannot be developed within a weak and short observation and it requires sustained decisions (Innerarity, 2009) – allow for distinguishing fact from fiction. Contact with things in real time. Work a new interpretation that they propose for space with the society/community/city – not a space as a receptacle for the actions of its citizens, but what comes between the people through their action - each city produces its own space, needs to develop processes articulated with the uniqueness of human activities.

Scientific fascination

Applying this approach to the reality of the participant cities/regions suggests that they may be constituted as a vibrant space, where is good to live due to the dynamics and cultural development, technology and the diversity of businesses connected to these lines. To achieve this configuration cities/regions have to explore the factors that differentiate them, must become active spaces, of discovery and experimentation and should invest in developing collaborative strategies that mobilize citizens and exploit the technologies available. In order to achieve this, it is necessary to create technologies, which allow personalized access, exploitation and development of cultural resources.

Causes relaxation and motivation, the value of the project moves from a state considered commonplace and invisible to a special state, with social value, scientific and visible - categories of visible and invisible lead us to a world consisting of views and inadvertence, of those who see and those who are seen, prominent and unknown, all this stirred by the effect of movements of which these relations are modified and rebuilds the space of what one sees (Innerarity, 2009:132).

Develop and use technology in order to revitalize learning activity and the training of citizens, sustained on interaction and sustainable leadership between creativity, innovation, technology and culture. Supported by a persistent intention of qualifying its human capital, enabling, this way, inclusion, cohesion and social heterogeneity, highlighting the value of linking leadership of learning, culture and digital literacy . Considering two dimension:

- **At the level of practical action**

It is based in a construction, grounded in active and interactive learning dynamics, sustained by research, by the desire to experiment in action, researching, criticizing and regulating the process of development of teaching and students' learning.

- **Collaborative culture**

- An ecological perspective on teaching-learning for leadership;
- The teacher as an actor for change;
- Enables a better management of the complexity that emerges from the rapid evolution of science/technology - all just decided on the ability to perceive and be perceived, it means recognition of value;
- Makes the dream comprehensible - capable of changing/transforming the re-imagining of the curriculum, identify the power of the knowledge for participating at life with sense.

Cross-fertilization

CULTURis is a multidisciplinary programme that provides new learning spaces in a perspective for generate autonomous individuals and promoting the leadership for learning. This position facilitates extended and interdisciplinary learning and enables an integrated and contextualized decision-making.

Widespread availability of affordable and innovative information technologies represents a potential opportunity for improvement/innovation on business processes or for enhancement of life quality of individuals (Fernandes, Machado & Carvalho, 2011:1-2). Align the quality of access to cultural resources (the essential elements of education) with priorities of European cultural policy. Is a concept to develop research in the context of this challenge, leadership for learning, that seeks to generate a wide range of useful technological solutions for schools, workplaces, businesses, museums, libraries, tourist nucleus and other cores cultural bodies, meeting the individual and collective needs, leveraging and answering to their expectations (as users and consumers) in the context of the interaction and involvement with digital learning and cultural resources. Use technology in order to revitalize learning activity and the training of citizens presents itself as a bridge to carry out the CULTURis effectively and further adapted to the new time:

- This initiates a self-reflexive questioning, systematic and scientific practice to improve – it is assumed practical action as a source of knowledge;
- Enables a deeper understanding and informed intervention on the action of the Project and the context in which such action unfolds - improves the rationality and understandability.
- Aims to develop approaches that can enable the construction of spaces of continuous discovery and co-responsible of training and lifelong learning.
- The leadership for learning will enable all citizens to be active players in their own development processes, which will be innovative and creative in order to meet the challenges of the twenty-first century.

The concept CULTURis generates a purpose of sustainable and intelligent development of its cities/regions, new spaces for learning, because, based on the value of the innovative information and communication technologies, it highlights, according to Landry (2009: 6), "the aggregate value is generated by the ideas that turn into innovations, inventions and copyrights".

In order to generate a purpose of social, economic and cultural development, that did not leave indifferent countries and cities, insofar as they sought responses capable of interacting with the future and release the past. Currently, the cities have a major role in the sustainable and intelligent development of the communities, that within this proposal, we assume creative and innovative, empowered by information systems.

The urban world, characterized by new civilizational paradigm, information/intelligent society, where demographic trends indicate that the urban population in 2015, will increase, for example, it will be 79% in OECD countries and 47.8% worldwide (data based on national definitions, it refers to averages of projections. Source: Human Development Report, 2004). Cities develop into a civilizational context that seeks to respond to different groups:

- People – lifelong education/training – social cohesion; employment/unemployment; health; leisure/culture; social inclusion; etc.
- Economic activities – traditional sectors; competitive sectors; etc.
- The institutions – Territorial dynamics; services; etc.
- The territory – organization, accessibility, quality of green spaces; Smart sustainability, etc.

Within the process of globalization and mass society, the information systems enables cultural resources, identity and collective memory, local/regional, to be preserved, disseminated and developed, if exploited and mediated through appropriate and flexible technologies. Allowing, this way its expansion/exploitation for responding, qualitatively and efficiently, to the sociocultural and economic needs of its users, in the different locals/regions.

This intention intends to enhance the classical cultural/historical memory and generate new resources/new learning attractions, providing interfaces between the past, present and future. Intends to contribute to structure and define the interface between the local and global levels, highlighting the local brand identity, distinguishing the groups and the specific locations, while generating the possibility of sharing experiences within an integrated global agenda and with the visualization and exploration of common experiences, in an attractive, creative and low cost way.

Another principle underpinning this intention is the possibility of answering to the challenges posed by the strategic action established by the Cultural and Educational Policies of the European Community. Even though the proposal refers to the development of cities/communities, it assumes the culture/education as a factor of its social and economic regeneration, and enables the directives emanating from the Convention on the protection and promotion of the diversity of cultural expressions, adopted by the General Conference of United Nations Educational, science and culture, held in Paris in 2005, which considered the cultural diversity as an essential vector of human values and capabilities, being the engine for the sustainable development of communities and your knowledge.

It is an attitude which we believe can generate project with creativity, where the uniqueness of interdisciplinary innovation through its high substrate, helps to strengthen and design, becoming an area of freedom, as constructed by knowledge. It's an attitude that appears capable of making us believe on a useful fusion between convergent thinking and divergent thinking, the attitude to learn with responsibility, in a continuum that happens from knowledge management to its use - life-time space and time theory (past, present, future), in a research environment recreated - praxis as epistemological field of knowledge (Viana, 2010).

In the scenario outlined, there emerges the symbolic function of the imagination, creativity and innovation not as a unique way of situating scientific truths, but also rather as seeking truth in the perceptions.

The challenges of today's world are located beyond the boundary between information and curiosity to discover, ie, claims clarity of quality and usefulness, to enable use and develop knowledge with meaning and significance. Therefore, seeks to develop visibility mechanisms of that usefulness, in order to overcome possible inertia of the information processes. With this aim, information systems are assumed as a strategic potential to organize high tech and globalized world, where we witness high consumption and production of information. Creating for their users, opportunity to develop critical thinking skills, in order to enable them to interact and establish useful interconnections with the complexity and richness that define this world.

Challenges of the Digital World

* Claims from the education a critical action to serve the progress of communities - improving the living conditions to transform society in a civic society;

* A vital role is assigned to the community/city in educating its citizens (recovery and development of culture) – asks for behaviors and attitudes framed by *glocal*, to ensure a better integration of action in professional space and personal/community space;

* To facilitate the ownership of several roles and harmonious relationship with the different contexts where they live, because:

- Considers the multiplicity of knowledge;
- Collaborates in the development of the identity of teachers and students and competencies to exercise leadership;
- Interdisciplinary construction;
- Develops skills to meet the challenges of today's society;
- Intents to respond to differentiated teaching;
- Intents to respond to diversity;
- Have an inclusive vision.

Challenges for Leadership for Learning with a creative project supported by information systems

- It is a collaborative work;
- Perceives teaching as a space for participation and leadership;
- Considers teaching a socially integrating space;
- Perspectives the process of teaching as a preparation for life - work, leisure, consumption, entrepreneurship, culture, knowledge;
- Fosters the face to face;
- Upgrading of learning activities;

- Sustainable Learning - multidisciplinary, integrated, innovative, empowering, emancipatory, universal;
- Drive learning to identify and resolve problems.

Challenges for urban education

* Invisible Society (Innerarity, 2009:10) *presents itself with more possibilities and meanings of the social (virtuality, exclusion, risk, chance, simulation, alternative, ...) sets a new concept of reality: moves from immediately to a real place and imaginary - but must respect the meanings that the actors/stakeholders attribute to the social meanings*

Tension/conflict generated by the fast development of Science and Technology (Hargreaves, 2003). They are mediated by the Information Systems as far as:

- Work/develop processes to comply with a balance between the needs of societies and communities and what cities can offer;
- Articulate Theoretical assumptions/policies and real contexts;
- Facilitate/work common interests in a participatory, collaborative and inclusive way - to work as a support in how to do/proceed;
- Mobilize available forces/offers and make them available enabling each individual/community to build them;
- Support the understanding of reality, in order to explore the thinking and imagination of each individual / community.

In the management of information resources, coordinates and integrates critically the various media – people, information sources and technologies – monitoring and mapping/cartography of information, ensure the quality of information and the use with quality (effective), allowing informed decisions. The role of information systems as part of construction of meaning in leadership for learning – Creative and Innovative Response to the Challenges of Inclusion, the major challenge of urban education.

Final Remarque

Management the complexity promote a *glocal* development, but this world of tomorrow complains for all:

- * Requires the projection of educational proposals for education/ training/cultural ability to facilitate the resilience and adaptive integrated behaviors.
- * Globalization, Integration of knowledge, Citizen Culture and Interdisciplinary are strength filled with emotions and signs demanding for a renewal of educational practices/training and of life in communities/cities – constitutes a new structuring place for *glocal* development.

Information Systems provide the process to enable identifies the entities/potential educational/training of the city will match the main *glocal* communication device. Its implementation will use the most advanced Information Technology and Communications, including web technologies and social service-oriented (service-oriented architecture and cloud computing).

This multilingual ubiquitous technology will respond, in an integrated manner, to the different needs of trainers/learners/employers at different stages of education/training, as a particular support to fulfill the potential educational/training. It aims to continuously construct, in a participated and shared manner, the sustainable development of understandability, characterized by the ability of every citizen to identify and develop skills necessary for his/her well-being, creative and active participation in citizenship, inclusion and employability in a knowledge society, within a perspective of lifelong learning.

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Introduction

Teachers' work is often assumed to occur almost exclusively within the confines of a single room (i.e., instruction and interaction with pupils). While the classroom is the dominant setting for teachers' daily professional life, it is not the only context for their work (Kruse & Louis, 1994; McLaughlin, 1993; Siskin, 1994). The school's organisation including other faculty members and administrators who compose the school staff create a larger context that, at minimum, influences teachers' professional satisfaction. In addition, studies of the relationship of school context to teachers' work suggest that the interpersonal and structural conditions that characterise teachers' work will also affect the impact that they have on their students (e.g., see Lee, Dedrick, & Smith, 1991; Louis & Smith, 1992; Rosenholz, 1989; Talbert & Perry, 1994).

Several questions come to mind regarding teachers' preparedness and ability to participate competently in leadership: Where do they learn the skills necessary for leadership? When and how do teachers gain an understanding of schools as complex systems? Who helps them understand the nature of leadership? Are teachers really prepared to provide effective leadership?

Answers to these questions and others are vital to making teachers' contributions meaningful and substantive. Keiffer (1981) describes empowerment as a process through which people develop competence in meeting their own needs. By developing their skills teachers need to participate in their social and political worlds, thus as individuals they gain control of their lives. Usually, prospective school leaders engage in some type of preparation during which they gain deeper understanding of schools as organisations, the change process, and the context in which schools operate. They also hone their communication, problem-solving, and decision-making skills, and develop or refine attitudes necessary for effective leadership. The teacher leadership role, by contrast, is not currently preceded by any such training. Interestingly, large numbers of teachers complete leadership preparation programmes and do not enter the ranks of formal school leadership. Consequently, these teachers exist within schools as valuable resources for leadership (McLaughlin, 1993; Strain, 2009).

Taking a Look at Schools Leadership Capacity

One common characteristic of the redefinition of teacher leadership is the location of leadership in processes among people, rather than in the particular skills or dispositions of one leader (Lambert 2003). In this definition, school leadership practice focuses on leadership activities generated through

collaboration, instead of zeroing in on a particular leader and his or her actions. This paradigm is known as *distributed leadership*, and it holds that the thinking and work of teacher leaders as it exists organically within the web of teachers' professional activities.

Distributed leadership is a collective activity in which department leaders work closely together for self-monitoring of and reflection on improved student achievement (Lambert 2003). In the last half decade 'distributed leadership' is a concept that has been much written about although relatively little researched. It sees the locus of leadership as expanding beyond principals and headmasters, and extends leadership roles into middle level management of schools, and further to teachers - both as individuals and groups. This is what Gronn (2003) characterised as the additive conception of distribution. It is a formal and essentially hierarchical form of distribution in which leadership is 'handed out', by those in senior positions of responsibility to people in given roles. These are roles that are clearly defined and bounded by individual responsibility and accountability. By contrast, 'holistic distribution', looks for a synergy arising through concertive action, 'stretching' leadership function across the social and situational contexts of the school' (Gronn 2003). New learning is integral to this process and emphasises the collective, rather than the traditional and formal, view of leadership. The web in distributed leadership comprises the interaction of leaders and followers, and the context in which they interact gives leadership activity its ultimate form (Spillane, Halverson & Diamond 2004). Defined in this way, leadership provides a sense of purpose that pulls teachers into the work of leadership as a form of learning with others to improve the practice of teaching and learning (Fullan, 2008; Lambert, 2003).

Excessive intervention from the top - down diminishes a system's capacity to autonomously respond to complex changes, which are often beyond the comprehension or control of leaders (Senge et al. 1999). Identifying and selecting the best leaders while weeding out the ineffective ones has not produced the dramatic changes in schools that stakeholders want to see. If changes are not made in how educators define and practice leadership, school improvement efforts will "fail massively and visibly, with an attendant loss of public confidence and serious consequences for public education" (Elmore 2000). Out of this challenge a new framework has emerged for school improvement. Known as *leadership capacity*, this model creates a context within schools that encourages leadership from all teachers (Lambert 2003). *Leadership capacity* can be defined as broad-based, skillful participation in the work of teachers as leaders in which they are invited, supported, and appreciated (Harris and Lambert 2003). A vital part of this new definition of leadership is its relationship to learning, because it determines how teachers will participate in the work of leadership. Assumptions and beliefs about leadership lay the foundation for how a school will build and sustain leadership capacity (Lambert 2003). Harris and Lambert (2003)

identify five critical features of a school exhibiting high leadership capacity. The critical features can be summarised as follows:

- i. Broad-based skillful involvement in the work of leadership;
- ii. Inquiry-based decisions and practices;
- iii. Roles and responsibilities that exhibit broad involvement and collaboration;
- iv. Reflective practice and innovation as the norm; and
- v. Steady increase in students achievement

These features are part of an evaluation of leadership capacity that supports successful school improvement initiatives. The leadership capacity in schools is also found to include explicit accountability mandates and definitions, along with accountability procedures and penalties for virtually every aspect of teaching: recruitment, preparation, certification, induction, teacher registration, professional development, assessment and evaluation, and curricular change (Cochran-Smith and Lytle 2006).

Elements of School-wide Professional Community

In this paper, professional communities are viewed by movement toward five elements of practice: shared norms and values, collective focus on student learning, collaboration, deprivatised practice, and reflective dialogue. These elements to any community are a sense of common values and expectations of and for each other. Professional communities do not constitute a hierarchy, and school-wide professional community demands at least a minimal level of each of the elements. Their presence or absence provides a method for distinguishing a professional community that is school-wide from other forms of school cultures.

Shared norms and values: Fundamentally have a basis in the moral authorities in education, and is derived from issues which are central to the social importance of teaching and socialising children. Members of a school community affirm, through language and action, common beliefs and values underlying assumptions about children, learning, teaching, and teachers' roles; the nature of human needs, human activity, and human relationships; and role of schools to the society and its relationship with the surrounding environment (Giroux, 1988; Praeger, 1991; Schein, 1985).

Collective focus on student learning: An undeviating concentration on student learning is a core characteristic of professional community (Newmann & Wehlage, 1995). Teachers' professional actions focus on choices that affect students' opportunity to learn and provide substantial student benefit (Abbott, 1991; Darling-Hammond & Goodwin, 1993; Darling-Hammond & Snyder, 1992). Teachers

discuss the ways in which instruction promotes students' intellectual growth and development, as distinguished from simply focusing on activities or strategies that may engage student attention (Gunter & Ribbin, 2010).

Collaboration: Professional communities foster the sharing of expertise, and faculty members call on each other to discuss the development of skills related to the implementation of practice (Little, 2003). By collaborating, they create shared understandings from complex and confusing data. Collaborative work also increases teachers' sense of affiliation with each other and with the school and their sense of mutual support and responsibility for effective instruction (Louis, 1992).

Deprivatised practice: In professional communities, teachers move behind the classroom door of their colleagues to share and trade off the roles of mentor, advisor, or specialist (Lieberman, Saxl, & Miles, 1988; Little, 2003). It is within these quasi-public relationships that teachers work to define and develop their own practice and control their own work. Peer coaching relationships, teamed teaching structures, and structured classroom observations are methods used to improve both classroom practice, collegial relationships and students' learning. In this way, teachers also come to know each other's strengths and weaknesses, and can therefore more easily obtain "expert advice" from colleagues.

Reflective dialogue. Reflective practice implies self-awareness about one's work as a teacher. By engaging in in-depth conversations about teaching and learning, teachers can examine the assumptions basic to quality practice (Praeger, 1991). Public conversation concerning the school and practice within the school may focus on the academic, curricular, and instructional concerns of schooling as well as on issues of student development and progress (Zeichner & Tabachnick, 1991). Reflection on practice leads to deepened understanding of the process of instruction and of the products created within the teaching and learning process.

What Do Effective School Leaders Do to Improve Learning in Schools?

According to researchers, school principals exercise a measurable, though indirect effect on school effectiveness and student achievement (Moreland, 2009). Leadership appears to particularly impact the quality of teaching and learning in schools. School leaders provide focus and direction to curriculum and teaching and manage the school organisation efficiently to support students' learning.

Principals also evaluate teachers and make decisions about their classroom assignments. When classroom instruction is weak or when large numbers of teachers are teaching out-of-field in schools, significant responsibility rests with the principal. Quality school leaders, as research evidence suggests,

understand teaching and are respected by their staff. Moreover, school leaders are to hold themselves and others responsible for students' learning and enhancing the capacity of teachers to meet this goal. As Orr, Berg, Rima and Meier (2009) puts it - the job of administrative leaders is primarily about enhancing the skills and knowledge of people in school organisation, creating a common culture of expectations around the use of those skills and knowledge, holding the various pieces of the organisation together in a productive relationship with each other, and holding individuals accountable for their contributions to the collective results.

How each principal performs these tasks will inevitably vary. Nonetheless, research suggests three primary modes of leading that promote students' learning.

- **School leaders as Entrepreneur**— Effective school leaders develop and sustain a focus on instructional improvement and student learning, while protecting teachers from the intrusions of the outside environment.

- **School leaders as Organiser**—Effective leaders bring to their schools innovative individuals and innovative ideas, programmes, and instructional strategies that can improve teaching while maintaining a coherent reform agenda. They also engage teachers, parents, and community members as collaborators and leaders in school improvement efforts.

- **School leaders as Instructional Leader**—Effective school leaders build data-driven professional communities that hold all individuals accountable for students learning and instructional improvement. They do this by managing time and financial resources to build professional skills and knowledge.

Effective Leadership in Schools

No doubt effective leaders are critical if all students are to achieve at high levels. Improved students' performance in every school has leadership that begins with effective school principals. Literature reported six strategies that school leaders can use to achieve results (Moreland, 2009; Strain, 2009; Zeichner & Tabachnick, 1991).

Strategy 1: Single out high-performers. Stop relying on the questionable pool of "self-selected" people with administrative credentials but little inclination or talent for leadership. Develop criteria and methods to choose high-quality candidates for leadership preparation. Tap those with a demonstrated knowledge of curriculum and instruction as well as a passion for helping students to meet high standards.

Strategy 2: Recalibrate preparation programs. Redesign leadership preparation programmes to emphasise the core functions of the high-achieving schools from the perspectives of the curriculum, instruction and students' achievement.

Strategy 3: Emphasise real-world training. Make field-based experiences a high priority and a central focus of principal preparation programmes.

Strategy 4: Link appointment of principal to performance. Create a two-tier appointment system for school principals. For *initial or transitional appointments* - candidates would have to complete a preparation programme focused on the core functions of successful schools management. Within a specified time, those with *initial or transitional appointments* would have to earn *professional appointments* by demonstrating that they can lead improvements in school and classroom practices and in student achievement.

Strategy 5: Move accomplished teachers into school leadership positions. Create an alternative certification programme that provides a high level of support for accomplished teachers who are interested in becoming principals. This program would enable them to bypass traditional preparation and to prove themselves on the job. Limit participation in such programmes to teachers with master's degrees, demonstrated leadership skills and proven records of increasing student achievement.

Strategy 6: Use state academies to cultivate leadership teams in middle-tier schools. Schools that rely on leadership *teams*, rather than on single-leader models, are most likely to improve student learning and "grow" future principals. Create state leadership academies that will cultivate school-based leadership teams and will help these leaders develop the skills and knowledge to promote effective practices that will raise student achievement. Concentrate on serving *middle-tier* schools, which have lagging academic performance, but rarely qualify for special assistance from state and federal programs.

The Teacher Leader in School Reform

The implementation of an externally developed school reform model can also dramatically affect the professional lives of teachers. An important aspect of this article is concerned with teachers who occupy positions of leadership in schools as either emerging - leaders, established - leaders, entry - leaders or advanced – leaders (Smylie, 1997; Wasley, 1989). Much of the research describing the development of teacher leadership focuses on how teachers' roles might be redefined to include the responsibilities and decision-making powers related to instruction, assessment, procedures, and governance, which are

typically reserved for administrators. The hope is that “teacher leadership and administrative leadership work in collaboration to create more democratic and participatory school organisations” (Miller, 1998, p. 531).

Opportunities for teacher leadership have also recently arisen from policies that designate master teachers to direct school improvement (Smylie, 1997). Established leaders (such as vice-principals) role involved considerable negotiation, ambiguity, and even tensions with respect to their responsibilities and relationships with principals and with teachers. This was due in part to the structures and cultures existing in schools. The quasi-administrative status of vice-principals and heads of departments meant that they lacked formal authority in dealing with teachers, which constrained their ability to monitor the teachers’ implementation of the curriculum and do what their principals sometimes expected of them. This was compounded when principals have varied conceptions of the roles which established - leaders would occupy in the school leadership strata.

The Principals and School Reform

It is well established that reforming schools requires both restructuring and re-culturing (Fullan, 1999; Hargreaves, 1994; Sarason, 1996), during which the role of the principal is reshaped (Carlin, 1992; Murphy & Louis, 1999) and teacher leaders are developed (Miller, 1998). Principals need to craft school cultures that help set the foundation for change, and the role of the principal as an active and ongoing supporter of reform is critical to the success of a school-wide change effort. For principals to be effective at guiding change, they need to do many things, including play an instructional leadership role. A good administrator supports improvement that is responsive to the classroom context (Fraatz, 1989) and provides support for classroom teachers. Principals must also create and maintain a sense of trust in the school; use positive micro-politics to negotiate between managerial, technical, and institutional arenas; and create a professional community and networks for communication within the school (Murphy & Louis, 1999), and they must also maintain a momentum of continuous growth (Goldring & Rallis, 1993).

Engaging in school change requires principals to move from being managers of the status quo to facilitators of reform (Frederick, 1992). In doing so, principals often have to develop skills of collaboration, learn to empower teachers, and learn to share power with teachers (Louis & Miles, 1990; Wasley, 1989). For principals, this involves a balancing act of knowing when to be directive and when to step back and allow teachers to direct reform efforts. Principals also need to be willing to take risks associated with losing some of their control. This is difficult for some principals, who may end up maintaining the status quo instead of empowering teachers (Anderson, 1991). The newly defined roles that principals are asked to play in reform are accompanied by a series of other challenges. For

principals, reform is often accompanied by role ambiguity or overload and by a loss of a sense of identity. Principals often must spend increased time promoting the school's image and working more closely with parents, ministry of education, and other external agencies (Goldring & Rallis, 1993; Murphy, 1994). This is a role in which some principals are uncomfortable.

Principals also face challenges in ensuring that teachers implement reforms at the classroom level, as teachers are accustomed to substantial professional autonomy and might resist encroachment (Fraatz, 1989). Even when principals are supportive of reform, their ability to provide effective leadership may be hampered by their own experience, training, or beliefs or by their lack of understanding of the reform itself (Neufeld, 1995). These findings about the impact of reform on the role of the principal illuminate some of the issues that principals in schools might face. However, much of the research on principals and school reform is discussed in terms of more general school improvement initiatives (e.g., site-based management, standards-based reform) or school restructuring. There has been a dearth of research on how the new generation of externally developed school reform models affects principals and their leadership activities in schools. With specified curriculum and implementation plans, some of these reform models raise a new set of issues for principals, who must learn to manage and guide teachers in the use of new instructional models and learn to interface with external reform design teams.

Opportunities in Teachers Professional Communities and Professionalism through Professional Development

Teachers cannot be professionals unless they lay claim to a strong cognitive and skill base that is not part of "common knowledge." Professional community must therefore be based on effective teaching, which is, in turn, supported by the emerging practical and research-based knowledge underlying the field of study (or content). Creating opportunities that support both individual growth and the development of collective knowledge and skills, such as collaborative peer coaching and coordinated, school-focused in-service opportunities, may improve performance (Jensen, 1989). The practice of teaching becomes understood, generated through development, and enhanced through innovation in schools with strong professional development programs (Brown & Duguid, 1991).

Even the best preparation programs provide only a fraction of the training school leaders need to continually succeed in their school. Yet professional development for principals is often an afterthought in Nigeria. When available, these efforts are usually poorly linked to national educational reform efforts and are rarely tied to standards. Professional development efforts in states of the federation differ considerably in quality and focus.

According to research, high-quality professional development programs:

- focus on student learning and the specific problems practitioners face;
- reinforce and sustain group work and collaboration among teachers, principals, and ministries personnel;
- link directly with day-to-day work in real schools and classrooms;
- sustain a consistency of focus over time; and
- use feedback from teaching and learning to inform program development and evaluation.

(Brown & Duguid, 1991)

Relatively few studies of teachers focus on their work life outside of the classroom. What is true in research is also a reflection of practice. Attending primarily to the work of teachers within classrooms, both traditional and restructuring schools all too often ignore the needs of teachers for sustained professional contact with colleagues (Louis & King, 1993). Increasingly, both researchers and policy analysts argue that teacher professionalism must increase if education is to improve. While individual professionalism is desirable, active work in a professional group is also important to increasing teachers' sense of craft and their overall commitment to work contexts that are increasingly difficult and demanding. The enhancement of individual professionalism is important, but attention also needs to be paid to the development of professional community and teachers' collective engagement in sustained efforts to improve practice.

How Can Policymakers Improve School Leadership?

To improve school leadership, policymakers must first recognise that most educational policies, reforms and regulations in states were developed years ago and cannot produce the kind of leaders needed by the present generation of schools. Further, because so much of the recruitment, training, and professional development of principals are recommended by LGEAs and educational districts, therefore policymakers must be strategic about how they intervene in the system of school leadership development. Where states have the most leverage—and where they can exert the strongest influence—is in how principals are appointed and prepared for the challenges in schools, and provided additional training/instructional development to improve their skills.

Conclusions

Based on the foregoing, formal preparation in educational leadership may be an important form of professional development for teachers. Leadership skills are, for the most part, learned skills. However, even with the present emphasis on promoting the professionalisation of all teachers, little training is provided for teachers as instructional leaders. If teachers are to contribute meaningfully and substantively to the leadership of the school, the development of teachers as leaders should be a substantial investment for the government. This article revealed some insights into the need for regular training and refresher courses for teachers in their various subject disciplines, in order to carry out their

professional responsibilities more effectively. We thus concur with Barth (2001), who asserts that teacher leadership is central to school leadership and it is about mobilising the still largely untapped attributes of teachers.

This paper highlights some critical features of high leadership capacity that are often missing in schools. In schools, opportunities for cooperative learning were scanty, and department leaders did not know how to work in a way that reflected broad involvement and collaboration. Collaboration among department leaders needs to be purposeful and skillful or it will only create unproductive work that detracts from increased leadership capacity. This article provides insights that will help guide the work of department leaders, because under current conditions, school leaders are not meeting the challenges of broad-scale school improvement. In this newly defined leadership role, department leaders can engage in a process of continuous learning and innovation to improve the practices of teaching and learning. The focus of leadership must shift away from a managerial orientation and move toward establishing a culture of learning in schools.

States can also take step to improve the skills of principals in school leadership development, especially in the areas of appointment, preparation, and professional development. Governors and other policymakers must act decisively and soon for states to grow a new generation of high-quality school leaders. By taking the steps described in this brief and by attending to the environment in which these school leaders will work, including pay and working conditions. Policymakers can achieve this goal and make important progress towards improving teaching and ultimately student learning in every classroom.

Recommendations

How can department leaders experience and foster high-quality professional learning as part of their daily work? How can they work collaboratively to support continuous learning and innovation, while meeting all of the managerial demands placed on them? The following guidelines provide a framework for emerging leaders and established leaders to build leadership capacity in schools:

- *Define roles related to practice, not position:* Distinguish roles by their practices relating to the goals of high leadership capacity, not by the position that a department leader holds in school leadership. To improve teaching and learning, department leaders and administrators need to practice leadership as a form of learning with others.
- *Focus on learning:* Make a focus on teacher learning, as the most important responsibility for department leaders. Clarify that leadership and learning are not mutually exclusive. Teaching

and learning are collective activities among department leaders, teachers, administrators, parents, and students.

- *Define improvement*: Provide a clear picture of what school improvement looks like and develop measures to detect day-to-day improvements made in the classroom. Look at evidence of student learning and support the strategies that work best. The daily work of teachers and students in the classroom shows up later as improvements on external measures, such as annual state tests (Elmore and City 2007).
- *Structure collaboration*: Experiment with different professional learning designs, in order to structure how teachers work together. Model and reinforce collaborative processes, reflection, and designs for professional learning, such as study groups, examination of student work, and lesson study.

It would also be prudent for teacher preparation programmes to incorporate teacher leadership as one aspect of pre-service preparation. This could enable teachers to see that their role in contributing to overall school improvement goes beyond the classroom. Administrative response to this level of empowerment for teachers may vary. Although administrators with more autocratic styles of leadership may not fully use this aspect of teacher preparation, however, administrators who practice collaborative or distributive leadership are likely to welcome the increased awareness and skill in their teachers. This level of preparation for teachers holds potential to contribute to the overall functioning of the school.

Presently, there is a dire need to build the knowledge of teachers regarding the external and some of the internal realities of public schooling. Teacher leaders must understand how and why change occurs in schools. With this in mind, principals may also want to focus some professional development activities on effective teacher participation in decision making. Principals must keep themselves abreast of current practices in teacher leadership, so as to provide teachers with relevant background, contextual information and experiences that would make them function effectively in teaching profession. Teachers must be supported to understand the broader context of schooling and to develop leadership skills, attitudes, and the dispositions to empower them to participate much more competently in school leadership.

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TRANSFORMING SCHOOL CULTURES THROUGH TEACHER LEADERSHIP (PEREZ)

Within every school there is a sleeping giant of teacher leadership, which can be a strong catalyst for making change. By using the energy of teacher leaders as agents of change, the reform of public education will stand a better chance of building momentum.

- Marilyn Katzenmeyer & Gayle Moller (2001, p. 2)

Why Teaching Leadership?

Leadership by teachers is essential to serving the needs of students, schools and the teaching profession. Teacher leaders – educators who take on leadership responsibilities to transform practice in their schools and beyond – are a vital and dynamic force in reforming K-12 education today. Teacher leadership is about leading change from the classroom. No single principle of school reform is more valid or desirable than the maxim that “student learning depends first, last, and always on the quality of the teachers.” The traditional model of school leadership evokes an image of an administrator—a school principal, for example—who directs instruction through the making of policies and procedures that are intended to sustain teaching and learning. In the current culture of accountability and budget crises, however, the principal is no longer sufficient leadership to ensure continuous progress toward school goals. In point of fact, principals do not—and cannot—be experts in all subject areas, and their tenure in a school is often shorter than that of the teachers. Moreover, state requirements and national mandates hold teachers accountable for student performance on assessments. The pressure of this accountability, coupled with community and family issues that affect student learning, challenge teachers—individually and collectively—to demonstrate exemplary professional preparation and continuous development (Blackwell & Diez, 1998).

It is interesting to note that in a Rand Study of governance patterns within 1,000 schools found that “In high-performing schools...decision making and leadership are significantly more democratic. The teachers are more involved and influential in establishing discipline, with selecting textbooks, designing curriculum, and even choosing their colleagues than are teachers in low-performing schools.” What can we take from this study? Students learn when teachers lead.

Now, more than ever, classroom teachers must become part of the leadership team of the school and apply their knowledge of the constantly evolving nature of teaching and learning to promote school-wide collaboration aligned to a shared vision of student achievement. Teacher leadership means different things to different people. Team leaders, department chairs, and respected teachers live it every day: They experience the dynamic nature of their complex roles in many ways. Yet many administrators, district office personnel, school board members, citizens, and even teachers don't recognize or understand teacher leadership (Ackerman & Mackenzie, 2006). And this lack of understanding adds to the obstacles many teacher leaders face.

The paradox is our understanding of leadership itself. Most of us hold the deep-seated assumption that leaders must have appointments and titles that formalize their leadership and officially confirm their knowledge, traits, and competencies. However, teacher leaders need to recognize how powerful they are in establishing the organizational culture in a school through modeling professional learning and collaborative inquiry as agents of change. Teacher leaders model effective practices, exercise their influence in formal and informal contexts, and support collaborative team structures within their schools.

Furthermore, Goodlad (1990) in *A Nation Prepared* proposed that schools introduce several elements related to the "career ladder" for teachers, the most notable of which was to introduce a new category of "lead teachers" who provide leadership in the schools and help their colleagues uphold high standards of learning and teaching. The appellation of "lead teacher" has evolved into the more current term, teacher leader. Teacher leaders are teachers committed to continuous improvement in instruction and student learning through the development of professional learning communities at the school site, the modeling of effective communication and collaboration skills, and through modeling and facilitating the use of research-based instructional strategies and data-driven action plans.

The teacher leader concept is a powerful one because teachers are uniquely positioned to assume leadership roles on a variety of tasks that transform schools from more traditional workplaces

into professional learning communities. The roles that teacher leaders take on in their school sites are varied and largely specific to the individual context of the school, as a study by Lieberman, Saxl, and Miles (1988) confirmed. A teacher who has stopped learning cannot create a classroom climate rich in learning for the students.

Similarly, a powerful relationship exists between learning and leading. In order to be effective, teachers must learn a variety of leadership skills, which are not typically supported in the curriculum of teacher preparation programs. Those skills include:

- Building trust and developing rapport
- Diagnosing organizational conditions
- Managing the work and dealing with processes
- Building skills and confidence in others
- Accessing and using educational research to improve practice and student learning
- Using assessments and data for school improvement

Therefore, teacher leaders need to bring the focus back into the classroom. One effective way to do this is through the process of collaboration and reflective inquiry. Teacher leaders should develop specific action research questions about teaching and learning in their schools and answer these questions through a data-driven process.

The Need for Graduate Study to Support Teacher Leadership

Teachers must be convinced that teaching is an evolving profession. Because the skills listed above are not typically developed as part of teacher education programs or traditional Master's of Education programs, researchers and educators alike (e.g. Goodlad 1998) advocated that colleges of education develop master's programs that advance teacher understanding of and capacity for collaboration, coaching and mentoring, decision-making, facilitation and action research. Teachers need to collaborate and share their expertise. The impact of teacher leadership is recognized in the schools

and yet the programs to help them develop and refine their leadership practices are still few and far between.

Never before has the need been so great for classroom teachers to become agents of change in their classrooms and schools to transform the profession. Teaching and learning today demand advanced education programs to prepare teacher leaders to improve schools from the inside out by creating professional learning communities.

The Master of Arts in Teaching Leadership (MATL) program was designed to respond to these calls for master's programs to prepare teachers for leadership roles at their school sites. The Teaching Leadership Program responds to the demand for more effective teacher practitioners who have the capacity to extend their influence beyond their classrooms to their schools and the wider profession, positively impacting the learning of students for years to come.

In sum, the Teaching Leadership Program is a vehicle for guiding and recognizing teacher development by providing coherence between the continuum of teacher development and the continuum of academic degrees. The Teaching Leadership Program offers an alternative, field-based approach to graduate study that addresses educational needs that may not be adequately met through traditional programs.

Vision of the Teaching Leadership Program

The faculty of the Teaching Leadership Program hold the fundamental belief that teachers are the most valuable resource in any school system. Teachers plan and guide student learning, manage the classroom environment, and interact with colleagues, parents and administrators. The program addresses the needs of experienced teachers for an applied degree, which advances knowledge and skill in communication, collaboration, reflective inquiry, decision-making and action research. It is the goal of the Teaching Leadership Program to foster *relationships* not just graduates, and thereby to promote avenues where research-based learning has an immediate impact on teaching and learning in the K-12 educational context.

Additionally, teacher leaders actively participate in the courses with other teacher leaders as they examine real data, successes, challenges and questions from their shared roles. They collaborate to help each other make connections and apply strategies to their specific work.

Program Goals:

- To redefine, elevate and celebrate the role of classroom teachers in the local service region.
- To promote an active community of practice encompassing classroom teachers who serve in the schools and districts in our region.
- To support classroom teachers who seek to sustain their professional vitality through continuous, career-long learning and development.
- To prepare teachers to engage in joint inquiry and transformational learning on issues related to teaching and learning.
- To develop teacher leaders who can serve as agents of change in the increasingly diverse and bureaucratically complex schools of our region.

Teaching Leadership Program Learning Outcomes

Graduates of the Master of Arts in Teaching Leadership Program:

- Are grounded in core theory regarding professional learning communities and demonstrate capacity to develop a professional learning community that embodies sustainable transformative change.
- Are grounded in core theory regarding systems of change and demonstrate capacity to diagnose needs within the community and institutional culture as a basis for designing innovative change within classrooms and/or institutions.
- Identify and respond to differences in learning style, culture and values in a way that leads to transforming participating students, colleagues, groups and schools.
- Are grounded in major theories of adult development and use these as a stimulus for self-awareness and embodied practice.

- Identify and articulate personal vision, values and vocation to tap into and channel their professional passion.
- Create sustainable school-based policies, structures and practices aligned to current theory and research.
- Are grounded in relevant theory and demonstrate capacity to design and implement data-driven evaluation of learning and systems of accountability.
- Are grounded in relevant theory and demonstrate capacity to develop action research into ongoing leadership practice within self and community

Core Principles

In each course, teacher leaders draw connections from their professional practice and the leadership literature, learn and practice a repertoire of tools and strategies to use in their roles, and demonstrate mastery of the core competencies in the “Personal Plan for Teaching Leadership” Portfolio. Critical concepts of teacher leadership such as adult learning models, negotiation, collaboration paradigms, learning communities, facilitation skills, advocacy, and professional development/learning are integrated into the program of study.

Using Data: Participants learn how to understand and analyze various forms of data, use data in decision-making processes, communicate using data and foster a culture of high expectations with data.

Supporting Instruction: Participants gain expertise in applying principles of adult learning theory as they learn and apply strategies for observing and analyzing instruction, providing growth-oriented feedback, planning and implementing effective professional learning experiences and evaluating instructional outcomes.

Shared Leadership: Participants learn varied approaches for building unity of vision within a team, managing an effective, collaborative team and understanding the role of individuals sharing multiple perspectives within school and district systems.

Professional Expertise: Participants learn procedures for building routines to guide team reflection and fostering professional expertise within a school. They develop skills to utilize the professional knowledge base of the team and apply that expertise to systemic improvement.

Conclusions

In conclusion, a new paradigm of the teaching profession is needed. The focus of teaching leadership needs to be with school wide excellence in teaching, learning, and assessment. A teacher education program offering an advanced degree in teacher leadership needs to strive for pedagogical excellence, confront barriers to the traditional views of leadership in the school's culture and structures and build new forms of leadership capacity in the teaching profession. University faculty and school leaders need to collaborate to provide a transformative program that drives school and community reform by working together to foster, develop and support teacher leadership. It is time to move toward a shared leadership model. Teacher leaders believe that all students can succeed. This is a crucial step towards making schools a source of instruction and inspiration. Teacher leadership is an idea that is long overdue.

Finally, the challenges of investing in teacher leadership and preparing future teacher leaders are great. However, the impact of empowering the next generation of educators who are agents of change through advanced degree preparation is vital. Programs need to be developed for teachers to be trained to work collaboratively to create shared leadership structures and to build a culture where teachers continuously enhance and improve their practice. Teacher leadership is an idea whose time has come.

Saint Mary's College
School of Education
Master of Arts in Teaching Leadership Courses

EDTL 800 Building a Community of Learners Through Critical Reflection (3 units)

Course Description

The expectations for being an active, engaged member of a learning community will be developed. An examination of assessment theory and practice, as they relate to adult learning principles and K–12 education, will lead to a deepening of involvement with community-wide areas of inquiry. Learning community members will begin investigating and transforming their beliefs and practices about teaching and learning through a critical reflection of their own beliefs and current best practices and theories. The development of professional portfolios will guide learning community members toward demonstrating growth toward the National Board for Professional Teaching Standards and the descriptors that are developed by the learning community.

Using an inquiry model, learners will develop research-based principles for constructing a teaching and learning environment responsive to the needs of their learners, assessing student learning, and developing instructional practices to foster a community of learners. Learners will be required to connect those principles to a deepening understanding of their own discipline. Learners will engage in action research and critical reflection on their teaching and learning to guide their inquiry.

EDTL 810 Implementing Effective Teaching Techniques (3 units)

Course Description

Teaching and learning practices and theories will be examined. Effective teaching techniques and presentation skills will be practiced and critiqued. Self- and peer- assessment processes to validate work that document evidence and reflection will be applied. The focus of this course is to develop effective communication and presentation skills with students, parents, colleagues and the community.

On-going collegial sharing and critical reflection will be significant aspects of the learning process.

Techniques for planning, presenting and evaluating in-service for teachers and parents—theory, research on effective practices, presentation skills, needs assessment procedures and methods of evaluation and follow-up—hands-on practice and demonstration of techniques, with videotaping and feedback.

EDTL 820 Articulating an Area of Inquiry: Bridging Theory and Practice (3 units)

Course Description

Areas of inquiry that will promote a deeper awareness of the theory behind teacher practice will be defined and developed. Specific attention will be given to the constructivist-learning model as a means of enhancing learning opportunities of students. Learning community members will continue developing and assessing their work and document their growth using a professional portfolio. Connections to their students' learning will be emphasized as well.

This course will challenge learners to integrate the core program concepts and vision into their classroom through their action research learning. Their continued inquiry and involvement with discipline-based learning plans will provide opportunities for making classrooms more effective for both students and teachers. Learners will be required to focus on the integration of assessment, instruction, environment, and discipline to transform their classrooms. On-going collegial sharing and critical reflection will be significant aspects of the learning process of integrating the standards of National Board Certification. A professional learning conference designed for program participants will focus on networking, shared learning, and dialogue as professional development.

EDTL 830 Developing Areas of Inquiry: Research and Practice

(3 units)

Course Description

During this course, learning community members will engage themselves in self-directed activities to articulate the emerging curriculum for their learning community experience. Their continued inquiry and involvement with learning plans will continue to provide opportunities for making classrooms more effective for both students and teachers. On-going collegial sharing and reflection will be significant aspects of the learning process. A required networking conference for all year three learning community members will be held.

Learners will conduct their action research design in their classrooms. The implementation, analysis, and synthesis of the discipline-based inquiry will focus on communicating an integrated understanding of assessment, instruction, structuring a learning environment, and their discipline (content area). Completing the requirements of arranged work, learners will apply, document, and demonstrate their learning between the learning community sessions.

EDTL 840 Demonstrating Professional Growth Experiences: Reflections and Projection (3 units)

Course Description

The final semester of the Master's program provides learning community members with the opportunity to demonstrate their significant learning throughout the learning community experience through portfolio assessment. Candidates will summarize their individual and community learning experiences from their work with the National Board for Professional Teaching Standards. Plans for continued personal, professional growth will be developed. As a graduation requirement, students will inform the education profession of their acquired expertise at an all-community conference.

Learners will demonstrate their comprehensive and integrated discipline-based learning through

portfolio development and by facilitating a research and dialogue-based seminar or forum at a professional learning conference. Learners will analyze their individual and community learning experiences that have impacted their teaching and learning and create a synthesis for continued professional growth and practice as a professional educator. Focusing on transformational learning, learners will articulate their professional beliefs and practices for their approach to assessment, instruction, environment, and discipline (content area). Learners will develop professional growth plans that reflect the research on shared learning, collegial coaching, and teacher leadership.

EDTL 850 Documenting Professional Growth: Completing Action Research (3 units)

Course Description

The intent of this course is for learners to carry out their action research independently and collaboratively and document and communicate their content-based area of inquiry investigation. Learners will present their action research findings at a networking conference and prepare an article for publication as part of the Collaborative Research Project. Learners will continue to apply, document and demonstrate their professional growth to complete requirements with their learning community advisor.

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SUSTAINABLE TEACHER EDUCATION FOR THE 21ST CENTURY

Introduction

This title isn't original. It was the title of the Campus Technology 2010 discussion on the future of open source and open content in higher education. However, the title of the panel discussion wasn't original either. It's derived from the familiar English expressions: *I read you like an open book*; or *the future is an open book*. There are two possible meanings embedded in this – 'open book' = clear (the future is clear); or 'open book' = can still be written in or read (the future is not determined yet).

Both meanings inform this paper, which falls into two parts – it presents a discussion of Open Content (Open Educational Resources), and then a discussion of Open Education, which is often confused with the notion of Open Educational Resources.

Open content

What makes content open? What makes an Open Educational Resource?

First, there is a need to distinguish between a resource, an educational resource, and an open educational resource. Tony Mays has done this graphically (in a workshop to Saide staff in June 2011):

Fig 1: What makes an Open Educational Resource?

<p>A resource</p>  <p>OER Africa</p>	<p>An educational resource</p>  <ul style="list-style-type: none">• What is the name of the bird in the foreground of the picture?• Can you name 3 other varieties of this kind of bird? <p>OER Africa</p>
<p>An OER</p>  <ul style="list-style-type: none">• What is the name of the bird in the foreground of the picture?• Can you name 3 other varieties of this kind of bird?  <p>This work is licensed under a Creative Commons Attribution 3.0 Unported License</p> <p>Citation: Tony Mays 2011</p> <p>OER Africa</p>	<p>A remixed OER</p>  <ul style="list-style-type: none">• The yellow hornbill shown left is one of four varieties of hornbills common across sub-Saharan Africa. The other varieties are the grey- and red- hornbills and the much larger ground hornbill.• As the name suggests, the large horny bill is the key characteristic of the species. What does this suggest about their typical diet?  <p>This work is licensed under a Creative Commons Attribution 3.0 Unported License</p> <p>Citation: John Doe 2012 Photo: Tony Mays 2011</p> <p>OER Africa</p>

The point about an OER is that it is re-usable, re-mixable, and adaptable. It is because of the licence that the photo and text are reusable. The licence permits reuse without the need to pay or ask permission. But it is also because both picture and text have been made available in a format that allows for editing.

What this series of slides also indicates is that, when it comes to teaching and learning materials, most of us ‘build on the past.’ Most of the content we teach is not new – we just package it in ways that suit the context, the audience, and the educational purpose.

In this sense it is not only the future of content that is an open book. Before proprietary copyright laws were introduced, content **was** open.

Copyright law was expressly introduced to limit the rights of the controllers and distributors of knowledge. Yet, these controllers are successfully turning a “copy” right into a property right. The traditional rights of learning institutions are being taken away. The balance for researchers should be restored. Research and learning must be allowed the broad interpretation that was intended in the original laws.

Rory McGreal, *Stealing the goose: Copyright and learning* quoted at http://wikieducator.org/Copyright_for_Educators/History#cite_note-18FirefoxHTML\Shell\Open\Command

The greatest obstacles to sharing content generally do not come from creators of content, but from publishers, to whom authors assign their rights. Authors recognise that all learning and creativity builds on the past, and understand that their benefit lies in how often they can be cited for the work they contribute, and how easily they can access the work of others.

Open Educational Resources makes building on the past easier through three main mechanisms:

- Open licensing –which allows reuse, revision, and redistribution without the need to ask permission, or pay royalty fees.
- Open formatting – file formats that are not only free of charge but easily editable.
- Open design – resources which are uploaded in digital ‘chunks’ that are not only easily downloadable, but are also sufficiently self-contained for re-mixing.

The point about Open Educational Resources is facilitation of re-use. Most projects addressing themselves seriously to the issue of re-use focus on pieces of content smaller than whole books or courses.

For example, at the University of Nottingham’s School of Nursing, Midwifery and Physiotherapy, there is a large OER project in the creation of re-usable learning objects for nursing programmes. Once the technical aspects of re-usability and discoverability are seen to, learning design needs to be the focus. The authors explore what reusability means

Koper (2003) defines *reusability* simply as ‘the availability of learning objects for others to use’ (pg 48). An alternative view is that *reusable* means that ‘the content included within the resource is appropriate for learners outside the immediate group that it was intended for’ (Windle & Wharrad, 2010). The former definition implies that resources are simply made available for sharing whereas the latter indicates an intention to support reuse. Currier and Campbell (2005) in their study to evaluate the reusability potential of content define ‘*horizontal reuse*’ as interdisciplinary reuse and ‘*vertical reuse*’ where resources are reused at more than one educational level. (Windle et al, 2010:9)

It is critically important to study re-use, particularly in African contexts, in order to understand the pedagogic processes involved in adaptation, as well as the obstacles and enablers of re-use.

The main lessons of experience recorded by this university’s experience is:

- A focus on developing materials for use, and getting this right, is central to stimulating reuse. (p. 4)
- The most effective learning objects are those that have been developed using consistent pedagogical approaches (p.5)
- Robust quality control [is] an important driver of both sharing and reuse (p.8)
- The importance of community (Windle et al, 2010:6)

The last point is particularly important in African contexts. The TESSA project has reaped the benefits of working with the same sixteen institutions across nine African countries over a number of years. The uptake of their resources has been very large, as Gareth Dart (2011) points out

In Nigeria, the National Teachers’ Institute plan to use TESSA approaches and materials in their certificate programme with over 100,000 student teachers as well as in continuous professional development programmes with over 145,000 teachers; Ghana is similarly using the materials on large scale courses; In the case of Zambia the University of Zambia is adapting the materials to use with existing courses and as a basis for new courses, colleges of education are integrating parts of the materials into new distance learning modules and a large NGO (Zambian Open Community Schools – ZOCS) involved in training community based teachers uses the materials extensively.

The OER value proposition, summarised in the diagram below, contains a culminating benefit, about the capacity building opportunities that collaborative work with OER provides:

Fig 2: The OER value proposition



The most important benefit of working with OER, in our experience, is that it affords the opportunity for conversations around teaching and learning between educators that are focused on artefacts – the learning objects or units of learning. As Maths teacher educators (see Sapire et al, 2012), or nurses, or experts in Food Safety work together to create or adapt OER, they talk about the essence of their educational work. There are numerous case studies emerging which illustrate the benefits across disciplines and we are beginning to see evidence in policy and practice in African countries that decision makers recognise the importance of collaboration and sharing, especially when it comes to the use of public money.

For example, in South Africa, the For example, in the *Integrated Strategic Planning Framework for Teacher Education and Development (2011-2025)*, there is commitment both to building a teacher education ICT support system, and to availability of ‘open source materials’ for teacher development. In addition, there is commitment to national coordination of continuing professional development ‘taking advantage of expertise from across the system, including those NGOs and organisations with specialist knowledge of the specific focus areas’ (Department of Basic Education and Higher Education, 2011:6).

The South African government has recognised that, in situations in which capacity and expertise is spread unevenly across the system, it makes sense to share resources.

This is not only in the policy. It has been actualised in a project. Funding support through the European Union Primary Education Sector Policy Support Programme in South Africa has enabled the Department of Higher Education and Training (DHET) to put in place a collaborative programme with the higher education sector to specifically strengthen and deepen Foundation Phase teacher education at universities, with particular emphasis on the need to address shortcomings in the ability of the system to produce adequate numbers of well-qualified African language Foundation Phase teachers. *Saide* has been asked to coordinate the materials development to facilitate sharing and reuse across institutions. DHET will publish the materials as OER on their Teaching Development website, following a protocol for OER publishing developed by *Saide*.

However, even though the benefits are articulated frequently, there is contestation. People fear that they are simply ‘giving away’, or allowing people to steal what they have taken time (and often money) to create. What is not realised sufficiently is that if work is digitally available, it is quite simple to copy and reuse. The technology around OER, far from advocating a looseness, is actually ensuring much greater tightness in attribution and citation. In other words, by formalising the process of publishing resources, open content publishers are actually protecting the rights of authors to acknowledgement in a digital environment that facilitates plagiarism.

Where the challenge comes – and this is where the future is an ‘open book’ in the sense of not easily readable – is to the publishing industry. The free availability of digitised open content potentially undermines the profit base of publishing companies. There is a powerful counter movement led by the conventional publishers, and it is by no means certain which side will win in the future.

Nowhere is the contestation more apparent than in the textbook industry. Organisations like Flatworld Knowledge emphasize the weaknesses in print based textbooks – delivery delays, expense for students, inflexibility. Note the advertisement on Flatworld Knowledge website <http://www.flatworldknowledge.com/educators>

Fig 3 The value proposition of Flatworld Knowledge Textbooks



Where textbooks are required for large school systems, the potential for corruption is enormous. Recently, Oxford University Press admitted guilt in bribing certain East African countries (http://www.nytimes.com/reuters/2012/07/03/world/africa/03reuters-kenya-oxford-graft.html?_r=1&hp). South Africa’s Minister of Basic Education, in the midst of the turmoil of a textbook delivery scandal in one of our poorer provinces, is likely to be looking for alternatives in the future.

However, textbooks, which are essentially packaged content, could be said to reinforce notions of fixed content, which learners must master (and reproduce) in order to be regarded as educated. The same set of open textbooks pop up again and again on Google, and there is a tedium that sets in as one reads the different versions of these texts. Unless students are tasked with writing their own textbooks (such as is the case in the Global Text project, where post-graduate students prepare text under the supervision of faculty), or unless more is provided than simply a static text (as is the case with the school textbooks produced by the South African NGO, Siyavula, which advertises more than merely content – see below from their website <http://projects.siyavula.com/technology-driven-learning/web-books/>, one wonders whether the technology is simply communicating poor pedagogy more efficiently.

Fig 4 The Siyavula textbook offerings

The Siyavula Mathematics and Science textbooks are available for Grades 10, 11 and 12. These curriculum-aligned textbooks come alive online as they are filled with interactive rich media such as videos, simulations and powerpoint presentations. This interactive rich media gives learners a chance to catch up on a lesson they may have missed or to “practise” science experiments without the required apparatus or laboratory risks involved. The textbooks are free to read online and on mobile phones, or you can order a hardcopy through us.

A new online practice service which allows learners to practice the types of questions they may find in their tests and exams. This practice service is well integrated with the

Siyavula textbooks and work together to ensure learners excel in Maths and Science. Learners are able to practice using their mobile phones or computers.

Secondly, without thought of cultural/contextual accessibility, OER remain closed or alienating.

Tel Amiel, speaking from a Brazilian perspective, picks up the language issue:

In 2007, for every 100 pages in English on the web, there were approximately 8.5 in Spanish, 10 in French, 6 in Italian, and 3 in Portuguese (Pimienta, Prado, & Blanco, 2009, quoted in Amiel, 2011:14)

Language has become an issue of access. The translation of materials has become the final effort in many educational projects aimed at promoting open educational resources. (Amiel, 2011: 14)

Highly successful projects such as the World Reader project – which trialled the use of e-readers and e-books by sixth grade students in Ghana. A major finding is that:

Almost all of the storybooks available to the students are written by Western authors. .. the students didn't have the life experience to understand a lot of what they were reading. (Sundermeyer et al, 2010: 26)

Open education

And so, Open Educational Resources may be culturally 'closed' – definitely not an open book to learners and educators who do not form part of the mainstream mainly English-speaking world of the Web.

In some documents there is a worrying confusion between Open Educational Resources and Open Education or Open Learning. Or an assumption that OER on their own will *open* education ['open' as a verb]

See the Cape Town Open Education Declaration <http://www.capetowndeclaration.org/read-the-declaration>

3. Open education policy: Third, governments, school boards, colleges and universities should make open education a high priority. Ideally, taxpayer-funded educational resources should be open educational resources. Accreditation and adoption processes should give preference to open educational resources. Educational resource repositories should actively include and highlight open educational resources within their collections.

In the first sentence of this paragraph, the writers call on stakeholders to make *open education* a priority, but the rest of the paragraph discusses only *open educational resources*. This suggests that the two terms are equivalent – or that it is OER that will make open education a reality. However, Open Educational Resources ≠ Open Education/. But this was in 2008.

Internationally there is recognition of this. Hence the major OECD initiative, to encourage higher education institution to move from the promoting the use of Open Educational Resources to developing much more all-embracing Open Educational Practices (OEP).

Fig 5 Constitutive elements of OEP (Ehlers 2011:4)

		OER Usage		
		Low No OER (re-) usage	Medium OER (re-)usage or creation	High OER (re-)usage and creation
Learning Architecture	High Social practices, Co-Creation, Sharing (Reflection in action) • „open“ objectives • „open“ methods	A	B	C
	Medium Dialog, Procedures, Rules (Know-how) • „closed“ objectives • „open“ methods	D	E	F
	Low Knowledge transmission (Know that) • „closed“ objectives • „closed“ methods	G	H	I

In the following extract, Ehlers (2011:3) expands of what is meant by low medium and high on the learning architecture axis of this graph:

- *Low* degrees of openness exist if objectives and methods of learning and/or teaching are rooted in closed, one-way, transmissive, and reproductive approaches to teaching and learning. In these contexts, there is an underlying belief that teachers know what learners have to learn and mainly focus on knowledge transfer.
- *Medium* represents a stage in which objectives are still pre-determined and given, but methods of teaching and learning are represented as open pedagogical models. They encourage dialogue-oriented forms of learning or problem-based learning (PBL) that focus on developing ‘know how’.
- *High* degrees of freedom and openness in pedagogical models are represented if objectives of learning and methods (e.g., learning pathways) are highly determined and governed by learners. Questions or problems relating to which learning is happening are determined by self-regulated learners. Teachers facilitate through open and experience-oriented methods which accommodate different learning pathways, either through scaffolding and tutorial interactions (ZPD Vygotskian-inspired approaches) or contingency tutoring (strategies of reinforcement, domain or temporal contingency [Wood & Wood, 1999]).

The OPAL initiative last year invited institutions to put forward self-evaluations of the extent to which their programmes are aligned with Open Educational Practices. We would agree that the goal of education is the creation of educational process that promotes and rewards self-regulated learning. However, what this framework does not sufficiently recognise is that expectations of self-regulation without the accompanying skills is likely to result in learning being closed rather than open for large numbers. This is particularly the case in developing contexts, where there are educational backlogs.

The competencies and background of the learners has to be taken into consideration when a particular approach is selected for teaching and learning. Similarly the nature of the subject has to be considered. There are higher expectations of knowledge transfer in certain aspects of a law or medical degree than there are in a degree in philosophy. Learner and learning centredness better as a starting point when

one is 'opening' learning, or intending to provide meaningful access to education, where learners have a chance of success.

Another recent initiative, the OER –U, is also coming in under the banner of the ultimate in Open Education. Advocates of the OER-U argue that traditional university education is beyond the reach of nearly 100 million learners in the world – because of its expense, lack of geographical accessibility, as well as scarcity. The concept of the OER-U proposes a solution to this, which is captured in this picture.

Fig 6 The OER-U concept

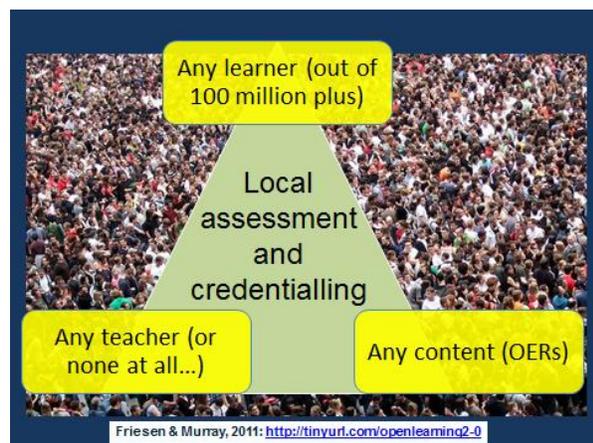


The initiative is referred to by one of the participating Canadian universities as Open Learning 2.0 (Friesen and Murray, 2011) in the following way:

Any student can study any content, supported in any number of instructional arrangements... The “local” institutional evaluation and accreditation... (remain) at the centre of the model... Even though learning is achieved through flexible arrangements, it can... still be rigorously assessed and credentialed. (Friesen and Murray, 2011)

Gabi Witthaus (2012) showed their idea in a picture.

Fig 7 OER-U – reaching the masses?



There are two problems with this approach. Firstly, it has to be completely outcomes based. The assumption in outcomes based education is that the content is not important – the outcome can be achieved with any content, with or without a teacher. Similarly, it is assumed that the context of learning is irrelevant. The same outcomes can be achieved no matter how or where one achieves them. In South Africa we have just emerged from a major reassessment of outcomes-based education, and have profoundly questioned the first assumption – there is certain content which is constitutive of a particular discipline, and to master the discipline requires sequenced acquisition of that content. For particular professions, the context of learning is likewise highly significant. Much can only be learned by practice from ‘expert others’ in the field.

But secondly, how many of the 100 million learners could the OER-U actually reach with technologically enabled, non-tutored, and bewilderingly international single courses? There would need to be a strenuous scaffolded programme to enable most of the 100 million to take advantage of the openness and flexibility of the OER-U. The courses, if they are good, are likely to help already skilled people with ‘just-in-time’ learning on self-chosen needs driven topics. They will provide a very useful service. But the masses out there? It is not at all clear how they will benefit.

For example, in South Africa, we have a major challenge of inequitable educational access. The results of numerous systemic tests (TIMSS, PIRLS, MLA, SACMEQ,¹⁴ and the systemic evaluations carried out by the Department of Education) demonstrate what Brahm Fleisch (2008) refers to as a ‘bimodal distribution of learner achievement’, with the largest majority of scores on these tests at very low levels, below norms even for developing countries, and a small minority at levels comparable with results from the developed world. As Fleisch (2008) summarises:

While a small minority of primary schoolchildren attending privileged schools are achieving a curriculum benchmarked ‘grade level’, which is comparable to countries such as Germany and the United States, the vast majority of children attending disadvantaged schools do not acquire a basic level of mastery in reading, writing and mathematics. It is these South African children who struggle to read for meaning and to perform simple numerical operations – whose learning remains context-bound and non-generalisable. (Fleisch, 2008: 30)

The results of the PIRLS study or 2006 (Progress in International Reading Literacy Study) were that Grade four and five learners achieved the lowest score of 45 national education systems (Fleisch, 2008: 18). The results of the 2009 systemic tests conducted by the Department of Education nationally in South Africa are equally shocking. In the grade three maths tests, learners had to interpret simple bar graphs and add amounts in rands and cents. In the grade three literacy tests, they had to draw conclusions from a text and understand the use of tenses. In all the tests the percentage of learners functioning at the 50% to 69% level was lower than 34%.

The context that has to inform an African approach to open education is characterised by

- Improving equity of educational provision – those who have continue to receive more, while for those who have not, the little they do have is increasingly being taken away
- Recognising that basic literacy for learning cannot be taken for granted..

¹⁴ Trends in International Mathematics and Science Study; Progress in International Reading Literacy Study; Monitoring Learning Achievement; Southern and Eastern African Consortium for Monitoring Educational Quality

To offer an open education future for Africa, there are historical and current socio-political challenges that need to be addressed.

Since *Saide's* inception in the early nineties, we have been considering what open learning means from a social justice point of view – how distance education methods informed by open learning principles can help to create equitable access to education.

We have been considering whether the principles that we started out with in the 90's need to be modified in the light of Web 2.0, e-learning and Open Educational Resources. In a recent internal workshop, we looked at the definition of Open Education that appeared on the Creative Commons website:

Open education is about **sharing**, reducing barriers and increasing access in education. It includes **free and open access to platforms, tools and resources in education** (such as learning materials, course materials, videos of lectures, assessment tools, research, study groups, textbooks, etc.).

Open education seeks to create a world in which the desire to learn is fully met by the opportunity to do so, where everyone, everywhere is able to access affordable, educationally **and culturally appropriate** opportunities to gain whatever knowledge or training they desire. [our emphasis]

There are two aspects of open education or open learning that we believe are 'new' or emphasised in ways that they were not emphasized before. The key words are 'sharing' and 'free tools, platforms and resources'.

And hence, from a developing world context, where we would like to see 'open education' understood in its social justice sense, we propose for discussion the following description of Open Learning:

Open learning is an approach to education that enables as many people as possible to take advantage of affordable and meaningful learning opportunities throughout their lives through:

- *sharing of expertise, knowledge, tools and resources*
- *reducing barriers and increasing access*
- *acknowledging diversity of context*

The principles of open learning are:

- *Learners are provided with both opportunities and capacity for lifelong learning;*
- *Learning processes centre on the learners and the contexts of learning, build on their experience and encourage active engagement leading to independent and critical thinking;*
- *Learning provision is flexible, allowing learners to increasingly choose where, when, what and how they learn, as well as the pace at which they will learn*
- *Prior learning and experience is recognized wherever possible;*
- *Arrangements for credit transfer, articulation and accumulation of credits facilitate further learning;*
- *Providers create a learning environment (incorporating appropriate learning support) to promote a fair chance of learner success within a quality learning programme.*

Perhaps these principles can guide our efforts to 'open' education for the future, with the help of open educational resources.

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EXPERIENCES OF “A COMMUNITY OF TESSA OER TEACHER USERS “IN UGANDA AND THE PARADIGM SHIFT TO LEARNER CENTERED APPROACH TO TEACHING AND LEARNING: THE CASE OF SELECTED PRIMARY SCHOOLS IN UGANDA. (JULIANA, MUGABI, ZZIWA, AND OKELLO)

1.0. Introduction

This paper presents the experiences of a community of teachers who are TESSA users in Uganda. The teachers’ experiences have been aired out during an ongoing action research on skills required for the sustainable use of TESSA materials in the context of Uganda. Teachers in selected primary schools of Uganda have been meeting as a group in their schools to discuss the use of TESSA materials, through sharing what those who use them have consistently found out about them. Through their conversations, workshops, journals and compiled case studies, the teachers’ methods of teaching depict a continuous shift from teacher centred lessons to the dominant use of learner centred approaches as they teach. Teachers share the advantages of such a method for the benefit of those not yet on board. The sharing of findings and case studies is leading the way to the paradigm shift of teacher centred teaching to learner centred teaching.

1.1. Background



Map of Uganda

Teacher Education in Sub-Saharan Africa (TESSA) is a project based at the Open University of U.K. designed to practically impart basic skills of teaching and learning among Teachers based in the Africa Continent Context. It is important to note that Africa is a continent that face plenty of infrastructural and socio-economic constraints in teaching and learning experiences of children in primary schools; Aguti (2002) shows the predicament in Uganda, pointing out the massive numbers in Schools, and yet with no commensurable expansion in either facilities, teachers, or teaching/learning

materials. This situation may have compromised the quality of education, she notes. The research on which this paper is based arose out of a conviction that it is possible to change teachers approach despite their training from teacher centred approach while teaching, to a learner centred approach culminating into a change of culture of teaching. In fact, Uganda teaching/learning culture at primary level is the traditional teacher centred approach in a relatively big class of 60 to 100 pupils. Teaching takes place in a context of limited resources and poor infrastructure for example lack of textbooks, classrooms chalk and chalk boards and a total absence of computers in some schools.

Recent reports confirm the situational analysis of the context of teaching in Uganda, when they show the existence of schools that require massive help in the teaching/learning arena in Uganda. Nambogga (2012) for example points out that schools in Mayuge, one of the districts in Uganda lack adequate classrooms, many pupils study in mud and wattle structures that are sometimes dilapidated, while some students study under trees. One of the schools with 600 pupils Nambogga points out has only 30 desks. Teaching and Learning in such schools therefore require an ingenious method that would alleviate the impact of difficult conditions that hamper teaching and Learning. TESSA approach comes in handy to alleviate such a situation as will be seen later in this paper and that is why the action research on which this paper is based was embarked on, to enable the dissemination of the ability of TESSA materials to assist in teaching and learning in the impoverished schools as well as changing methods of teaching even in the well-to-do schools.

Tessa introduces a rather revolutionary approach uprooting the teacher centred approach and introducing a student centred approach. Study materials, are prepared to fit the context of poor infrastructure limited facilities and a utilization of local resources within an area.

Uganda's entrance into TESSA OER use, started as far back as 2006 when a series of workshops took place at Makerere University and at Kyambogo University aimed at helping tutors on B. Ed Programs and teachers in selected schools to use the TESSA OER materials as they carried out their work facilitated by officials from the Open University of U.K. As a result of the workshops a few primary schools in Uganda were used as pilots in the use of TESSA OER materials in the teaching and learning day to day experiences. This particular action research is based on the schools that Makerere University follows.

It is important to note that all those involved in the TESSA project from Makerere University and the schools are convinced that the quality of Education, particularly at primary level, is a great challenge for Uganda and are convinced that TESSA materials in teacher education would improve the quality of primary education in one way and that is the paradigm shift from a teacher centred approach of teaching to a learner centred approach of teaching.

1.3. Objectives of the Action Research

The objectives of the action research which is the basis of this paper are;

1. to find out through the experiences of teachers how a change in the teaching practices of Primary teachers in Uganda, from teacher centred approach to learner centred, can be achieved through the use of TESSA OER materials and
2. to develop specific dissemination practices for use of TESSA OER that would bring about a teacher culture of learner centred approaches over a wider audience of teachers based in under-resourced schools of Uganda.

2.0 The Methodology

This study followed an action research method as explained in the following section. The initial stage of this Action Research was a workshop during which teachers from 10 schools were given one TESSA CD ROM and a hard copy of TESSA materials of Science, Literacy, Numeracy, Social Studies and Study Skills. A follow up on Utilisation of TESSA OER, challenges and prospects is done by staff of Makerere University.

2.1. Action Research method and the justification for its use in the study

The practice of action research can be traced to the early work of John Dewey in the 1920s whose conviction was that professional educators should become involved in community problem-solving. As Johnson (1993) notes action research has since evolved as a process through which practitioners study their own practice to solve their practical problems. On that note, Elliot, cited in Nixon (1987) says this kind of research is fundamentally concerned with the everyday practical problems

experienced by teachers rather than the theoretical problems defined by pure researchers within a discipline of knowledge

Action research as Kemmis (1993) says is a form of research carried out by practitioners into their own practices. The methodology the action research on which this paper is based follows the principles of action research that call for a research process that involves change within that which is researched as (Greenwood et al. 2006, and Somekh, (2006) point out. It involves observation of processes, and gives room for studying a cycle obtaining results and studying a second cycle to improve practice and effectively use TESSA materials. In all these, it is paramount to note that practice is always influenced by context.

2.2. Various tools used in the study

The tools used to aid the action research in this study include; documentary review of previous reports on use of TESSA materials as gathered from four schools. Follow up visits with observation checklists to the selected primary schools to observe as frequently as possible lessons making use of TESSA materials, case study questionnaires for recording of students learning outcomes and performance in tests of classes that were taught with TESSA OER materials, Questionnaires and intermittent Interviews Schedules with the Head teachers.

3.0 Results

Sustainable use of TESSA materials in the teaching and learning experiences of selected primary schools is evident. The teachers' move from teacher centered to learner centered approach is also evident and teachers now enjoy their teaching experiences, while the pupils look forward to the school experiences daily. Teachers form forums and advise each other and the teachers look forward to the workshops occasionally organized in lieu of adaptation of TESSA materials in those selected schools by staff of Makerere University. Teachers also always share their experiences whenever there is chance.

The experiences shared in the Community of TESSA teacher users, rotate around planning for a lesson, thorough preparation, the ability to involve pupils and its impact, ability to use the local environment, ability to replicate or adopt a case study to use in your own classroom, ability to use local environment, ability to maximize classroom time, and most important of all, ability to get acquainted with the objectives of the lesson by knowing that what one needs to achieve at the end of a given lesson and that it should be the starting point, the ability to acquire organisation skills, the ability to share, the ability to give the children the foundation to learn and explore are also important.

The following are some of the experiences shared during workshops as captured from workshops witnessed in Kiswa Primary School, Greenhill Academy, Kabojja Primary School and Bugema Preparatory School.

3.1 Need to Plan and prepare thoroughly as per discovery of TESSA “users” teachers.

Planning was found to be key in preparation of a lesson based on TESSA OER,

The teacher preparing to use the TESSA materials should work out the specific steps required to prepare a lesson based on TESSA OER. One of the teachers Lukeman, of Kiswa Primary school commented;

“A teacher ought to be fully prepared. If you are teaching measurement, then prepare to come with a metre, a ruler and papers”

Good preparation starts with classroom environment, in one of the visits to observe lessons at Kabojja Primary school, for example the following scenario surfaced. Teacher Okiror was teaching about road safety in SST and displayed a thorough preparation of the lesson he had taught. He prepared pupils to set up their own safety rules in class and the rationale for them. In a democratic manner, the pupils of Primary 3 set up safety rules they would follow in their class. Then afterwards he introduced the road safety rules and took children on the road to test whether they have grasped. While crossing the road to his amazement, comments Okiror,

“Some had not grasped the idea of looking right then left then right again, some were actually trying to cross even in a dangerous situation. Testing the rules however helped them to conceptualize the road safety rules”

3.2. Acquiring ability to involve pupils and its impact on Learning.

In the teachers' journals, was found some of the answers to the guiding questions put before them, especially one that required them to observe and gauge their ability to involve pupils and to give evidence. In their sharing, teachers realized that one has to make sure each and every pupil in the class has something to do. Some of the experiences shared in this aspect included the following;

“In a lesson observed in a P6 class, Mr. Wamala of Kabojja Primary School had asked pupils to come to class with apples. He was going to teach fractions in Mathematics. With each pupil dissecting his/her own apple, as they observed the teacher doing it, the apple was divided into a half, then a quarter etc, and reassembled again to make a whole. After the lesson, each pupil ate his/her apple and went away happy and yet having grasped the concept of fractions. There was not a single pupil that was not involved”.

This lesson revealed a truly child centered lesson. In a teacher-centered lesson, the teacher would write on the blackboard and divide components himself without involving the students and using their day to day experiences. The apple for example, as some of the children interviewed revealed was always bought for them by the parents, as they went back home, but all of a sudden it became a visual aid in the teaching of mathematics. Mathematics ceased to be abstract at such an early age.

3.3. Ability to survey and use the local environment

The ability to survey and use the local environment is depicted in the following experience

“Teacher Okiror was teaching about the causes of diseases in P.5 and introduced a story. Two boys were going to school and came across enticing mangoes that had fallen from a tree ready to be eaten. Both the boys picked a number of them. One washed the mangoes in a stream nearby and started eating straight away. The other one warned him about the dirtiness of the water but he ignored, the other one went with his mangoes to school, located clean water to wash the mangoes and ate them later. A few days after, the boy who had eaten immediately complained of diarrhoea and stomachache and was later hospitalized and put on drip! Teacher then asked what the cause of the boy's diseases was and continued to teach about clean water and clean environment which are major topics within social studies”

On the issue of surveying the environment, TESSA review Meetings for teachers using the TESSA materials, teachers noted that it is important to first of all understand the teaching syllabus and the requirements of the topic you are about to teach and then survey the environment and identify a particular local environment that fits within the syllabus you are using to teach the pupils. Mapping

before hand and establishing which Tessa materials are relevant to the curriculum is depicted in the following experience;

“I was teaching graphs in mathematics. I surveyed the environment to find out what elements in the environment would fit my lesson. I decided that the students count all fruit trees on the compound. I grouped the pupils into five groups. Groups were able to tally and record the fruit trees; for example they counted 10 mango trees 7 jackfruit trees, three jambula trees and 5 avocado trees. The graphs that came out included bar charts and line graphs the mathematics class therefore was not in the classroom, but outside and pupils looked forward to another adventure.”

Following is another experience of utilising the local environment depicted:

“In a lesson entitled naming, identifying and finding out different parts of the plant flower, the teacher, Okello encouraged students to bring flowers to the class, and each of the student was involved in identifying the different parts of the flower using the flower he/she had brought himself/herself.”

3.4 Ability to replicate or adopt a case study to use in your own classroom

As teachers gave tasks and homework they made use of case studies within the modules;

“Tutor Mary of Makerere University gave an assignment to her students of B.Ed for use in the primary schools they teach in particularly suited for Primary 4. She replicated a case study she saw in TESSA materials and wrote a song on the “Finest Tree” and then asked the students how the song can be used as a basis for teaching English lessons. Teachers came up with interesting suggestions such as, it can be used to introduce pattern writing, it can be used to introduce writing a guided composition, the song can help to teach the skills in language learning, like listening, speaking, reading and writing, in listening for example, the teacher tells the learners the song they are going to learn, he sings the song several times learners join him/her and sing along.

It also helps the teacher to teach vocabulary for example, branch, leaf, green nest, around etc. It improves teaching in class for example the teacher displays the picture of the tree, discusses with the learners, through questions and answers. Then the teacher sings the song while the learners listen. The learners join the singing while teacher withdraws to detect mistakes he/she then notes the intonations in the song, it also helps the teacher to teach the skill of reading, the teacher may ask simple oral

questions to test their understanding for example what is the song about, where did the tree grow, where is the nest”

It was quite interesting to note that all that content, a lecturer would have just poured to his teachers in training came from the teachers in training themselves, and just from a case study, replicated from the TESSA materials.

3.4 Maximize classroom time,

In the sharing forums, it was found out that Classroom time can be maximized with a lot of innovation as per the following example;

“Teacher Sarah was explaining particular concepts of the English language and maximized each and every item she could think of in the classroom, the concepts were “ round,” “heavy”, “light”, “soft”, “smooth”, “rough”, “rectangular,” “long” and asked pupils to show all those concepts from the classroom environment. They were able to show the concept of light, using a light bag, to show soft, by touching their skins, to show smooth by touching the blackboard, to show rough, by touching their desks, to show rectangular, by touching their books, and rulers, and to show oval, by locating an egg, to show a triangle, by displaying a “samosa” something sold in the canteen for them to eat, heavy by trying to lift a desk and a table, light by lifting a polythene bag, and lifting a bucket without water, something long by comparing a short pencil with a long pencil. Whatever, they learnt explaining those concepts was in the classroom and they picked the concepts very well.”

3.5 Ability to make it a rule that a teacher get acquainted with the objectives of the lesson.

Teachers in their sharing realized that each of the teachers, before starting to prepare for a lesson, ought to find out what do he/she needs to achieve at the end of a given lesson

“Drawing from Mary Nabukenya’s tasks again, the idea of having objectives of the lesson is well illustrated when she uses a song as she teaches the teachers, in an English class/lecture. The objectives were very clear and were to introduce the writing of poems and songs task, show how replication can be used to reinforce reading skills, mastery of words, order of adjectives, listening, speaking, reading, speaking skills, it was also to enable the teacher to become knowledgeable and skillful in teaching the writing skills, employing songs and poems to teach and one of the objectives also was to show the teachers that the song itself has a motivating effect and writing need not be introduced to the learners as an abstract/hard aspect but as a simple task through

making it appealing as in a song. The song makes all pupils activity- engaged. Children learn from known to unknown, a song for example is about the tree, the nest, the egg, the leaf, the branch, the wood which are in their environment”.

In another study, the mathematics teacher Lukeman of Kiswa Primary School planned to teach shapes, the objectives were very clear and were; to explore shapes, to draw the shapes, to identify the shapes. All those activities were preplanned and carried out as scheduled.

3.5. Ability to acquire organisational skills

The teachers shared how to organize the activity that is to be carried out during the lesson as per the following example

“In a mathematics lesson, Lukeman, teaching P6 Maths organized a problem solving competition in the play ground. The activity involved a lot of prior organisation for example; the preparation of Cards with problems to be solved, Participatory choosing of returning officers among the pupils themselves, how groups would be organized and what to be shared in the class after the game”.

3.6. The ability to share.

Sharing helps to open up children’s understanding. Sharing with fellow teachers is also a skill as the following voice of experience shows

“Teacher Mugeni organized pupils in groups and each group was given materials to perform an experiment and share with the class. Pupil leaders did a wonderful job, introduced participants in their groups and reported, while other groups corrected them. When the video clip was shared with other schools, headteachers urged their teachers to encourage children to use that skill of sharing in class to build their confidence. It also gave teacher Mugeni the ability to identify leaders among the pupils and to teach the pupils leadership skills. The group work also built skills that help learners to search for their own information”.

3.7. Give the children the foundation to learn and explore

In the teachers’ forum while sharing their experiences, one issue came out vehemently, and that was to encourage children to participate in knowledge construction. Teachers shared that once pupils were involved in knowledge construction, they would be able to learn more and not forget what they have learnt. Such a practice would give the children the foundation to learn and explore. Following is what one of the teachers shared;

“Teacher Lazarus was teaching about pollination, he took his class in the gardens. Bees and flies were busy pollinating and the pupils participated in the learning seeing the two insects live pollinating the plants. The learning was so deep that it involved pupils asking Pertinent questions, like how does a bee pollinate a plant with thorns, don’t the thorns prick it?”

In the same vein, teacher Lukeman was teaching multiplication and

“asked the pupils to pick Cassava leaves in the garden and use them to count the small disjointed leaves per cassava leaf, then place equal ones together a number of times getting the total number which made the concept of multiplication very real to them. They were exploring multiplication on their own”.

Another component he used in multiplication was the fingers of the students,

“He encouraged them to look at one of their hands which had exactly 5 fingers but each finger had joints. Taking the small finger for example, it had 3 joint parts, if you put it together with the other small finger, you have 3 +3 joint parts making it 6. Therefore 3 joint parts times 2 make six. Hence instead of memorizing the multiplication, children explored and learnt how it came about, and hence solved multiplication visually. This method, Lukeman said, helped him to conceptualise that children can easily multiply when something is there to guide them”

In a lesson where teacher Sarah was teaching opposites of verbs,

“She did this through demonstration/work and songs and was actually an action oriented lesson especially with a teacher able to identify pupils by their names and keeping them focused” “she , used the very examples of sentences constructed by students themselves” and on “Appropriate use of verbs, she referred to the learner’s immediate class environment”

4.0 Discussion.

Whereas the results showed mainly the activities of the teachers as they participated in the action research, in the discussion we refer the reflections of the teachers as per the requirements of action research.

In order to improve on using Tessa materials, teachers ought to turn back and reflect on what went wrong or what was good, what made it better than the earlier one. The teacher ought to be a

researcher, what did I learn from what I did, how did the girls perform in relation to boys, what happened when I mixed girls and boys.

Teachers viewed the video clips reflecting some of the activities carried out in the earlier cycle as shown in the section on results and the following were some of their comments. While teaching average in mathematics, Wamala picked on the items the pupils had in class, geometry sets, pencils, books and soon realized were not enough for the type of concepts he needed to pass on the students. Hence next time he planned better when he was teaching fractions, and asked each pupil to come with an apple which they did, the resources therefore were enough for each and every pupil in the class

Teacher Patrick taught how air exerts pressure in a small classroom, and called a group of pupils in turns to observe. On reflection, after viewing what happened, Patrick saw the need for larger space, the importance of more groups, working at the same time and he took the students outside in the next lesson where there was plenty of space, and pupils even asked question she never expected as each pupil was involved in the experiment through their small groups, one of such question was that what if the cardboard does not hold?

Teacher Sarah reflected on her English class she taught on describing objects to P.4 which was outside the class. She noted there was less teacher talk, learners actively participated, they discovered, class management was a bit hard since pupils worked in groups and I was the only one in charge, but pupils understood better the concept of the objects that were long, short, round, rectangular etc and the lesson was easier. Teacher Sarah further noted that some learners have negative attitude towards studying but as we continue with this method, even those with negative attitude will be motivated” s he also noted that after the lesson, she will encourage pupils sort real objects e.g. tins, boxes and pictures to further conceptualize the concepts taught and that the children should collect objects them themselves and bring them to the class.

Teacher Lukeman reflected on his mathematics game in the play ground and said the returning desk looked a bit disorganized and some students tried to cheat as the returning officers were preparing the answers and was able to teach mathematics through a game, he did this again but with better organisation

Conclusions

A change in the teaching practices of Primary teachers in Uganda, from teacher centred approach to learner centred, can be achieved through the use of TESSA OER materials by following methods that have been tested to work in classrooms, observed during this action research. The outstanding issues are that a teacher ought to plan thoroughly, he/she should be able to utilise classroom and school environment in all aspects of teaching involving the students to make use of the resources available and he/she doing less talk, group preparation is an art, and it is therefore important for the teacher to keep on reflecting and improving group management every time he uses it. Every aspect of the learning ought to be tried out practically, the skill of self evaluation is also key, a teacher ought to be a researcher to evaluate himself/herself constantly and keep improving. At all times, pupils should be encouraged to participate in learning.

The ability to share: Sharing helps to open up children's understanding, sharing with fellow teachers is also a skill. Organisation skills are also important, there is the need to maximize place for example but basically to plan and prepare thoroughly before any lesson is taught with the help of TESSA OER resources. Teachers should also get acquainted with the objectives of each lesson in order to choose appropriate methods. What do I need to achieve at the end of a given lesson, Ability to replicate or adopt a case study to use in your own classroom is also a key skill that is learnt reflection and sharing with fellow teachers using TESSA materials.

Recommendations

Following the conclusion reached at as per previous discussion, it is recommended therefore that the local environment is a resource, that teachers can consistently use it to allow the children to enjoy the lessons. Secondly, to get all the pupils involved teachers ought to use methods which are practical and can motivate them preferably taking place sometimes in a school garden or play ground. Thirdly, watching video clips of earlier lessons by the teachers gives teachers a clue on how TESSA materials can be used to make learner centred lessons. It is also recommended that more funding be poured in the dissemination of TESSA OER resources to enable the researchers to spread the practice of learner centred teaching throughout the country. Occasional joint workshops of TESSA users and meetings should also continue to be implemented.

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REFLECTIVE LEARNING EXPERIENCES OF PRIMARY SCHOOL TEACHERS DURING THE USE OF OPEN EDUCATIONAL RESOURCES

Introduction

Reflection in its generic term is understood to be ‘those intellectual and effective activities in which individuals engage in to explore their experiences in order to lead to a new understanding and appreciation’ (Kolb, 1984). Most writers such as Schön, Dewey, Boud agree to the fact that the concept implies an active and conscious process that is continuous. In other words, reflection is a positive active process that reviews, analyses and evaluates experiences, drawing on theoretical concepts or previous learning so as to provide an action plan for future experiences.

Presently, many teacher education programmes worldwide have incorporated reflective learning components in their teacher preparation programmes. This is to help develop a link between theory and practice so that the training of the teacher becomes informed by a more practically grounded learning experience. Similarly, the University of Education, Winneba whose conceptualization of teacher education is that teachers are reflective decision-makers who facilitate student learning have provided opportunities for its products to enhance their ability to engage in reflective practice activities. In this regard, during students’ school-based internship, commonly known as teaching practicum, students are mandated to write a reflective paper, which is part of a three-credit course. But the question is: Do these novice teachers have the knowledge and skill in reflective learning and writing? Do they know how to continue to reflect on their teaching experiences, learn from them and use the findings to improve on their practices? Again, with the many in-service training activities for teachers already teaching how do they collaborate in their professional practices? This study seeks to add to the field through the analysis

of teachers' reflective learning experiences and interviews the professional learning gained by keeping a reflective journal.

At the University of Education, Winneba, some primary school teachers in the catchment area were introduced to the concept of open educational resources (OER) and specifically trained to use a kind developed by the Teacher Education in Sub-Saharan Africa (TESSA) consortium to improve their classroom practices. Participants in this study were teachers selected after the training workshop and were encouraged to keep a reflective journal as they use the resources in their day-to-day teaching and learning processes. However, the issue remains to be explored whether the exercise had impacted positively or not in their professional practice. It is to be noted that in the past, there had been other innovative interventions in teaching that teachers have engaged in and are supposed to inform their practice but whether or not such efforts as in this case succeeds or not is yet to be explored. Further, if this move has a chance to improve teachers' practice it will be necessary to consider the manner in which the findings can be used to assist many more teachers.

The overall goal of this study was to elicit information on teachers' learning from reflection during the use of TESSA OER in their classroom practice, the result of which will provide the basis for developing activities for integrating reflective learning and writing into teachers' professional development programmes.

The purpose was to examine the evidence supporting the ten (10) teachers' professional learning from their reflection exercises and whether it follows elements of learning cycles propounded by Kolb and Gibbs in the literature. Thus, the experiential learning cycle by Kolb and Gibbs are discussed as the theoretical framework underpinning the study.

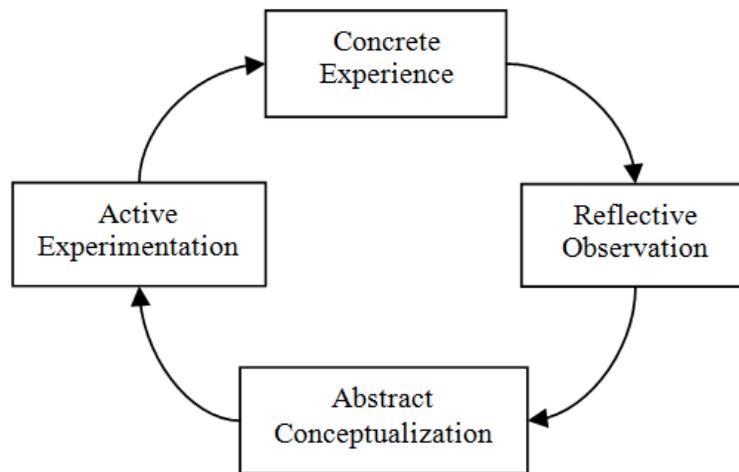
Specifically, the study sought to address the following questions:

1. What is the perceived value of using TESSA OERs by primary school teachers in their classroom practice?
2. How are teachers learning from reflection during the use of TESSA OER?
3. In what ways have teachers collaborated with others during the use of TESSA OER?
4. What challenges do teachers encounter as they keep reflective journals?

Reflective Learning Journal, What is it?

Reflection, as defined by Moon (1999), a known advocate of the use of reflective learning journal, is “a form of mental processing with a purpose and/or anticipated outcome that is applied to relatively complex or unstructured ideas for which there is not an obvious solution” (1999:23). What is implied in this definition is that the process of reflection should serve a purpose and have an anticipated outcome. and that reflection should benefit the individual reflecting by he or she learning from the outcome through self-development engagement.

Mezirow’s transformation theory, which is one of the many definitions of learning, describes learning as the process of learning through critical self-reflection. He states that learning is the process of using a prior experience to understand a new or revised interpretation of that experience in order to guide future action (Mezirow,1991). In the literature, Kolb (1984), Boud et. al. (1993) and Dietz (1998) have all identified learning as a cyclic model. Kolb’s experiential learning cycle, which was used as one of the frameworks to understand the teachers’ learning experiences with TESSA OER, is a four-stage cycle beginning with the concrete experience followed by reflection then by abstract conceptualization and active experimentation as shown in Figure 1.



"Fig. 1". Kolb's (1984) cycle of experiential learning

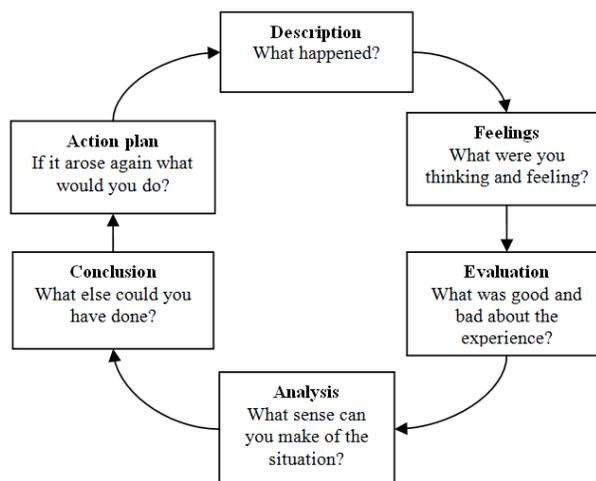
This model of experiential learning process depicts how an individual's experience is translated into new concepts through reflection and leading the individual back to the first stage and so on. The understanding gathered from this model is that the results of experiences lead learners to new knowledge or solution or method which becomes another concrete experience that the learner reflects on and conceptualizes findings and modifies or applies the new concepts in other similar situations. In this vein, a teacher's lesson delivery after a lesson may be considered as the concrete experience and pondering over how the delivery occurred and what he/she learnt from his or her strengths and areas for improvement can be interpreted with the model.

Boud et.al (1993) on the other hand, proposed a three-stage model of learning, which includes the preparation for the experience, the experience itself and then the reflection on the experience. Boud explains reflection as " ... a conscious activity in which we engage to explore our experiences and develop new understandings and conceptualizations (Boud et. al, 1989). In his view, learning during reflection from experience should be a valued act especially with formal education. Dewey (1933), Kolb

(1984), Dietz (1998) and others have all argued that emphasis ought to be placed on the learner's ability to actively construct knowledge during reflection. Dietz (1998) describes the professional learning cycle as the 'translation of learning theory into cycles of professional development', which provides the means to make the connections between theory and practice. These models identify reflection as a significant part of the learning cycle. As teachers, who were familiar with the routine aspects of classroom management, adapting OER in ways of modifying their teaching plans and lessons to accommodate students' learning call for reflection and active experimentation.

Gibbs (1998) reflective learning cycle, which appears to be an expansion of Kolbs experiential learning cycle also consists of six stages as shown in Figure 2. The cycle consists of:

1. Description of the event/situation
2. Analysis of feelings
3. Evaluation of the experience
4. Analysis to make sense of the experience
5. Conclusion with other considerations and
6. Action plan for a similar situation



"Fig. 2". Gibbs (1998) reflective cycle

In Gibbs reflective learning cycle (Figure 2), it appears Kolb's 'Reflective Observation' and 'Abstract Conceptualization' have been extended in Gibbs model (Park & Son, 2011). In Gibbs model, the former seems to have been extended to include Feelings and Evaluation and the latter in Analysis and Conclusion (ibid). Thus, in reviewing and superimposing teachers' reflective learning experiences from their classroom practice, this model serves as a framework to understand their 'stories'. However, it needs to be mentioned that writing reflectively and keeping a reflective journal can be daunting. Reflective writing is a skill that needs to be developed and so will need practice and perseverance. Moon (1999) suggests that the use of a structured framework to enable learners reflect on appropriate issues could help them 'move on' in their thinking (1999). Thus her seven step framework for reflective writing for learners are as follows:

1. Purpose (identify the purpose of the reflective activity)
2. Description (describe the events, context, personal behaviour and feelings)
3. Links (make links with ideas relating to the event, from experience or reading)
4. Revisiting (revisit the event and interpret it from a different point of view)
5. Stand Back (a little later make notes on the events testing the resulting ideas in other situations or discussing them with other people)
6. Results (identify has been learned or solved, or an area for further reflection that has been identified)
7. More Reflection (identify further possibilities for reflection). (Moon, 1999)

Keeping a reflective journal may be seen as pivotal to the teacher's learning and as a strategy to assist them in raising awareness of their learning. By asking teachers to keep a reflective journal in this study, it was assumed that their continual reflections on their practice would improve their pupils' learning

outcomes. For teachers, a reflective journal or diary should be where one records their daily or weekly events and their reactions to them with the focus on instructional practices, lesson planning, classroom management, pupils' learning and other personal professional development. Further, the purpose of keeping a reflective journal as a teacher is to provide an opportunity for a more focused look at one's teaching strategies or recurring problems of learners (Clarke, 2004).

Tessa's Open Educational Resources

The main characteristic of OER is that they are generally cost-free, or totally free. This means that the costs borne by users are reduced by involving software programmers, legal experts and repository managers in the whole OER production process. An evaluation report of 2005 by UNESCO revealed that people use OER for various reasons. For example:

1. People who are neither teachers nor students in formal programmes access OER primarily to enhance their personal knowledge.
2. Students who access OER do so mostly to complement a course they are taking, to enhance personal knowledge, and to plan their course of study.
3. Teachers who access OER do so mostly to plan or prepare a course, enhance their personal knowledge, or learn about topics related to their research. [UNESCO, 2005]

What this report seems to imply is that all stakeholders in society and in education such as students, teachers, educators and any individual could have access to OER knowledge to inform themselves. In this study, teachers who were introduced to the TESSA resources were encouraged to use them to enhance their classroom practices.

Methodology

The research tradition that was considered suitable for this study is the qualitative approach using phenomenology method. This method rests on an assumption that there is a structure and essence to share an experience that can be narrated (Pratt, 1992). It seeks to describe the meaning of a concept or phenomenon that several individuals share (Marshall & Rossman, 1999); as in the case of these teachers who are using the TESSA OER and have experiences to share. Also this method is useful for revealing how things look from the point of view of the respondent as well as the researcher. With the researcher being familiar with the TESSA OER, the task will be to discover and describe distinctively different ways in which individuals relate themselves to various elements in their contexts. Further, phenomenology is a method for describing qualitatively different ways in which people understand or conceptualize an aspect of their world. In this regard, teachers using OER and reflecting on the use by keeping a reflective journal will narrate their experiences from their point of view and in their contexts.

A guiding framework for posing questions and interpreting the data was based on the learners: learning process, the content to be learned, the context (external factors that influenced teaching & learning) and the teachers' own beliefs, actions and intentions of using the OER in teaching. It can be foreseen that these elements, serving as guidelines for interpreting the data would be interrelated and internally consistent. However, they will be defined and understood in ways that would be complementary and not contradictory.

Data Collection Process

The ten purposively sampled respondents were from the group of 42 teachers who were introduced to the TESSA OER and trained to access, use and implement the strategies on their own in their classrooms. To explore how they used them, the respondents were encouraged to keep a reflective diary or journal, in which they were to record their learning experiences. Besides the reflective diary, brief visits were made to them during which short interviews lasting 10-15 minutes were conducted with their consent. Interviewees were assured of confidentiality and anonymity as names of schools would not be mentioned in the report. The interviews were tape-recorded with their permission for easy transcription. They were conducted in English in a conversational manner rather than a series of questions though there was a short semi-structured interview guide used by the researcher to guide the conversation. It needs to be mentioned that of the ten interviewees only 8 were available and ready during the visits and interviews. The other 2 could not honour the appointments as scheduled.

Amongst the variety of data collection methods, interview is one kind that fosters face-to-face interactions with a respondent. It facilitates an immediate follow-up for clarification and the discovery of any nuances in culture. It provides contextual information, facilitates cooperation and is useful for uncovering respondents' perspectives, though it could be prone to misinterpretations and ethical dilemmas. (Marshall and Rossman, 2006). Observation techniques were also used in collecting field notes on how teachers were teaching using the OERs.

Analysis of Data

A systematic format for analyzing the data was designed having the research questions and purpose in mind. Data analysis started as soon as the first data were collected. The responses were transcribed verbatim and thoroughly read through several times so that the data will be very familiar to the researcher. All transcripts were numbered. During the reading process, memos were written at the

margins of the transcripts to identify ideas and patterns emerging. When all data from interviewees had been obtained, the main key words and phrase were noted and used as codes for sorting and analyzing the data. This strategy helped in organizing the data into categories and then condensed under themes based on the research questions. At the same time, any unanticipated new ideas were noted for discussion since they could give some other insights to the study. Findings from the analysis were set for discussion. Pseudonyms have been used in identifying interviewees

Results and Discussion

These results are excerpts from interviews conducted during the visits to find out about their reflective thinking. It needs to be mentioned that in reality what teachers kept as reflective journals or diaries were just recordings of what they taught and how they taught and not an actual recordings of feelings, beliefs, self-evaluations, or what was learnt from the experiences and what changes will be effected if an opportunity was given. Enquiries about their journals revealed that they did not know how to write a proper reflective diary and would appreciate a brief training in it. This is in addition to a sample that was given to them before the exercise. As products from the University it was assumed that they had a knowledge of writing reflective papers.

Perceived value of using TESSA OER by Primary School Teachers in their classroom practices

Under this theme, the researcher sought to find out the perceived value of using the TESSA OER as posed in research question one. All interviewees indicated the great benefit that they have gained from the various strategies described in the OERs. They acknowledged the potential that the resources have in transforming their classroom environment. The following statements are samples from teachers:

They are very interesting and it's been designed in such a way that they ensure full participation in class or lessons. It has helped me in my teaching, at first I was teaching most of the lessons in abstract to the pupils and since I started using TESSA website I have been using real object in my teaching [Boakye]

I give them project work in groups and they do it together and come and present it in class. Pupils participate in class and even come out with new examples. [Gorden]

It's been very interesting to the extent that with Tessa model, it makes lesson more interesting and lively. So it is a place I visit often even on my phone and the rest.

it's interesting now the topic I'm teaching is 'Indiscipline'. I noticed that when a child misbehaves, they can easily rebuke the person and say that we watched the video show on indiscipline ... and it has brought me closer to them because when they have difficulties or problems, they come to me to seek for help or solutions [Ham].

The first one is interest, and this interest is lasting, right now if you go to my classroom and ask them how did we go about playing one game that we adopted from one TESSA resource ... It is popular with them, it keeps on and on; to stimulate and sometimes they will ask you, hello sir when will you do that activity we did last time again? I think it adds more knowledge to not only the children but me the teacher [Ruff].

Interestingly, almost all of them claim the TESSA OER have made their lesson presentations easier, classrooms livelier and more interesting or exciting and helped pupils to retain contents learned. It has to be acknowledged that the strategies are mainly activity based with active learning strategies such as games, songs, role-play drama, small group work and others. As children, these strategies would definitely be interesting to them and help them to grasp concepts quickly. As mentioned by some interviewees, the resources allow them to involve the children in lesson delivery, teach with real objects and not in abstract as they used to do. In terms of respondents reflective learning experiences, these can be related to Kolb's (1984) reflective observation and abstract conceptualization after the concrete experiences. Their self-evaluations of how they feel about their new classroom environments seem to be leading to action plans for improvement in their classroom practices. It is presumed that the new

learning situation is acceptable to these teachers and that they will make every effort to maintain such kinds of classroom environment.

Teachers Learning from their Reflections on the Use of TESSA OER

When asked how they (interviewees) are learning from their reflections, they had more to share in statements such as in the following:

You see sometimes I can teach today and after reflecting I can see that, what I have done could have been done in a more different way. So in my own view and my thinking is that, if good, ... but we should get Ghanaian episodes. So sometimes you have to rehearse many time too before using it in class. You have to rehearse more or less like a mock in classroom, how you'll would do it. One day I was rehearsing and my wife was laughing at me ... Reflective writing is also another issues, that people don't know how to write, what at all are they reflecting on? I think one of the TESSA materials that I received ... [Saleia]

Some of the activities in the TESSA might be quite lengthy, so I sometimes consider and select some of them considering my lesson period. And then personally in my own opinion, I just think that the games in the TESSA resources give different interest level in the classroom ... So this is what I normally do. It makes me improve on the one I have seen on Tessa. The model that people have used, I always try to improve on them. So this is what I normally do. One of the topics I have treated is the solar system and I used the idea in my class [Cindy].

Actually what I do is that, I go through the TESSA materials, read them and look at how it's been done elsewhere and then I follow the steps sometimes modify it and use it in preparing my lesson notes so I adopt and adapt them. For example, I use songs to arouse the interest of the pupils, to prepare their minds towards the lesson. I use songs which are related to the topic to draw their attention to it. I adopted it from the TESSA resources. [Magda]

Under this theme most interviewees responded positively indicating the learning experiences from their reflections on what they had accessed from the TESSA OER and their application in their lessons. Most of

them seemed to indicate that their reflections were leading them to improve upon what they had been doing and giving them clues to making the learning environment lively. Some indicated that they have resolved to employ alternative ways such as using videos and audio recordings to present their lessons. Others seemed to rehearse after reflecting on an adopted strategy to be sure that he/she gets it correct before implementing it in class. As mentioned in the literature, as adult teachers, they have been learning from experiences and their learning is based on assumptions which include: the need to know, readiness to learn and orientation to learning. Thus, their motivation to learn and the social contexts to learn have all influenced them in their classroom. This is indicative of the learning transformation elements that result in higher-order purposeful actions. These elements impacted on impulses, feelings and desires of all in the classroom.

The practices could be deduced as having conceptual underpinnings in Kolb and Gibbs learning cycles as discussed in the text. The two cycles indicate that learning is a process which starts with the learner's experiences, which when reflected upon lead to new generations of actions in new situations. In other words, connections are made between theory and practice and teachers in this study seemed to be making connections between what they have been doing and plan for new teaching situations. They seemed to be moving from abstract teaching to planning lessons that consider student learning needs. These teachers' continual learning could certainly strengthen their classroom practices since they were challenged to re-visit their own methods of teaching; to shift from the traditional teaching to more active-base methods.

Ways that Teachers have Collaborated with Others During the Use of the TESSA OER?

From interviewees experiences, it is assumed that as they learn and relearn, they will interact with their colleagues and share the new knowledge with them. This is what some of them had to say when asked to narrate how they have been 'spreading' the 'TESSA news.

I introduced the TESSA programme when I went to Ho (a town in Ghana) attending the GNAT (the Ghana National Association of Teachers] annual conference; I demonstrated it to the teachers and they were so happy. And I also taught them how to access the TESSA site and the other resources. Now they are happy with it. So now I'm more than a resource person. [Johnny]

...With my colleague teachers, I do speak to them about it and I've told them that if there is something they don't understand ... anything, I will be willing to help them. Most of them were not at the training. [Salei]

For the District competition, I took the lesson, from TESSA resources and gave it to him. He prepared the lesson for the District, I just supported him to come and observe it and it was wonderful we won the prize ... So sometimes you have to invite the teachers and refresh their minds I'm lucky that in my school they see me to be more or less a master teacher in mathematics. So they will come, sit behind in a demonstration lesson, they observe, and then learn from me and each other. [Ruff]

It can be gathered from these examples that teachers trained at the workshop are sharing the new knowledge with colleague teachers. More than half the group members interviewed indicated that they have been networking and sharing the new found strategies and website with many colleagues in the profession. One interviewee indicated that he usually demonstrates how one can access information on any topic from the internet and the website (www.tessafrica.net). He had the opportunity and demonstrated the use of it to other teachers at a national delegate conference of the Ghana National Association of Teachers (GNAT). As mentioned, he is now seen as a resource person for TESSA. There are school-based and District-based training from time to time and such gatherings seem to be opportunities for networking and exchange of ideas.

Similarly, as a Mathematics teacher narrated, he is considered as a master teacher in Mathematics in the District and thus he supports other mathematics teachers by demonstration lessons from school to school. In his submission he indicated using TESSA OER most of the time. This is evident that reflective learning promotes professional collaboration characterized by collegiality & reciprocity, shared repertoire and build up of mutual relationships. This finding is supported in the literature that reflective learning is a continuous process not an outcome.

Challenges Teachers Encounter as they Reflect and Keep Reflective Journals

In spite of the usefulness that these problems are common but they still have to be mentioned. For instance, some interviewees indicated that:

Yeah, sometimes it's difficult, the other time I was trying to use the internet and as I started browsing, it just went off and the children were disappointed. Again, another time too I was using the audio in class and as I was playing the programme on environmental degradation. It got to a time that the kids were excited then the internet cut off ... (Johnny)

This is an issue prevalent in most activities carried out using the internet or being dependent of the power system.

I think the language of some of the materials and the activities ... because it is from other country's activity err ---- that they have adopted are local ones and I was trying to get it more in tune with my children but sometimes its difficult. [Cindy]

In the view of a few interviewees, there were songs and games that were localized or contextualized which made it difficult for them to adopt and adapt though they realized they could be helpful. They

were of the opinion that if resources are being shared then generic language and resources should be used. For example, some games were interesting but because of the language they could not be of help to them even when translated to the Ghanaian language. This made a teacher to comment that he seems not to have seen any Ghanaian play at the site:

On the TESSA OER, there are no Ghanaian plays and our scenarios are not much on the TESSA site, in the Ghanaian context should think that we also have something unique that we do in Ghana, that other countries can also copy and adapt in their countries. Again, when you go to the net sometimes you wonder whether the TESSA resource are updated monthly or annually or it is just that a fixed thing that we have all gotten it down in our homes and no updating, and keeps changing –everyday? [Ruff]

The above comment raises an issue that is worth considering. The question is: when resources are developed do they undergo continuous updating or is it that once they are uploaded they are not updated again? On the other hand, it could be argued that the resources are just guides to help teachers develop their own localized models. This implies that reflection and keeping of learning journals should be encouraged among teachers to browse for more resources and become independent learners since one source of information cannot be conclusive on any subject. Again, teachers complained about lack of requisite skill & knowledge in reflective writing & in keeping reflective journals. Reflective writing is also another issue that people do not know how to 'write'. Lack of time due to workload to constantly reflect and write in journal was an issue raised by interviewees.

Conclusion and Recommendations

An interesting finding in this study is that basic school teachers consider OER, particularly the TESSA OER as user-friendly, influencing their classroom practices and methods, which can greatly help them in their work. They have indicated that this package can help them produce better learning environments. Kolb

and Gibbs experiential levels of learning cycles have also provided useful underpinnings for understanding learning during reflections. This was evident in teachers submissions of looking forward to planning interest and exciting environments for the learners using games, songs, videos and audios, which are strategies that children enjoy getting involve. Again, these reflections have shown that the teachers in the study have started to make connections between what they know, what the needs of the learners were and how to teach to meet those needs. In a similar vein, they started networking and making connections with their colleagues sharing ideas in a mutual manner. They realized that by talking to their colleague teachers and working collaboratively with them as some did, they would build a better community of practice in the profession. Continuous reflection on their teaching and modifying the strategies could help improve their students' learning outcomes.

However, the skill of reflecting and writing journals after reflection is what these teacher seem to lack. It appears the critical factor that needs to be addressed is reflective writing skills of teachers. This is not different from the regular pre-service teachers who are often being guided to write their reflective practice papers. The issue is that these teachers seemed not to know how and what to capture when it relates to the outcomes of the reflections; how to structure what to improve upon. It seems appropriate to provide guidelines with prompt questions and sample journals to serve as guides for them. It will also be necessary to refresh their minds and skills with exercises in reflective learning and writing skills and not to assume that they have prior knowledge of doing so. This study has highlighted the need for teacher education programmes to focus on emphasizing teachers' reflective learning and writing as well as keeping journals/diaries. This technique could help them to develop skills that cater for improvement in their classrooms and meeting the needs of their learners. The study has further thrown light on the need for teachers to collaborate and network among themselves as they come across new approaches to teaching and learning to improve their practice. It has shown that with the support of teacher

education institutions, in-service teachers' practices could be influenced with new pedagogies for the betterment of students' learning.

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REVISITING THE IMPLEMENTATION OF THE PLANO NACIONAL DE FORMAÇÃO DE PROFESSORES DE EDUCAÇÃO BÁSICA – PARFOR: THE CHALLENGE OF LEADING TEACHER EDUCATION TOWARDS EXCELLENCE AND QUALITY
(MARTINS DE ALMEIDA NOGUEIRA)

1- Foreword

In this new approach to this subject, we focus again on the key national policy in teacher education that was launched in 2007. The question under debate has to do with the context of the problem linking the training of teachers and the actual demands of an efficient performance. We take into consideration the quantitative expansion of teachers due to the expansion of educational coverage in Brazil, which became a very relevant goal since the proceedings of the Jomtien Conference, in 1990, and to the continuing demand for lifelong education.

Our starting point is the Programme of Accelerated Development (PAC) launched by the Federal Government in 2007, which sets collective goals and commitments for 2007-2015-2022. In the face of which the National Programme of Educational Development – PDE, Federal Decree no. 6094/2007, integrated in the National Plan for Social Development and Poverty Reduction, was elaborated and the National Plan for the Training of Basic Education Teachers (Plano Nacional de Formação de Professores de Educação Básica - PARFOR) was proposed.

The purpose of this paper is to revisit the panorama of the 2007 educational policy which aimed at stimulating the State and civil society in the development of education quality in the context of teacher preparation. Once again we argue that the PARFOR is assessed and examined as a governmental TE policy to be confronted with the long lasting problem of qualifying teachers with most/all the competencies to fulfill the tasks of the teaching profession. We understand that since 2007 extra steps have been taken by the federal government to ensure the achievement of the goal of high standards in education and the national plan can be numbered as the number one strategy, if not the main one, to perform the task of the most important agent in improving TE standards of quality.

The PARFOR was elaborated with the purpose of equipping 330.000 teachers with qualifications for their occupation along the years of 2009, 2010 and 2011. This number represented 50% of the Ministry of Education 2007 Census- EDUCACENSO demand and about 85% of the demand for the year 2015, as per UNESCO Statistic Institute – UIS. We emphasize that in September 2011, two years after the launching of the plan, during the I National Meeting of the PARFOR, the Minister of Education stated that amongst the 600 thousand teachers that were in public schools classrooms with no qualification, 380 thousands of them were enrolled in graduation courses (SECOM, 2011). This assertive may lead us to the conclusion that these data indicate the attainment of the main goal of the plan, an assertive that is to be defeated by the numbers that will be presented later.

2- Introduction

The theme of the present study justifies itself, from our point of view, due to its relevance in the set of governmental public policies, placed, as we see it, in a higher level as a research field in government guidelines designed to ensure the effectiveness of the social right expressed as *right to education* (Brazil Federal Constitution, 1988, art. 6), a social right of all citizens and a duty of the State. This right is reinforced in article 5th of the Education Act 1996 (Lei de Diretrizes e Bases da Educação Nacional - LDBEN), Education Act of 1996, in which the access to fundamental education (elementary and low secondary levels-eight years of compulsory schooling) is defined as a public subjective right. So, in 1996, the federal government endorsed education as a social right in compliance with the 1988 Federal Constitution, as well as with the contents of the document “Education for All” signed in Jomtien, in 1990. Compulsory and free public education was adopted as one of the guidelines to amplify and consolidate educational opportunities towards the universal access to elementary education. Thus, the right to education, currently configured in the large spectrum of basic education, translated itself into a priority political action set by the State.

Preceding the Education Act of 1996, the FUNDEF (Fundo de Manutenção e Desenvolvimento do Ensino Fundamental e Valorização do Magistério) was established. It was a federal government financial plan elaborated in order to reconcile the requirements of the expansion of the educational system with the available resources in 1996, with regards to eight years of compulsory education. Therefore, the priority was defined in terms of objectives fixed in relation to compulsory education. The plan prevailed in the period of 1996-2002, which corresponds to the two presidential mandates of President Fernando Henrique Cardoso.

In January 2001, the National Plan of Education (PNE – Plano Nacional de Educação) established that the states, the Federal District and municipalities should elaborate their corresponding decennial plans. The Plan identified the qualification of basic education teachers as one of PNE’s greatest priorities, enforcing the Public Power task to dedicate peculiar attention to this problem. However, it must be taken into account that Carnoy (2003) argues that it is necessary to consider the limits of the power of the State, a matter revealed by the current ideological system within our globalized world, and to the capacity of the State to manage education with efficacy, and the implicit obligation to reform the management of the system. It is worth to add that the teachers are to be aware of their role in improving the quality of teaching and this put into evidence the problem of initial and continuing training of teachers, the agents of the pedagogical action (NOGUEIRA, MOURA, 2011).

Persuaded by Carnoy’s reasoning, we interrogate once again: what are the new alternatives the academic community must search in face of the complexity identified in the process of teacher education, imbricated in the most general conditions of the interaction between the political, the economic and the education systems? Which new alternatives should the academic world find in face of the legal dispositions concerning teacher education? How should it position itself as far as the PARFOR is concerned?

In the construction of alternatives, we meet today the afore mentioned challenges: the scenario designed by the democratization process of the country initiated in the years 1980, which brought the new Magna Carta in 1988; the state constitutions in 1989; the organic municipal laws in 1990; the Statute for the Children and Adolescents – ECA, in 1990; the Education Act of 1996, the tensions inherited by the civil society and the government; and the confrontations and difficulties experienced in the process of implementing educational policies, and the fulfillment of the established goals. It

must be stressed that the political system influences the educational system, but the relationship between the two is a reciprocal one. Therefore, this linkage may be inherent in the educative process itself and it builds questions concerning the desired outcomes and goals of teacher education quality in the PARFOR.

With this brief introduction we wish to stress once again the nature of the trends of the educational policy aimed at stimulating all partners – government and civil society – in the development of education quality in the context of teacher education. A core premise is that societies and governments are able to conduct social change, for instance, towards better education for the whole population. The presentation provides the reader with a description of the policy and the contextual factors that contributed to the formulation of the policy and throughout the text the 2007 National Plan for the Training of Basic Education Teachers (Plano Nacional de Formação de Professores de Educação Básica – PARFOR) is assessed in terms of examining its political feasibility.

In the scope of the study we concentrated on the political guidelines and actions developed at the State University of Norte Fluminense Darcy Ribeiro-UENF, which stands in the State of Rio de Janeiro, in 2009-2011.

3- Starting from the challenge of better teacher education

Before focusing at UENF, it must be said that it is our intention to critically examine the implementation of the plan, but it is clear to us that the implementation of plans takes time, and that the attainment of goals requires even longer time. We add that (NOGUEIRA, MOURA, 2011)

It is debatable whether this policy is adequate to solve the problem once educational policies are also confronted with high rates of students' failure, dropouts and repetition which have been threatening their effects and efficiency as well as the quality of the educational system for some decades.

On the other hand, research issues show that every year less young students choose professorship as a career and more teachers renounce to teach, a problem getting worse since the years 1990s. The country faces a significant lack of teachers in the public system, and this affects the quality of teaching and weakens the right to education, a social right stated by the 1988 Federal Constitution (NOGUEIRA, GOMES, GRISPUN, 2009).

However, we are aware that TE is a complex system and its corresponding actions do not always succeed. The Inter-American Development Bank acknowledges that in the political field there are no general formulas to be applied in each and every circumstance, and the effectiveness of the policies will reflect the way they were discussed, approved and implemented (IDEA, 2005).

In 2009, the PARFOR conjoined the Ministry of Education (MEC), the Public Institutions of Higher Education (IPES) and the Chancery of Education of States and Municipal Districts in search of implementing actions with views to grant qualification to those teachers in the public network who have not received specific training in the respective professional areas, as well as those teachers who are willing to have a second licensure.

In this new approach to the subject we have been studying, we think the access to the programme must be pointed out once again, mainly because it doesn't obey to the usual rules of admission to

higher education institutions. The access is granted to each and every teacher who works in public schools, respected the limit of vacancies established by the institutions. Upon completing a pre-enrolment on the internet portal of the Ministry of Education, applicants indicate their provenance as well as professional and academic experience. Once this information is furnished, the application is validated or not. Only after this will the teacher have his enrolment authorized in the chosen course. The candidates come from a teaching background of at least three years as required.

Starting from this reasoning about the implementation of the PARFOR, we make an approach to the State of Rio de Janeiro in this scenario. According to data informed by the Ministry of Education, 1,266,154 students were enrolled in the modalities of regular schooling, education for the disabled and education of youngsters and adults in RJ (MEC/INEP/SEEDUC, 2009). It must be emphasized that a great effort was made in order to pursue the objective of fostering the public school teachers' qualification, encompassing the 55.098 teachers presently working in a network of 2132 state basic education public schools (IBGE, 2009).

We highlight that the low quality indicators in the public education system of the State of Rio de Janeiro, particularly in the region where UENF is inserted, are alarming. In 2010, the RJ was one of the five states which results were below the national average in the Development of Basic Education Indices (Índice de Desenvolvimento da Educação Básica - IDEB), another indicator that measures the school performance in all items referred to quality of education.

The State of Rio de Janeiro - RJ stands in the 10th position out of twenty seven states of the ranking of PISA evaluation in Brazil, which stood in the 53rd position among sixty five countries in 2009. It must be pointed out that there has been an improvement since ten years ago, when the Brazilian educational system was first appraised by the PISA. However, this improvement is far behind the desirable performance and we must point out that it that it is necessary to reinforce that the efficient implementation of educational changes requires more than political will and the availability of financial resources: without teachers prepared to carry out the improvement of education quality there can be little hope of positive results. It must be said that PISA evaluation may reflect the final consequences of the state of basic education in our country, after successive failures of the policies implemented in the last few decades.

The State of Rio de Janeiro accounts for four federal universities and three state universities, which, in compliance with their immediate possibilities and according to the decision subscribed by their faculties, offered a number of 136 vacancies for the second semester of 2009, in different licensure courses. It is relevant to state that there were fifteen TE courses in these seven institutions, five of them in the curricula of the State University of Norte Fluminense Darcy Ribeiro – UENF.

Before describing the experience at UENF, we present hereby some data that challenges the real success of the implemented action in terms of an effective training of teachers for the elementary level, especially in respect to the solution to the historical problem of shortage of teachers for the disciplines of chemistry, physics, mathematics and biology at the public secondary school. According to the director of the Elementary Presence Education (Ministry of Education and Culture – MEC) who spoke at the I PARFOR National Meeting in 2011, in the period of 2009-2011, a total of 159,229 vacancies have been offered for the licensure courses of eighty six public institutions involved, which resulted in 1,421 classes implemented and 50,259 enrollments, numbers way beyond the targets established by the Federal Government through PARFOR, information corroborated in studies

developed by the MEC itself (MEC/INEP, 2011). In 2011, the ratio enrolment/vacancies reached 41.88%, the highest since 2009, yet below 50%.

The implementation and development of the program is backed by the Resolution 48 of September 4, 2009, issued by the Deliberative Council of the National Fund of Education Development, which defines the parameters and guidelines for the concession and payment of grants and scholarships to those working in licensure courses, emphasizing, among other subjects, the need and relevance of promoting the initial and lifelong training of teachers from elementary grades. By doing so, the Federal Government provides financial support to the institutions that subscribed to PARFOR, which, in turn, must promote the physical infrastructure, supplying administrative staff and selecting the faculty members.

In face of these data, it is appropriate to make a small digression. According to the proposal of the PARFOR, the licensure courses being offered by public institutions of higher education would begin to receive students meeting a specific criterion of having previous experience in teaching, a status earned by entering the public service by means of also public selection exams, among other requirements. The student-teachers enrolled in the courses with the expectation of practical gains: being professionals formed by the Normal School, the expectation is that now they become eligible to a better salary.

However, in spite of the most favorable perspective of a better remuneration, the numbers seem to indicate a reduced interest from the part of the professionals of teaching, which drives our consideration to the questions that involve professorship: the choice of the teacher's profession; the initial preparation and the professional performance; questions to be addressed in the evaluation of PARFOR *vis-à-vis* the enormous complexity of the problem of qualifying teachers already in service and the necessity of facing the challenge with strategic systematic actions, and not with broken up politics.

Returning to the text of the afore-mentioned speech, we note that it does not set out the distribution of enrolment by area of graduation. However, the shortage of teachers in the areas of the sciences of nature and mathematics, a recurrent fact in the last decades, had already lead the authors of the *Report on Teachers Shortage in the Secondary Education: Structural and Emergency Measures* (MEC/CNE, 2004), to present, in the item "Solutions and Propositions", the recommendation of priority for the degree courses in Sciences of the Nature and Mathematics, thus placing them in degree of precedence.

4- Implementation of the PARFOR at UENF

In fact, UENF, as a university bearing an expressive vocation for the education of teachers – we currently have five courses for teaching training created over the last twelve years – coordinates with the regional demands of development. There is an annual offer of 160 vacancies (190 when we consider the additional places that came with the introduction of the PARFOR), in the set of graduation courses.

Now, the first problem puts itself in evidence: offer of places that seemed sufficient to cover part of the teachers' demand vanishes throughout the academic experience. We can illustrate with the example of UENF's licensure course in physics, which since its creation in 1999 up to 2007 received 196 enrolled students, but only managed to graduate 85, which corresponds to an evasion rate of

55,73%. The licensure course in chemistry shows a picture even more distressful: of the 240 enrolment brought into effect in the same period, 101 were graduated, which corresponds to a percentage of 42,08%. This represents an evasion rate of 57,92%. So, between 1999 and 2007, although UENF has made available 1.098 enrolment, only 565 students finished the licensure course introduced in 1999, which corresponds to 51,45%.

The PARFOR was created with the strict objective to ensure that the teachers in service in the public network of elementary education obtain the formation demanded by the Education Act of 1996 (Lei de Diretrizes e Bases da Educação Nacional – LDBEN), through the introduction of special, exclusive classrooms for the teachers in service. UENF also tried to adapt the courses to the tough reality witnessed today by the public schools in the Northern region of the state of Rio de Janeiro. The reality evidenced in the region does not leave room for doubt: in addition to the problem of the insufficiency of teachers, there is also the problem of delivering them an appropriate formation.

The introduction of the Plan demanded in its pedagogic project an attentive glance at this process. It immediately outlines a different picture of what it allowed a first approximation to suppose. When the applications were opened for the courses in the modality PARFOR, the demand for the first complete licensure was wider than that of a second, contrasting with what we initially supposed was going to take place. The first offer of a special group, in 2009, for the licensure course in pedagogy, for instance, was designed so to receive graduated teachers of the public system, thus needing a pedagogical preparation to legitimate their teaching activity. In face of the biggest demand for the first licensure course, effective in 2010 the nature of the course was re-defined.

The politics of PARFOR aim to qualify and / or re-qualify the teachers in service. With the assumption that there is a basic problem surrounding teachers education (insufficient personnel, reason for the shortage of 330 thousand vacancies today in Brazil), the problem of lack of qualified teaching professionals has been appraised principally from the quantitative perspective, albeit the political action is based on the principle of the quality of the education and is governed by the right to education, one of the social rights established in the Federal Constitution. In our study we realized that the problem of quantitative order remains a challenge. We could identify, for example, a conflicting relationship between the offer of vacancies and the effective filling out of enrolment.

The entry numbers in 2009/2 and 2010/1 indicate that, in the first mentioned period, the eighty five vacancies distributed in five licensure courses have not been filled out; of the fifty three actually entered, only sixteen remained. As for the second period, there was an offer of 100 vacancies, but only six students were enrolled and exclusively in the licensure course in pedagogy. This picture has remained unchanged throughout the years; as evidenced by the data raised, there is an extremely reduced or non-existent number of students in the licensure courses, with the exception of the licensure in pedagogy, which received in 2012 the total of fifty eight students, contrasting with the nine students distributed in the other available courses. Considering that during the period of implementation of PARFOR, four licensure courses (physics, chemistry, biology and mathematics) received only thirty nine enrolments, of which only nine students currently remained, we end with an evasion rate of 76,93%.

Licensure	<i>Enrolment</i>	<i>Active students in 2012/1</i>
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courses	2009 / 02	2010 / 01	2010 / 02	2011 / 01	2011 / 02	2012 / 01	2009 / 02	2010 / 01	2010 / 02	2011 / 01	2011 / 02	2012 / 01	Total
Physics	9	0	0	1	0	1	1	0	0	0	0	1	2
Mathematics	10	0	0	1	0	1	3	0	0	0	0	1	4
Chemistry	7	0	0	1	0	1	0	0	0	0	0	1	1
Biology	2	0	0	3	0	2	0	0	0	0	0	2	2
Pedagogy	25	6	29	34	0	0	12	3	17	26	0	0	58

Table 1: Entry of students through PARFOR.

We can assume that this framework is not very different from the scenario in the other institutions involved in the program, which possibly also show results far below from the targets set by MEC.

The experience of implementing the PARFOR at UENF leads us to reflect about the expansion of the public school system and the consequent demand for increasing the number of teachers, an issue that has accelerated in the 1990s, when effective action was initiated with the purpose of achieving universal enrollment in basic education. This reflection includes, among other subjects, the low percentage of graduate teachers, which is part of the problem of shortage of 235 000 high school teachers in public schools, as stated in the *Report on Teachers Shortage in the Secondary Education: Structural and Emergency Measures* (MEC / CNE / CEB, 2007).

Illustrating the issue of evasion of students in undergraduate programs, the general enrollment period (see Table 2) reports the total enrollment for the degree course at UENF, excluding PARFOR, which had not yet been implemented in the period. Note that only the period of 1999-2007 was considered, for it would be enough to account for the completion of the courses including the percentage.

LICENSURE	1999	2000	2001	2002	2003	2004	2005	2006	2007	Enrolment	Licensure	%
Physics	1	27	31	29	19	36	29	15	9	196	85	43,37
Chemistry	-	29	34	31	25	34	37	27	23	240	101	42,08

Mathematics	32	39	33	32	13	40	36	17	11	253	130	51,38
Biology	40	26	46	41	48	64	42	29	35	371	222	59,84
Pedagogy	-	-	-	-	4	5	11	8	6	34	27	79,41
Total										1.094	565	51,64

Table 2: General framework of enrolments in licensure courses at UENF

When we look at the high rate of evasion in the training courses for teachers, we notice that only the licensures in biology and pedagogy are a little above the national average. The others are very approximate, as the report mentioned. This is an issue that, associated with the progressive reduction in the interest of young people by the teaching career, has shaped both national and international agendas in the political arena, in search for decisions that cope with the complex challenges faced by the educational system.

5- Some final considerations

Teacher education programs in the PARFOR modality were hosted at UENF rather enthusiastically in 2009. Our teacher training project was built within the same principle that built the University itself: a force to leverage regional development.

Now it is left for the University the task of reconciling their own interests with more comprehensive needs emanating from the outside. In the case of education, these needs that emanate from ministerial bodies in their role of establishing policies through which the solutions to the problems that arise can be referred.

We identify, however, an underlying problem regarding teacher training on PARFOR, and this problem has to do with the quantitative character of the program. This study addresses the need of an effective policy of numerical expansion (in both training and recruitment) of basic education teachers. Despite being a case study, because it is restricted to the experience of UENF, we found some indications that PARFOR, due to its emergency character and the data gathered from the experience at the national level, will not achieve the targets either for the short or the medium term.

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1.0 Introduction

Development entails transforming human life. The indicators of development are; low infant mortality rate and low maternal mortality. Development is measured in terms of access to basic services like; education, information, security, and health. The current discourse regards education as fundamental to sustainable development; true development cannot exist outside of a supportive education curricular. In its generic sense, education is all those processes of learning which enable a person or society to acquire skills, behaviours, values, and knowledge which society considers necessary to live a happy and successful life. Education experiences are categorized as informal, non-formal and formal. These categories are differentiated according to the degree of structuring which they display. Informal education is completely unstructured, it refers to learning experiences which take place unconsciously and naturally. Non-formal education is learning experience which is moderately structured (Barker, 1996). Formal education is carefully organized into programmes, syllabuses and timetables. It is implemented in formal institutions like schools, colleges or universities. In formal education, teacher education is the medium for transmitting skills, behaviours, values, and knowledge which are considered necessary to live a happy and successful life. In this discussion a teacher is an individual who has successfully completed a teacher education programme. Teacher education is the formal learning experience that teachers undergo in their preparation to become qualified agents of development (transmitters of knowledge and skills to society). This discourse examines the nexus between the system that produces teachers (teacher education) and development in Africa.

1.1 Education for Development

Three models of development are common in the development discourse. These are basic needs, economic and human development. The needs model of measuring level of development focuses on provision of food, water, shelter, education, information and security. According to Maslow's hierarchy of needs, this category of needs is basic to human survival. The second model (economic) emphasizes the need to create wealth for a community or society. Without wealth, it is difficult for people to purchase the basic needs. The third model is human development. It focuses on improving the productive capacity of an individual. This is where schools and teacher education intersect with development. True development considers the effect of human activity on our environment – the only habitat that humans have. Development refines the socio-economic and political outlook of our society; it commands the education curricular to change in responds to changes in the local and international scene. Useful education is that which is of good quality (Chambers, 1983) and quality education is measured in terms of its ability to attend to the developmental challenges facing our world.

During the colonial era, quality education in Africa was one that promoted the development of white people living in the continent. The effectiveness of the education system and curricular were measured in terms of its ability to create wealth for whites. The exploitative education of the colonial era cannot be considered of good quality in the new political dispensation. Rather, quality education is one that champions the developmental needs of previously marginalized parts of our society. According to Chimhowu, Manjengwa and Feresu (2010), quality education is a tool for fighting poverty, building democracies, and fostering peace in the continent. The above sentiments point to the fluidity of quality education; which changes shape and direction depending on situations and period. In the new political dispensation in Africa, quality education thrives to open new avenues and new consciousness in Africans. Quality education empowers Africans to open their pathways to self-actualization.

1.2 Teacher Education influences Development

Teachers' role in Africa's development can be viewed from three main stand points. First and foremost, they are leaders because of the special place they occupy in communities (Zvobgo, 1986). Second, teachers have a special responsibility to make towards the mental and physical development of all learners through instruction, professional guidance and training in formal and informal settings. Third, teachers have an important role to play in the overall development of communities in which they operate; they participate in such programmes as adult literacy, community development and health education. Viewed from this broad perspective, teachers are agents for social change. In playing their role, the need to be skilled to deal with the socio-economic and cultural diversities that characterise our communities. In this regard, Gumbo (2008) argues that teacher education should be viewed as a pervasive element which must be integrated into all developmental efforts.

As mentioned earlier on, early colonial work in Africa was exploitative; it was centred on creating wealth for whites and their home countries. This was to be achieved in a geo-social setting whose education system and development path did not have a capitalistic orientation (Gumbo 2008; Barker 1996). The indigenous African education systems and curricular were ignored. This impacted negatively on African people's developmental path. The continent's development lags far behind that of Europe and America. The education system in Africa is not only less sophisticated but is struggling to produce a 'perfect' teacher for the continent. Zvobgo (1986) laments that in most countries in Africa, teachers are, to say the least, unprepared and unwilling to serve in poorer parts of the continent.

Powerful economies are supported by a powerful education curricular and weak economies require a powerful education curricular to develop. The Republic of Guinea has a third of the world's recoverable reserves of high quality bauxite and has the world's largest untapped reserves of iron ore. Yet the country is one of the poorest in the world. In fact, the economy Guinea is ranked 156th on the UNDP Development Index (Hamann, Woolman and Sprague, 2008). The education system and curricular in the country should be powered/reengineered to exploit the natural resources for the benefit of the people of Ghana.

Development influences the quality and quantity of infrastructure in schools, number of education institutions, teaching equipment, and support given by the state. For instance, in South Africa the best schools in the country are found in developed communities such as towns and cities. Such schools prepare children to occupy influential positions in commerce and industry and in the public sector (Jean, 2009). The schools are a preserve of children from the upper economic strata of our society. School fees that are levied by these schools fall far above the reach of poor parents. The system replicates what existed during the colonial rule in Africa where the best schools were a preserve of the whites.

Segregation was based on skin colour; but now it is based on social class. The quality of education and infrastructure in these schools is far superior to that which is found in rural communities. Schools located in poorer communities are a preserve of poor children; no white people send their children to school in poor communities. Government Ministers and other wealthy send their children to elitist schools. The situation above replicates itself throughout Africa.

According to Zvobgo (1986), no system of education can function effectively without a sound and well-planned teacher education curricular. The quality of the teacher education system operating in any society can be measured or seen in the teachers it produces. A good teacher education system churns out teachers who can skillfully lead African communities to development. Teacher education curricular should have practical components like woodwork, metalwork, fashion and fabrics and agriculture.

According to Booker T. Washington in Siyakwazi (2012), the education curricular should appeal to the heart, mind and hands of learners. The curriculum in most of our schools tend to ignore Booker T Washington's principles. It is not unusual to find high school students with distinctions in Agriculture at 'O' level failing to make use of the skills acquired at school to improve agriculture productivity even in cases where the empowerment programme has availed the necessary input. Development that fails to influence education in a positive ways tends to create discord in the education-development environment. Yet, Zvobgo (1986) warns that a development process that fails to synchronize the relationship between education and development is bound to fail. Every development process calls for refined of skills, attitudes and knowledge.

The teacher education curriculum should have an examinable Module on entrepreneurial skills development. Every child from primary school to university should be exposed to the module. This way, Africa's education curricular will be able to produce job creators rather than job seekers. A sustainable teacher education curriculum should also aim to effect changes in our environmental order by attending to such issues like climate change, waste management, environmental degradation, communication, and gender.

1.3 Teacher education and gender sensitization

Women constitute 60 percent of people in Africa, and yet absolute poverty and underdevelopment is most rampant among them. According to Pauli (2000), over the past two decades, the number of women living in absolute conditions has risen by 50 percent compared to 30 percent for men. The above statistic shows that the feminization of poverty is growing in Africa. Africa needs to learn from the Panama disaster; during the military rule of Presidents Omar Torrijos and Manuel Noriega, the Civil Codes made divorce illegal and married women's property subject to control by their husbands. The Penal Code made rape and abduction a matter of family 'honour' rather than making it a crime against women.

The poverty among women is closely linked to their poor access to education. Without a sound education base, the development of women is compromised. The feminization of poverty in Africa is also a result of gender bias, which prevents women from obtaining the education, training and legal status they need to escape poverty. In most parts of Africa, women's economic activity dominates the non-wage economy, either as unpaid work for household subsistence, or as paid work in the informal sector. Lacking education and skills, women settle for badly paying jobs. Women are especially vulnerable to the impact of economic restructuring, both because they hold a significant share of paid labour and because of the peculiarities of women's participation in the job market.

Underlying the feminization of poverty of women in Africa is the high rate of women unemployment, resulting from persistence of labour market discrimination, lack of education and training and the persistence of cultural myths about suitability for women. Teacher education should encourage research on women and development. According to Branzei and Peneycad, despite increasing research on women empowerment in Tanzania, compared to Kenya and Ethiopia, there is limited understanding of which policies (teacher education) resources and capabilities mattered most (Hamann, Woolman and Sprague, 2008).

In many African states, most young women attend primary and secondary education and few proceed to university. These gender inequalities require strong advocates and formal education is one such. The teacher education curricular in Africa should seek to eradicate these gender biases in our society. Women are just as good as men. In fact, women are more tenacious and patient than men in learning skills as well as applying them to jobs.

Africa could also learn from the success story of Panama, where after 1989, women are empowered to take up the do-it-yourself jobs in the construction industry were subjected to a teaching programme that empowered them with skills and education. With adequate education and training, women are more likely to raise income for their families. Presently in most African states, credit and finance policies greatly affect women's access to credit, while pricing policies affect the value of their products. An agenda for the promotion of economic empowerment of women should be based on the principle of social justice that addresses women's livelihood needs in terms of their access to and control over economic resources.

Our teacher education curricular is the vehicle for empowering women in the midst of a men-dominated society. The deployment of learners to subject areas at all levels should also be gender sensitive. One university in Zimbabwe is championing such a curricular. All students are exposed to a compulsory module called Gender Studies. Females, who do not qualify to enroll in Science, are allowed to undergo an 8 months bridging course before they are admitted into a degree programme.

1.4 Teacher education and economic development of Africa

Education is one of the most fundamental tools for meaningful and successful socio-economic development. In some African countries, education is not performing well in this area. According to Trialogue (2008), South African education is not yet creating a meaningful opportunities for disadvantaged learners and to produce the skills that are required by the economy. The observation above reflects badly on the teacher education system and curricular of the country. The major attack against the teacher education in South Africa is that the teachers are inadequately trained. The weakness of the teacher education system and curricular are reflected in poor literacy rates among Africans in South Africa, which is a shadow of the apartheid teacher education curricular. The teacher education curricular in the country needs a face lift so that it produces graduates that are desirable in the new democratic South Africa. However, the government alone may not be able to meet the needs of the teacher education in the country. The corporate world should empower the teacher education with financial and technological support required to produce a new generation of teachers for the economies in the country. According to Trialogue (2008), more than any other sector in South Africa, the education system requires systemic support. Popular areas of support of teacher training include infrastructure and technology development.

1.5 Moderators of the nexus between teacher education and development in Africa

There are several moderators of the nexus between teacher education and development in Africa; and these include social policy, HIV/AIDS, economics, politics, technology, the legal environment, and armed conflict. This section discusses how social policy, pandemics and politics moderate the nexus between teacher education and development.

1.5.1 Social Policy

Social policy is one of the factors that moderate the link between teacher education and development. In colonial Africa, the education landscape was characterized by inequality of education and development opportunities between the European settlers and their African counterparts. Education was compulsory for all Whites of school-going age. The schools had the best-trained teachers, a strong teacher-pupil ratio, and the latest teaching-learning technology. Tuition was free, schools received liberal financial support from the state and the curriculum was designed to produce leaders for industry and government. The social policy of the settlers allowed Africans to suffer deprivation in education. In Tanzania, the British and the Germans established laws and regulations which stifled the expansion of education of the indigenous populations (Robb, 2002). The legal provisions resulted in income poverty for the Africans, which also made it difficult for them to afford competitive education.

In Zimbabwe, South Africa and many other parts in the continent, the education system and curricular for the Africans was underfunded and the teachers ill-qualified. The education system and curricular were tailored to produce semi-skilled workers who would be 'hewers of wood and drawers of water' for European masters. The education system was based on Aristotle's philosophy of a 'slave education' that emphasized the teaching of basic menial skills (Maphosa, Kujinga and Chingarande, 2007). The teacher education curricular was meant to prepare Africans to serve the European masters efficiently. Academic subjects were deliberately played down on the excuse that such subjects in the curriculum would produce 'educated vagabonds' (Zvobgo 1986). The disparity in the education curriculum and development opportunities between white communities and black communities in Africa forced nationalist leaders in the continent to believe that unseating of colonial administrations would lead to prosperity of the African people. Hence Nkrumah's (1965) motto, "seek ye first the political freedom, and all things shall be added unto you." The entire continent is now politically liberated. It is time for Africa to fulfill the dream of Kwame Nkrumah. Our teacher education curricular should be transformed in order to reverse the adverse effects of the colonial education on Africa's development.

1.5.2 The HIV/AIDS Pandemic

Pandemics such as HIV/AIDS do moderate the link between education and development. The pandemic is associated with poverty and underdevelopment. It is the most poorest communities that are more likely to engage in risky behaviour. No wonder why Thabo Mbeki argued that HIV/AIDS is a disease of the poor (Matunhu, 2012).

The effect of HIV/AIDS on poverty is that it depletes savings and investment- which are key aspects of development. It robs communities of teachers and parents leaving children as young as nine years old looking after their siblings (Matunhu, 2012). The cost of health care and funeral expenses often erode community savings and livestock. According to Guerny's study, medical treatment and mourning costs together exceed three times the average annual income, creating long term consequences for Africa (Guerny, 2002). Because of the above factors, poverty is both intergenerational and intergenerational. Africa's teacher education curriculum should be determined to eradicate HIV/AIDS in the continent.

1.5.3 Political conflicts

Teacher education and development are moderated by political conflicts. In Zimbabwe, education and development gains were reversed by the political polarization between the Movement for Democratic Movement and the ruling ZANU PF. There was an unprecedented brain-drain both in terms of numbers and quality of human resources from the teacher education institutions. Teacher output from colleges and universities was compromised. The volatility of the political environment affected the training of teachers impacted negatively on teacher education (Chimhowu, Feresu and Manjengwa 2010). Huge shortages of science teachers are still haunting the ministry as neighbouring countries like South Africa continue to attract Mathematics and Science teachers from Zimbabwe.

In the Democratic Republic of Congo, teacher education and indeed development is among the lowest in the world (Hamann, Woolman and Sprague, 2008). Yet, the country has large deposits of gold, copper and cobalt. Exploitation of the natural resources is affected by armed conflict. Teacher education curricular needs to be vigorous in championing peace and reconciliation in the country. Teachers have to be skilled to preach the gospel of peace and development among their students and the entire communities in which they are deployed to work. The inherent risk associated with armed conflict is weakening of social capital as well as weakening of institutions, rule of law and destruction of infrastructure for development. The dysfunctionality of armed conflicts (civil wars) has been witnessed in Libya, Zimbabwe, Egypt, Somalia, Sudan, Liberia, Sierra Leone and Cote d'Ivoire; it exacerbated the poverty in Africa.

Africa's development is dependent on the quality of leadership. Countries that have suffered many years of leadership crisis have experienced development challenges. For example, Sudan and Somalia have suffered many years of low development due to leadership crisis. Despite having a reasonable pool of skilled labour and educated manpower, the leadership are bankrupt of alternative ideas for development.

1.6 Conclusion

The discourse noted that there is a close link between education and development in Africa. The discussion was centred on formal education. The argument is that education like development is dynamic and not static. A continual renewal of both school education and teacher education is necessary in the fight against poverty and underdevelopment in Africa. By all means, teacher education should be an instrument for producing agents for socio-economic transformation of Africa. An admirable teacher education curriculum is one that responds to socio-politico-economic and technological changes in the continent. The discourse highlighted the fact that the teacher education curricular of yester centuries should be different from that of the present socio-economic and political order. Then teacher education curricular for Africans concentrated more on basic literacy and numeracy. By and large it was an education for impoverishment. The current education curricular should be one of emancipating Africa from poverty and underdevelopment. The education curricular is expected to

respond feverishly to climate change, HI/AIDS, gender, terrorism, child labour, and human trafficking. The discourse highlighted some of the factors that affect or mediate the relationship between education and development in Africa.

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INTRODUCTION: THE CHALLENGE OF THE HOMOGENEOUS

The American system of teacher education is founded and is foundering upon a *technological* and political paradigm framed by neo-liberalism. Consider the implications of framing teacher education as fulfilling a social need for “highly qualified” and “proficient” teachers – operators skilled in the technology of learning production. Acceptance of this frame leads to the search for a systematic and standardized (Taylorist or Fordist) analysis of what teachers need to know and be able to do. Further, this frame also prescribes a metric that relies upon a belief, or faith, in education and learning as homogeneous processes that are influenced by environmental factors but that are independent and uniform across individuals. Homogeneous education and learning are structured within standardized curriculum and within the accreditation standards and state program standards that dictate the form teacher education will take if programs wish to remain in operation.

Within this context, a standardized context, government bureaucracy invades the institutions that prepare future teachers in an effort to manage teaching and learning. Pedagogy is presented as the object of managerial systems (Best Practices). From this managerial orientation it is but a short step to assertions of the need for teacher education institutions to remedy the achievement gap, to raise the graduation rate, to remain accountable for the efficient use of state budgetary allocations, and to be held accountable for the teachers they certify through tracking of K-12 student performance. Each of these outcome constructions implies deficits in the implementation of the bureaucratic managerial system. As a sphere that is under the political and economic control of the government, institutions for teacher preparation represent the new front line for the neo-conservative/neo-liberal ideology and its assertion of the impact of eroded community, colonization, and domination and the promotion of a view of teacher preparation as an object of political administration and needed reconstruction.

These standards are what Jean Baudrillard (Baudrillard, 2000) would call a *brand*. Baudrillard makes use of Pierre Martineau's (Martineau, 1957) analysis of motivation within advertising to deconstruct the power of *brand*.

The function of "brand", the principal concept of advertising, summarizes well the possibilities of a "language" of consumption. All products (except perishable foods) are offered today as a specific acronym: each product "worthy of the name" has a brand name (which at times is substituted for the thing itself: Frigidaire or Xerox). The function of the brand name is to signal the product; its secondary function is to mobilize connotations of affect: ... (Baudrillard, 2000, p. 236)

By *branding* education within the language game of academic and professional standards, the political economy of education and learning, and specifically teacher education, has been left open to be captured and sold to society as crisis, risk, and loss of competitive edge. The currency of test scores (Parkison, 2009b) seizes hegemonic control of the market construct and is used as evidence of this crisis, risk, and loss of competitive edge. Teacher education programs provided by institutions of higher education are marginalized as dysfunctional and alternative licensure and alternative route programs are held up as the savior brand.

The cultural politics of the neo-liberal paradigm has been dominated by those supporting its epistemological premises: "It sets up as the norm of all practices, and therefore as ideal rules, the real regularities of the economic world abandoned to its own logic, the so-called laws of the market." (Bourdieu, 1989, p. 35) This hegemonic control is not accomplished because neo-liberalism has achieved consensus on the role and content of teacher education, but because there has been a capitulation on the part of many teacher educators within this dialogue through the adoption of the language game and political economy of the *law of the market*. The language of debate has been co-opted and is now the language of standards, efficiency, utility, and accountability.

Baudrillard is worth quoting at length as he asserts the limiting and oppressive consequences of the dominance of a market, *brand*, driven political economy:

1. This universalization, this efficiency is obtained at the price of a radical simplification, of an impoverishment, and of an almost irrevocable regression in the “language” of value: “All individuals are described in terms of their objects.” Coherence is obtained through the formation of a combinatorial matrix or repertoire: hence a functional language is established, but one that is symbolically and structurally impoverished.
2. The fact that a system of interpretation (*lecture*) and recognition is today applied by everyone, or that value signs are completely socialized and objectified, does not necessarily lead to true “democratization.” On the contrary, it appears that the *constraint of a single referent only acts to exacerbate the desire for discrimination*. Within the very framework of this homogeneous system, we can observe the unfolding of an always renewed obsession with hierarchy and distinction. While the barriers of morality, of stereotypes, and of language collapse, new barriers and new exclusions are erected in the field of objects: a new morality of class, or caste, can now invest itself in the most material and most undeniable of things. (Baudrillard, 2000, p. 239)

Through the language of equity and fair access to rigorous and standardized teacher education programs, and, theoretically, these programs’ teacher products, the entire political economy of education has been hegemonically co-opted. Educational policy makers have consciously and intentionally generated a mythology, or set of moral imperatives, that relies upon the political economy of test scores and curriculum standardization that constrains and binds educative experiences (Apple, 2006; Davis, Sumara, & Luce-Kapler, 2008; Parkison, 2009a).

How do teacher educators take a dissident stance within education and schooling? Is there a space for this dissident stance? What are the consequences? If we look at these issues critically, it is evident that teacher education faces a crisis of identity, a crisis of mission, a crisis of ideology and

epistemic foundations that must be addressed. It is essential to ask these questions in order to avoid and challenge complicity with oppressive and objectionable practices and programs.

IMPACT UPON TEACHER PREPARATION

The marketization of teacher education that has taken hold as the neo-liberal elite and political leadership have seized and maintained power, creates a hegemonic system in which utility and efficiency become the key indicators. This process moved through P-12 education and is infecting higher education like a virus and challenges those involved to engage in the political dialogue – or struggle. Teacher education must face the normalizing challenge of the *law of the market* as a threat to the moral, social, aesthetic and political purposes of teacher education.

Investigating the unrecognized axiological choice made by teacher educators as they investigate the utility and efficiency of teacher education programs is critical. Teacher education programs pursue accreditation and produce state mandated program reports that motivate their pedagogical and curricular decision-making requiring that the role of the standards and accountability be made visible. The more teacher educators come to rely upon the law of the market to define the effectiveness and proficiency of individual students and teachers, the more we are led to interpret students and teachers in terms of the epistemological criteria (standardized, external data – test scores) that form the basis of the neo-liberal paradigm – it forms an ideological tautology that traps teacher education and make it complicit in the neoliberal agenda. I classify this onto-epistemology as “old school realism”. It rests upon the assumption that there is a static, concrete, and perceptible reality that simply needs to be measured to be known. This epistemology has been surpassed within the physical sciences, specifically physics, by the onto-epistemology of Model Dependent Realism (Hawking & Mlodinow, 2010). Teacher education should consider aligning with this perspective as it is supported by learning theory and culturally responsive pedagogy (Gonzalez, Moll, & Amanti, 2005; Vygotsky, 1978).

Educators, administrators, and students have sought to avoid the axiological disputes that arise as the value of curriculum and pedagogy become topics of discussion. There has been a hope that these

disputes can be avoided altogether by making do with a correlation between individual teacher educator efficacy and the brute data provided by standardized testing (Praxis I, Praxis II, and Principles of Teaching and Learning) and enrollment matrices that track full-time enrollment (recruitment, retention, and graduation). Each teacher educator, and by extension department and program, believes their pedagogical and content expertise can successfully mediate the gaps in the standards. This belief allows many teacher educators to rationalize compliance with the political economy of brute data. The weakness of this approach, visible in the alienation of many stakeholders within the educational system (marginalized populations and dysfunctional higher education – P-12 partnerships), becomes even more disturbing when considered as a struggle of cultural politics.

ALTERNATIVE CONCEPTUAL FRAMEWORK

The *profound existence* (Bataille, 1985a; 1985b) of a culturally and socially responsive teacher preparation program that depends upon the emergence of specialized and potentially unique curricula and pedagogical strategies is marginalized as government policy and finance incentivize conformity to “best practices,” or *what works*, that are framed within the law of the market myth. The heterogeneity of *profound existence* works to upset the equilibrium upon which the homogeneous depends and is directed toward. The proposed standardized and accountable paradigm of American teacher preparation relies upon a belief in the scientific discourse and rationality that support the homogeneity of “best practice”. This discourse provides for fundamental value judgments on the worth and worthiness of teacher candidates, teacher educators, preparation programs, and institutions of higher education – differentiation is possible because of this belief. This same belief serves to limit the unique classroom and community of practice’s ability to communicate and engage with the local and the proximate – learning directed toward the free discernment of the *me* is lost or submerged (Bataille, 1985a).

A turn to and through heterology facilitates an investigation of schooling as a wholly mediated, contested, and processual site of ideological and epistemological struggle. In abandoning the traditional

homogenizing assumptions, the mundane experiences of everyday teacher preparation can be revealed in their full contingency and complexity: revealing the *profound existence* of the classroom.

The potential realized through heterogeneous teacher preparation programs, which is typically classified as useless, unproductive, and ineffective, should be understood to have an existence valid and valuable in itself. Bataille would frame these heterogeneous programs as *sovereign* and thus of worth as an expression of sacramental sacrifice by either the collective education community or the individual program and its faculty. His explanation of heterogeneous existence is helpful:

The reality of *heterogeneous* elements is not of the same order as that of *homogeneous* elements. *Homogeneous* reality presents itself with the abstract and neutral aspect of strictly defined and identified objects (basically, it is the specific reality of solid objects). *Heterogeneous* reality is that of a force or other in a more or less abstract fashion, almost as if the change were taking place not in the world of objects but only in the judgments of the subject. The preceding aspect nevertheless does not signify that the observed facts are to be considered as subjective: thus, the action of the objects of erotic activity is manifestly rooted in their objective nature. Nonetheless, in a disconcerting way, the subject does have the capacity to displace the exciting value of one element onto an analogous or neighboring one. In heterogeneous reality, the symbols charged with affective value thus have the same importance as the fundamental elements, and the part can have the same value as the whole. It is easy to note that, since the structure of knowledge for a *homogeneous* reality is that of science, the knowledge of a *heterogeneous* reality as such is to be found in the mystical thinking of primitives and in dreams: it is identical to the structure of the *unconscious*; ... (Bataille, 1985b, p. 143)

In the schooling context examples of homogeneous reality can be found in the manner in which students are categorically classified and differentiated.

Excesses within a political-economy, particularly a restricted and constrained political-economy like the fetishized, test-score based, law of the market political economy of the current teacher

preparation paradigm (Parkison, 2009b), that obtain sovereignty are typically viewed as standing reserve, raw material from which growth and development can spring. An alternate, revolutionary, view of excess is also pertinent if considered from the perspective of organization theory. Rehn & O'Doherty (Rehn & O'Doherty, 2007) explain the potentiality of this alternate perspective toward excess:

Excess can also be found in that which cannot be made to fit a system, that which is neither inside nor outside the state apparatus, but somewhere in-between, in a hiatus or hybrid zone of semi-legality and clandestine activities: military detention camps and rendition bases, Guantanamo Bay, Sealand, the immigration "processing" centres, sidewalk economies, refugee camps, bordertowns, the grimey back-alleys of the urban condition, junkspace, needle parks These are turbulent states of exception (cf. Agamben, 2005), spaces of *bricolage* and improvisation that concentrate a host of powers and forces, causing them to collide and twist, fostering and festering mediations and reactions that periodically discharge in unusual and exceptional ways. Excess piles up in these bordertowns and wastelands of organization forming compounds of tense, fragile equilibrium that we might liken to what Taussig (Taussig, 1995) calls a "nervous system" – the audible click of its radioactive half-life barely perceptible above the metallic clang and whirl of power generators and military equipment. Here, excess is equally surplus and void, positive and negative, production and waste, both the presence and absence that attends the circulation of matter. (Rehn & O'Doherty, 2007, p. 102)

Heterology is used to seek ways to map the patterns, structures, and complexity of these excesses in order to better represent the appropriation of teacher preparation and schooling as means of excretion. Looking at what has avoided or resisted measurement, scientific analysis, and accountability leads toward a consideration of the marginal and ephemeral: the fissures, lacerations, and gaps that emerge within teacher preparation and schooling. This is complex, it is political, and it requires a recognition of oppressive intent (or at least consequence) that is challenging to ascribe to trusted educational and political leaders.

“OUR FUTURE, OUR TEACHERS”: A CASE WITHIN THE HOMOGENIZING PARADIGM

Analysis of the Obama administration’s policy recommendation for improving and regulating teacher education in the United States illustrates the homogenizing paradigm’s impact on teacher education. In September, 2011, the United States Department of Education released *Our Future, Our Teachers: The Obama Administrations Plan for Teacher Education Reform and Improvement* (United States Department of Education, 2011). This new *brand* in teacher preparation asserts a simplification of teacher preparation and licensure in the name of efficiency and adherence to a codified set of standards that will facilitate the expansion of the teaching pool so that it is more inclusive, democratic, and effective: a pool of teacher commodities that will fit into the law of the market political economy of schooling and teacher preparation. The entire teacher preparation system is reprimanded and cited as the primary rationale for the proposed reform agenda:

Despite requirements under the Higher Education Act that states identify and improve low-performing programs in their states, few states hold programs to any meaningful standard of quality. In the most recent year for which data is available, states identified only 37 low-performing programs at the over 1,400 institutions of higher education that prepare teachers – and 39 states identified no low-performing programs at all. Thirty-nine didn’t identify a single low-performing program. Over the last dozen years, 27 states have never identified a single low-performing program. (United States Department of Education, 2011, p. 6)

Resistance from critics of the policy proposal has been met with the assertion that stubborn self-interest motivates any complaint and is further evidence of the crisis in the system of teacher preparation – the standard neo-liberal response to critique.

USDOE proposes a comprehensive plan with three key components: 1) Institutional reporting and state accountability; 2) Reform financing of students preparing to become teachers; and 3) Target support to institutions that prepare high quality teachers from diverse backgrounds. Both the state accountability and the high quality teachers components rely upon and assume the validity and

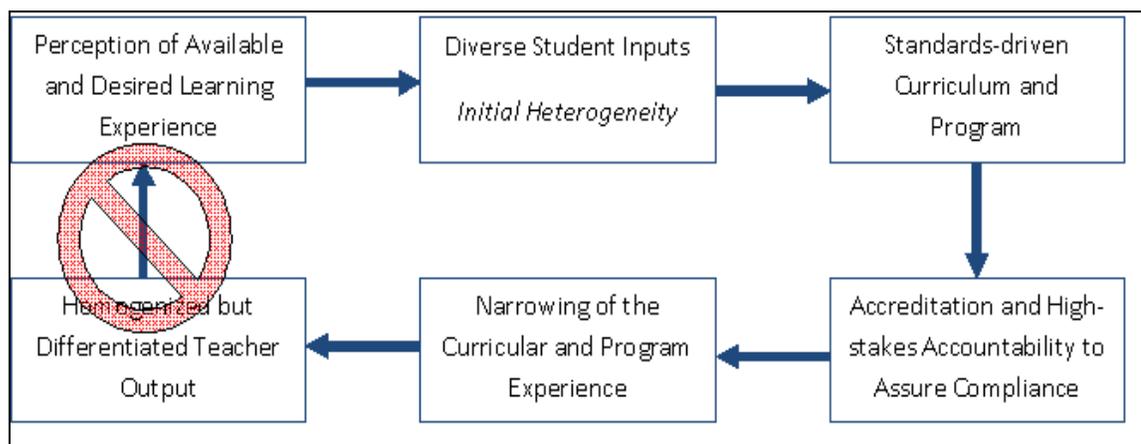
comprehensiveness of state data gathering and reporting systems that utilize k-12 student standardized test scores. The fetishizing of test scores restricts the dialogic space in which to develop heterogeneous curricula and programs (Parkison, 2009b). The proposal focuses on performance-based outcome measures that include (United States Department of Education, 2011, p. 10):

- Student growth of elementary and secondary school students taught by program graduates;
- Job placement and retention rates; and
- Surveys of program graduates and their principals.

The utilization of these three outcome-based measures, as proposed by the USDOE, relies upon a faith in the efficacy of these instruments for indicating and documenting student proficiencies, it does not address the political question of identifying desired outcomes.

Figure 1: *Homogenizing Paradigm* illustrates the disruptive consequences of standards-driven programs when linked and accountable to external high-stakes testing.

FIGURE 1: HOMOGENIZING PARADIGM



Rick Ayers and William Ayers are helpfully in critically explaining this perspective:

School is built so stolidly on **summing up knowledge**, certifying and sanctioning all the stuff of the curriculum, that “reform” often amounts to little more than spreading the powerful arms of authorization into new realms (think: new standards for dance) or a more encompassing reach

(think of the two dozen – and growing!—competencies to be mastered in 1st grade language arts), and no one worries much about who established the curriculum and why. (Ayers & Ayers, 2011, p. 2)

The homogenizing paradigm of standards creates a system in which certification is the end to be achieved, not learning. This disrupts the cycle of continuous improvement and life-long learning that is part of the neo-liberal rhetorical toolkit.

If *Our Future, Our Teachers* is mapped to the homogenizing paradigm presented in Figure 1, then it becomes evident that the result will be deterrence from the pursuit of additional educative experiences directed by teacher educators. Teacher education programs are faced with the threat of punitive financial measures if their teacher candidates do not perform on these measures. As asserted within the plan:

Potential reforms may include:

- Heightened entry and/or exit standards for teacher candidates;
- Comprehensive interventions to help promising candidates meet heightened standards, particularly passing rigorous entry and licensure exams;
- Redesign to ensure that programs are deeply, clinically-based with academic coursework informing and supplementing field experience;
- Training of all candidates in evidence-based methods of reading instruction and the use of data to drive classroom practice; and
- Partnerships with local school districts or with non-profit organizations with demonstrated experience and effectiveness in preparing and placing high-quality candidates. (United States Department of Education, 2011, p. 14)

The reliance upon external assessment, clinical, field-based experiences, and consultation and guidance from schools and “non-profit organizations” marginalizes the expertise of teacher education faculty.

The reliance upon evidence-based methods and demonstrated effectiveness further embed and prioritize the fetishized high-stakes testing paradigm that derives from the law of the market mythology. As has been seen in the P-12 educational setting, the narrowing of the curriculum is an incentivized strategy to assure continued state support and compliance.

Institutions of higher education that have teacher preparation programs are faced with a maze of regulations that remain to be sorted out and explained even by the state institutions that support this new policy framework. Continued efforts by conscientious teacher educators across the United States to clarify and at times to resist this new homogenized paradigm are encouraging, but the battle for public opinion is not favorable to institutions of higher education in the current political climate. Significant attention needs to be devoted to how teacher educators can take a dissident stance in the face of this spreading homogenizing paradigm.

The politics of this homogenizing paradigm may be hidden from many teacher educators, but it remains a political phenomenon – one that grants legitimacy and power to a specific perspective while simultaneously de-valuing other positions within the discussion. Certainty, within an epistemological framework, serves as a foundation or validation of knowledge. The difficulty arises when certainty, in this case certainty in the form of neo-liberal *law of the market* faith, is asserted to be absolute and becomes the criteria for the validation of all other frameworks (Parkison, 2005).

One of the most important effects of the homogenizing paradigm can be seen in the perception of the value of professional development, learning and continuing education. The compression of the curricular and programmatic experience leads to a devaluation of what teacher education, research, and other professional development opportunities have to offer. Once a teacher has successfully survived the homogenized educative experiences offered by teacher education, what more is there to know about teaching and learning that experience in the classroom does not teach? As seen in the discussion of *Our Future, Our Teachers* (United States Department of Education, 2011), the potential worth or value of what teacher education has to offer is marginalized to such an extent that current policy proposals

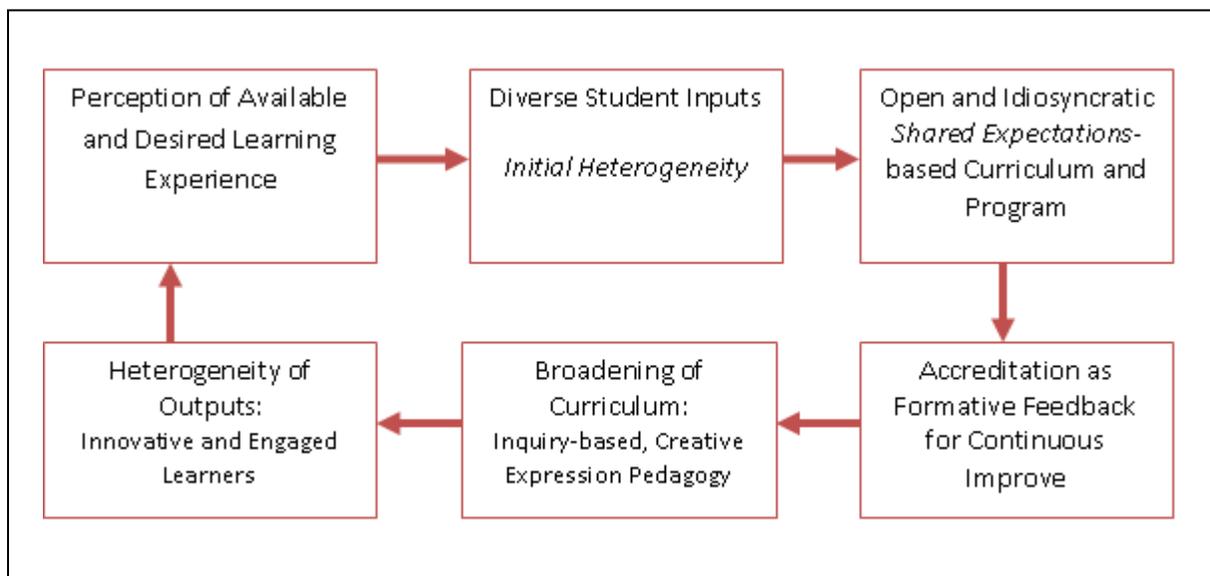
emphasize the need to embed what is currently happening in K-12 classrooms into the teacher preparation curriculum. Teacher education, while charged with the task of fixing America’s schools, is itself fixed by embedding what is modeled in K-12 classrooms into the preparation of future teachers. This tautological recommendation represents one of the fissures in the neo-liberal ideology.

Frames such as “standards-based”, “accountability”, “utility”, and “efficiency” rely upon an epistemic mythology that normalizes and homogenizes diverse factors – often through force, fraud, and exclusion (Apple, 2006; Rehn & O'Doherty, 2007; Sandywell, 2004). The neo-liberal ideology and the impact of eroded community, colonization, and the marginalization of diverse populations and the expertise of teacher educators lead to the promotion of a view of schooling as an object of political administration and needed reconstruction if society is to be *saved*.

PROFOUND EXISTENCE AS A DISSIDENT ALTERNATIVE

Figure 2: *Heterogeneous/Profound Existence Paradigm* illustrates the potential cycle of continuous learning and improvement that can come from building curricula and programs upon open and idiosyncratic shared expectations.

FIGURE 2: HETEROGENEOUS/PROFOUND EXISTENCE PARADIGM



As faculty within departments and programs reach consensus through dialogue about what the goals and expectations for teacher candidates should be, a dynamic and engaging program takes form. Feedback on program impact is formative and directed toward improvement, not accountability, labeling, and stigmatization.

Bataille's development of heterology as a potential science of alterity and heterogeneity as opposed to homogeneity opens an interesting space for the discussion of program formation within teacher education. By focusing upon the unique, diverse and heterogeneous elements that directly and concretely affect the students, classrooms, and schools of education within the schooling system, scientifically-based best practices, standardized curriculum, and accountability regimes are forced out of their neutral policy positions. Education can choose both its history and its potentiality by choosing the frame through which to evaluate the system (Hawking & Mlodinow, 2010). By positioning teacher education within the realm of *profound existence* and the general political economy (Bataille, 1985a) it becomes possible to either avoid or embrace, as a positive judgment, the distortions, abstractions, and oppressions that affect stakeholders within schooling.

Michel de Certeau, in *The Practices of Everyday Life* (de Certeau, 1984), helps to open a space for educative dissonance within teacher education.

These styles of action intervene in a field which regulates them at a first level (for example, at the level of the factory system), but they introduce into it a way of turning it to their advantage that obeys other rules and constitutes something like a second level interwoven into the first (for instance, *la perruque*). These "ways of operating" are similar to "instructions for use," and they create a certain play in the machine through a stratification of different and interfering kinds of functioning. (de Certeau, 2000)

As teacher education opens to a perspective guided by heterology, programs become spaces that draw upon "temporary stabilization" in the form of academic disciplines, literacies, and numeracies in order to unhinge the hegemonic political economy that oppresses the program and differentiates teacher

candidates based upon arbitrary criteria (test scores). This process would push back the restrictive political economy that currently controls teacher education.

Teacher educators' perspective toward the desired outcome, or role of the program, dramatically influences the impact the program can have for the teacher candidates. Foucault's (1988) discussion of "caring for the self" identifies a typology of second level technologies which provides teacher educators with an innovative method for preparing inclusive and engaging programs. Foucault's typology includes:

... (1) technologies of production, which permit us to produce, transform, or manipulate things; (2) technologies of sign systems, which permit us to use signs, meanings, symbols, or signification; (3) technologies of power, which determine the conduct of individuals and submit them to certain ends or domination, an objectivizing of the subject; (4) technologies of the self, which permit individuals to effect by their own means or with the help of others a certain number of operations on their own bodies and souls, thoughts, conduct and way of being, so as to transform themselves in order to attain a certain state of happiness, purity, wisdom, perfection, or immortality. (Foucault, 1988, p. 18)

How the dissident teacher educator perceives the content and, importantly, the purpose of the program influences the technology that the program is meant to develop. Dissident teacher education raises important questions regarding the changing role of teacher educators as both leaders and learners within higher education as a "care of the self" perspective is considered.

When developing a teacher education program oriented from a position of heterology, there is a drawing into question of contemporary instrumentality and standardization that frames the preparation of teachers. By considering the standards-based and discipline-based curricula as a system of arbitrary connections that share an "ideological field of articulation" (Pieters, 2000), teacher educators and teacher candidates gain the freedom to inquire and investigate in an effort to construct understanding

and develop potentially innovative logics of their own within programs directed toward open, idiosyncratic shared expectations.

CONCLUSION

Perhaps we should prepare new teachers by asking: "How should we prepare new teachers?" By framing teacher education within a question rather than within a standardized answer, it becomes possible to engage in the process of continual overcoming, becoming, and creation. Dissident teacher educators can enrich the dialogue of education and challenge the impoverished *law of the market* political economy. Overcoming the constraint of a single referent through the creation of a disguised second level critical structure enables the discursive space for the recognition of open, idiosyncratic shared expectations. Teacher education has the opportunity to challenge the law of the market if we only have the courage to do it.

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AREAS OF SPECIALIZATION VERSUS PRESENT TEACHING SUBJECTS OF NCE TEACHERS IN PRIMARY SCHOOLS IN NIGERIA (SHOBOLA, OLAWATOSIN, & OLATOMIDE)

Background

Over the time, education has been identified as one strong wheel that drives the development and growth of a nation to its destination fast, and teacher is one of the driving agents in realizing the set aims and objectives of the institution. It is with this in mind that government provides institutions to train teachers who would in turn impact the students with knowledge and make them functional to self and the society at large. The need to train teachers to serve in different educational levels (primary, secondary and tertiary) brought about the teacher training institutions such as Grade II Teachers' Colleges, The Institutes of Education, Colleges of Education, The National Teachers' Institute, and The Teachers' Center (Ojerinde, 2011).

In line with the educational restructuring in Nigeria to meet the educational demands of its citizens like other parts of Africa, it is no longer news that Nigeria Certificate in Education (NCE) is the minimum teaching requirement to teach especially in primary schools. This is due to the fact that "no educational system can rise above the quality of its teachers" (Federal Ministry of Education, 1981). It is the aim of the Federal Government of Nigeria to produce highly motivated, conscientious and effective classroom teachers for all levels of Nigeria's education system; teachers who can develop the spirit of inquiry and creativity; teachers who can have intellectual and background adequate for their assignment and who can adapt to any changing situation not only in the life of their country but also in the wider world; and teachers who are committed to the teaching profession (Federal Ministry of Education, 1981 in Adebile and Bateye, 2011). It is believed that the minimum educational requirement for all highlighted above is NCE qualification. Although, this adoption of NCE qualification as minimum requirement to teach in primary school did not please some educationists, as this was expressed by Ojerinde (2011) saying "of recent, some state governments have not only scrapped The Teacher Training Colleges but have also given an ultimatum to Grade II Teachers to obtain the Nigeria Certificate in Education or be sacked". He further explained that in some states in Nigeria, about 75% of the teachers teaching in the primary school are unqualified and some of them do not possess the Teachers' Grade II Certificate which Ojerinde (2011) considered as basic minimum requirement to teach in primary school. But it should be noted that NCE is the basic minimum requirement to teach in primary school at present (FGN 2004). This is not the concern of this study though, but to examine the correlation between course of specialization of the teachers in the college and their ability to cope with teaching all subjects when they get classroom teaching job.

College of Education is one of the tertiary institutions in Nigeria that is specifically designed to train teachers for schools and it is supervised by National Commission for Colleges of Education (NCCE). The certificate that is awarded at the completion of the programme is Nigeria Certificate in Education (NCE). The institution usually operates school system within which there are departments; schools like Arts and Social Sciences, Education, Languages, Science, Vocational and Technical Education (Osun State College of Education, College Student Hand Book, Ila-Orangun and Ilesa Undated). The basic qualification to enroll for NCE programme is pass in five SSCE or GCE (O/L) subjects including English language, three of which must be at credit level at the same sitting or four credits at two sittings. Likewise a Grade II Teachers' Certificate (TCII), R.S.A or City and Guilds Intermediate Certificate, Associateship Certificate in Education (ACE), National Technical Certificate/National Business Certificate (NABTED) etc are all eligible for admission so long they possess the expected academic qualification.

In line with the structure of academic programme at NCE, students are meant to specialize in courses of their interest and academic strength as shown in their secondary school certificate or other certificates as the case may be. However, these teachers who have specialized in one area of study or the other are expected to teach all subjects if eventually offered teaching job in primary school after graduation. Then the question arises that if the teacher is qualified in terms of paper qualification, is he trained to qualify to teach all subjects in primary school? It's been observed that most primary school teachers in Nigeria often complain that adjusting to primary school teaching is difficult for them. Some complain that they weren't exposed to all subjects they teach now when they were in the college; and some claim that they need to re-train themselves in order to adjust to primary school teaching setting. All these form the thrust of this study.

Research Questions

How do the teachers perceive repacking the NCE syllabus to accommodate all the teaching and learning processes in Primary school?

Hypotheses

Two hypotheses were postulated for this study, and these are:

1. There is no significant relationship between Area of Specialization and Teachers' Adjustment to teaching in Primary School.
2. There is no significant relationship between the Teachers' academic qualifications and their adjustment to teaching in Primary School.

Methodology

Research Objectives

There were two main objectives for this study. One, it examined if the area of specialization of the teachers while in NCE is adequate to teach all subjects in primary school. Two, it investigated which of NCE holder and NCE plus Grade II holder was able to adjust quickly to primary school teaching.

Participants

The participants for this study were 182 (male 23 and female 159) primary school teachers (teaching primaries 1-6) with age range of 20 and 50 years drawn from twenty public and private primary schools. The teachers must have taught for not less than two years in primary school, and must be teaching all subjects in a primary school class. To qualify for inclusion in the study also, the participant must have had NCE or NCE plus Grade II Certificate.

Instruments

A self-constructed questionnaire tagged “teachers’ specialization and the teaching subject in primary school” was used to elicit information from the participants. It contained nineteen items which examined their area specialization in NCE and academic qualification to see if it takes care of subjects they teach now in primary school.

Design

The study made use of ex-post facto survey design with the use of a questionnaire.

Procedure of Data Collection

To elicit information from the participants (with the copies of questionnaire), the researchers paid visits to the twenty primary schools (private and public) on different days to acquaint selves with the head teachers and to make known their mission in the schools. Having discussed with the head teachers and collected the number of teachers with NCE and or NCE plus Grade II Certificate qualifications, copies of questionnaire were given out to the teachers during their break time; filled and returned, and the exercise lasted eight working school days.

Results

The tables below present the demographic data of the respondents

Table1: Percentage Distribution of Respondents’ Sex

Gender	Frequency	Percent
Male	23	12.6
Female	159	87.4
Total	182	100.0

The sample size had the female gender of 87.4% and the male gender of 12.6%. This shows that there was more female than male in the primary schools visited.

Table 2: Percentage Distribution of Respondents' Teaching Qualification

Qualification	Frequency	Percent
NCE	70	38.5
Grade II & NCE	112	61.5
Total	182	100.0

The table above shows the respondents' qualification, 61.5% of respondents had both grade II and NCE while 38.5% had NCE only.

Table 3: Percentage Distribution of Respondents' Area of Study

Area of Study	Frequency	Percent
Vocational	26	14.3
Science	37	20.3
Humanities	31	17.0
Primary Education Studies (PES)	88	48.4
Total	182	100.0

The table above shows the respondents' area of study, 14.3% were in the vocational area of study, 20.3% were in the science area of study, 17.0% of the respondents had their area of study in humanities and 48.4% were in Primary Education Studies (PES).

Research Question

How do the teachers perceive repacking the NCE syllabus to accommodate all the teaching and learning processes in Primary school? The item that measure the teachers' perception of the NCE syllabus was analyzed with descriptive statistical tools and the result is in the table below :

Table 4: Percentage Distribution of Respondents' Perception of Repackaging NCE Syllabus

Options	Frequency	Percent
Am Strongly in Support	121	66.5
Am in Support	61	33.5
I am not in support	-	-
I am strongly not in support	-	-
Total	182	100.0

The table above reveals the respondents' perception of NCE syllabus repackaging to accommodate all teaching areas in primary school; 66.5% of the total respondents were strongly in support of the repackaging of NCE syllabus and 33.5% were in support of the repackaging NCE syllabus.

Hypotheses

- 1. There is no significant relationship between Area of Specialization and Teachers' Adjustment to teaching in Primary School.**

To find out if there was any significant relationship between the teachers' area of specialization and the teachers' adjustment to teaching in Primary School, chi-square was used to test the relationship and the result is presented:

Table 1: chi-square showing relationship between area of specialization and teacher's adjustment to teaching in primary school

	Teachers' Adjustment to Teaching				X ²	df	p
	Very Easy	Easy	Difficult	Very Difficult			
Vocational	5 (19.2%)	2 (7.7%)	14 (53.8%)	5 (19.2%)	43.66	9	<.05
Science	8 (21.6%)	11 (29.7%)	9 (24.3%)	9 (24.3%)			
Humanities	5 (16.1%)	7 (22.6%)	13 (41.9%)	6 (19.4%)			
Primary Education Studies	39 (44.3%)	34 (38.6%)	9 (10.2%)	6 (6.8%)			

Table 1 presents information on how teachers adjust to teaching in the primary school in relation to their area of specialization. It was revealed in the Table that while 82.9% of the teachers with specialty

in PES find adjustment to teaching in the primary school easy (44.3% very easy, 38.6% easy), 73.0% of those who specialize in vocational subjects did not find adjustment to teaching in the primary school easy (53.8% difficult, 19.2% very difficult). Furthermore, it was also revealed that while 51.3% of teachers who specialize in science find the adjustment to teaching in primary school easy (21.6% very easy, 29.7% easy), 61.3% of those whose specialty in the humanities did not find adjusting to teaching in the primary school easy (41.9% difficult, 19.4% very difficult). The table also revealed a chi-square value ($\chi^2 = 43.66$, $p < .05$) which is an indication that there is a significant relationship between area of specialization and teacher's adjustment to teaching in the primary school. Thus, it could be concluded that teachers with specialty in PES find it easiest to adjust to teaching in the primary school than teachers in other fields of specialization.

2. There is no significant relationship between teacher's qualification and teacher's adjustment to teaching in primary school.

To find out if there was any significant relationship between the teachers' qualification and the teachers' adjustment to teaching in Primary School, chi-square was used to test the relationship and the result is presented:

Table 2: chi-square showing relationship between qualification of teachers and their adjustment to teaching in primary school

Teachers' Qualification	Teachers' Adjustment to Teaching				χ^2	df	p
	Very Easy	Easy	Difficult	Very Difficult			
NCE	2(2.9%)	1(1.4%)	42(60.0%)	25(35.7%)	1.566	3	<.05
Grade II + NCE	55 (49.1)	54 (47.3)	3(2.7)	1(0.9)			

Table2 reveals the teachers qualification and how they adjust to teaching in primary school. It was shown in the Table that of the 70 teachers with only NCE qualification 95.7% did not in any way find adjusting to teaching in the primary school easy (60.0% difficult, 35.7% very difficult). While 96.4% of those with combined qualification from Grade II and NCE indicated that adjusting to teaching in the primary school was with ease (41.9% very easy, 47.3% easy). It therefore implies that adjusting to teaching in the primary school is much more easier for teachers that have combined qualifications of Grade II and NCE than NCE only. This is buttressed by the chi-square value ($\chi^2 = 1.56$, $p < 0.05$) which showed that the relationship between teacher's qualification and teacher's adjustment to teaching is significant.

Discussion

From the findings, it was obvious that all the respondents were in support of complete repackaging of NCE syllabus to cover primary school academic activity. This is in line with the complaints of the respondents that the academic syllabus that they had at NCE was different from the academic activity in primary school, therefore, making teaching in primary school a bit tedious especially at the entry stage. For instance, teaching in primary school requires that the teacher must have knowledge in all the ten/eleven subjects that are offered, but of which the teachers are not exposed to at NCE except one or two subjects that are related to their course of study. This invariably will pose a difficulty to them when they start to teach, because at NCE, they often specialize in one discipline or the other (for instance music, English, geography etc), but when they pick up teaching, they are meant to teach all subjects. Except at upper classes where they are meant to rotate some teaching according to their discipline; again, this does not cover all the subject areas and not in all the classes.

The results further show that teachers that studied Primary Education Studies (PES) were able to adjust to teaching in the primary school when compared with other teachers in other areas of specialization (Science, Vocational and Humanities). Again, the likely reasons for this adjustment are that PES' curriculum is specifically designed according to primary school academic activity. For instance, the curriculum entails hand writing, English language, arithmetic, physical and health education, creative arts etc, of which other teachers in other areas of discipline are not exposed to. Also, at teaching practice, PES student teachers are posted to primary schools for the assignment which gives them the opportunity to interact with children of that age, knowing their feelings and common behaviours. Invariably, when they become their permanent teachers, it would not become burdensome to relate and interact with them unlike other teachers from other areas of discipline.

The results also reveal that teachers with Grade II and NCE were able to adjust to primary school teaching activity compared with their counterparts with NCE only. This is likely to be so because Grade II programme is specifically designed to train teachers for primary school, while NCE as mentioned above allows students to specialize in one area of study or the other which does not take care of the primary school holistically except PES programme. In essence, a teacher that has gone through Grade II already has the full knowledge of teaching in the primary school; having NCE qualification (having specialized in a course or discipline) notwithstanding, he/she will be able to adjust well in the primary school setting.

Conclusion

It has been established that NCE is the minimum academic qualification to teach in Nigerian primary schools. But it is observed that the concerned teachers are not favorably disposed to their work because of the gap between what they studied in the college and what they are meant to teach when they are offered teaching appointment in the primary school. This is as a result of college system of specializing in one course or the other which does not cater for all primary school subjects and activity. This makes the teachers to embark on self-study to be able to record any success in the delivery of their teaching, and this sometimes can be tedious. Alternatively, some teachers may decide to be passive about this challenge and they keep on impacting wrong knowledge to the pupils or they purposely avoid some areas of teaching that seem difficult to them. Perhaps, this is one of the latent reasons that is responsible for low standard of education as is been echoed all over the country. This study concludes that there is no correlation between the courses that are taught in the college (NCE) and primary school curriculum in Nigeria.

Recommendation

Based on the findings of this study

- Since Grade II programme is been scrapped, the curriculum should be infused into NCE programme irrespective of their areas of specialization such that all student teachers are exposed to primary school education system
- If Grade II curriculum is what is found in PES, then it shouldn't be an area of specialization but general area of study to all student teachers
- Student teachers should be made to have their teaching practice in primary school and not secondary school as it is done presently so that they can be further equipped for their future primary assignment (teaching in the primary school)

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EFFECTIVENESS OF THE INTEGRATION OF INFORMATION AND COMMUNICATION TECHNOLOGY IN THE TEACHING PROCESS IN SELECTED COLLEGES OF EDUCATION IN ZAMBIA (KANGWA, CHIFWEPA AND MSANGO)

The purpose of the study was to assess the effectiveness of ICT integration in the teaching process in Colleges of Education in Zambia. The Theory of Integration as devised by UNESCO (2004) was used to inform this research. This research employed mainly a qualitative survey research approach. The target population comprised of college principals and lecturers as well as ICT coordinators of CEs, MoE National ICT coordinator and the ICT coordinator from the Curriculum Development Centre (CDC). The sample consisted of 70 lecturers, purposively sampled (through homogenous type of purposive sampling) from the four Colleges of Education. The same (purposive) sampling technique was used to select a principal from each of the four CEs and this brought the number of principals to four. One MoE National ICT coordinator was also selected as an informant. From CDC, one ICT coordinator was also purposively selected to be part of the sample. This brought the total sample size to 80. A questionnaire, semi-structured interview, observations, discussions and audio recording were used to collect data from the field. Constant comparative and narrative methods were used to analyze the primary data. This involved classification of words and phrases that related to the same content into major themes prior to discussion and conclusions.

It was found that the most commonly used ICT equipment among CEs was a desktop computer (42 per cent), the TV and the radio scored 21 and 15 per cent respectively. 14 per cent of the responses showed that laptops were used in the teaching process and the least used was the LCD (8 per cent). In terms of ICT use by course or subject, most responses (20 per cent) showed that they were mainly in computer classes, 17.7 per cent of responses indicated total none use of ICT equipments in any subject or course. Mathematics and Natural Sciences both recorded 15 per cent. Other courses in which ICT was used included social sciences (10 per cent), Local Languages and Art were both at 6 per cent), Music (5 per cent), English Language (4 per cent), and the least being Physical Education which accounted for 1.5 per cent. Among the factors that influenced ICT use in CEs were lack of good policy framework, poor ICT literacy among lecturers, inadequate funding and resources, among others. In a nutshell it was concluded that the integration of ICT in the teaching processes had not been effective as it met neither national nor international standards as outlined in the Zambia MoE ICT policy and the UNESCO framework respectively. Further research, infrastructural development, ICT skills training and others were among the recommendations of the study.

INTRODUCTION

There was a growing concern in Africa about the use of computers to support learning in educational institutions. Information and Communication Technologies (ICT) were used to gather, analyze, modify

and exchange information. They were used in almost all spheres of human activity. The computer and the internet were increasingly making their way into teaching and learning practices and processes (Boakye and Banini, 2008). Education is a basic human right. When that right in the context of educational growth and self-fulfillment is granted development opportunities, it is likely to be accompanied by improvement in the individual's and society's well being as a whole. The inseparable themes of improving access and quality of education are at the heart of Millennium Development Goals (MDGs) and Education For All, (EFA), (Olakulehin, 2007). As education systems expanded, the question was how the EFA goals could be achieved when most countries in Africa were faced with a myriad of problems that seemed insurmountable.

Most learning is improved or enhanced through the use of learning support materials that are carefully constructed and carefully used. Some complex issues in education or learning process require mixing of advanced tools of teaching unlike over reliance on the traditional ones such as charts, chalk board, books, a pen, and paper, among others which marred most learning processes especially in the 20th century (Rosenberg, O'Donoghue and Olvitt, 2008). They further argued that for the development of learning, support materials that were flexible and adaptable to diverse and changing contexts, recognizing aspects such as language, purpose and topical complexity was necessary. Mbanjwa (2002) further argued that the educators' ability to appropriately select and mix both traditional and modern learning support tools was key. One of the modern tools which could be mixed with the common methods in teaching processes at various levels of tertiary education and particularly in teacher education is the use of Information Communication Technology (ICT) such as internet, Television, radio and others.

In the Zambian context, where ICT applications used to have so little to do with the core business of teachers' educators, more than ever, it is important that ICT is fully integrated into the teaching process among teacher education colleges. With the introduction of the ICT facilities in some institutions such as the University of Zambia, our attitudes and those of our students have changed. Internet meant that we had access to a wealth of information and the problem was no longer "how do we get more information, but rather how we cope with all the information that is out there and what we can do with it" (Anderson and Glen, 2003).

Over two decades ago, the unfortunate reality was that for many African countries such as Zambia, larger socio-economic issues preceded improving the quality of education. Poor learning outcomes remained a tremendous challenge in most countries in Sub-Saharan Africa (SSA). As a result many African countries, including Zambia were significantly disadvantaged globally as well as in terms of their national priorities by poor performance of the education sector. Teachers had an indispensable role to

play in the education system. To have quality education, there was need to have sufficient and well trained teachers/teacher educators in different techniques of teaching.

Ministry of Education, (MoE) (1996: 107) reaffirms: “The quality and effectiveness of any education system largely depends on the quality of its teachers. They are the single most important factor in determining success in meeting the goals”. In the national policy document MoE (1996) it is further acknowledged that the two pillars on which professional competence of teachers rested were initial and on-going in-career professional and personal development. In the 21st century, one of the means through which teacher educators'/trainers'/learning facilitators' competencies could be continually developed to ensure effective teaching process is through integration of ICT.

The Zambian economy has historically been heavily dependent on mining. Mining being a high- tech industry contributed significantly to the country's early introduction to Information Technology (IT). The Telecommunications' Act set up in 1994 placed Zambia in a leading role as an African country in the use of ICT in Africa. After the Act, the Communication Authority of Zambia (CAZ) was created. The roles of the CAZ included issuing telecommunications service and supplier licenses and overseeing the growth of the telecommunications industry in Zambia. However, there had not been any major improvements in the technology industry or in the implementation of the ICT policy (Isaacs, 2007). It is further acknowledged that “Zambia is the pioneer of Internet in Sub-Saharan Africa outside South Africa in the early 1990s. However, this advantage has not been exploited as the country now lags behind many African counties that started internet services only a few years ago” (Ministry of Communications and Transport, 2006:11).

Up to 2007, Zambia's ICT development was still heavily anchored on mobile operators, fixed line operators and Internet Service Providers (ISPs). In 2007, there were approximately 500, 000 internet users, 700 telecentres and cybercafés with 30 ISPs countrywide. In 2008, there were, 3,200,000 mobile phone subscribers representing a teledensity of 22.5 percent. In 2009 the number of mobile subscribers rose to over 4, 000,000 while in the same year the number of fixed line telephones was only 90, 951. In 2009 there were approximately 1. 3 million internet users representing a penetration rate of 11.9 per cent (Isaacs, 2010).

There is substantial evidence that used appropriately for specific contexts, ICT can be an effective tool for supporting teaching and learning. “In the sphere of education, ICT has the potential to improve the quality of education and training through e-learning and online learning” (MoE, 2007: 2). However, the integration of ICT in education is a contentious issue. MoE (2007) reaffirms that ICT integration is a complex process and as such, all education stakeholders require clear guidance on what is expected of them throughout this process. It is therefore no longer a question of technology being integrated in the

school setting, but rather a question of when and how to integrate the technology so that it benefits both educators and learners. Countries that fail to recognize and respond according to the new trends in new content and new methodologies in education may find it very hard to compete in the new global economy (Kozma, 2003). Cox et al (2002), further observe that new technologies such as internet and computers are often introduced and even forced into schools in ways that do not enhance teaching and learning. They further argue that Ministries of Education are most often too eager to import computers into schools without putting in place a policy environment and curriculum that supports the integration of technology into teaching and in ways that ensure equitable success. For any successful integration of technology, ICTs inclusive, in the teaching process, there is need to understand and appreciate the dynamics of such integration. Even the highest learning institution in Zambia (UNZA) is still grappling with ensuring proper integration of ICT especially in the teaching process. Premised on this synoptic background this research assessed the effectiveness of integrating ICT in the teaching process among selected Colleges of Education (CEs) in Zambia based on the following questions:

(1) What ICT equipment was used in the teaching process in Colleges of Education? (2) What was the role of ICT in the teaching process in Colleges of Education? (3) What factors influenced the use of ICT in the teaching process in Colleges of Education? (4) How effective was the integration of ICT in the teaching process in Colleges of Education?

2. METHODOLOGY

This research mainly employed a qualitative survey research approach. According to Sidhu (2009:109) “survey may be qualitative or quantitative” depending on the nature of data to be collected and how they are intended to be collected. This research combined both aspects. The quantitative approaches were employed mainly during analysis of data through Statistical Package for Social Scientists (SPSS), processing of data and cross tabulation of some research results using the Chi-square (X^2) inferential statistics. A survey approach also facilitated the use of both qualitative and quantitative techniques simultaneously.

The target population comprised of college principals and lecturers as well as ICT coordinators of CEs, MoE National ICT coordinator and the ICT coordinator from the Curriculum Development Centre (CDC). The reason for including various informants in the target population was to ensure trustworthiness and to avoid biasness of data.

Four government-run Teacher Training Colleges were included in this study namely: National In-Service Teachers' College (NISTCOL), Kitwe College of Education (KICE), Chipata College of Education (CHCE), and Solwezi College of Education (SOCE). The institutions were purposively selected to ensure that CEs in urban areas, peri-urban areas and rural areas were represented. The sample consisted of 70 lecturers,

purposively sampled (through homogenous type of purposive sampling) from the four colleges of education. The same (purposive) sampling technique was used to select a principal from each of the four CEs and this brought the number of principals to four. Moreover, one MoE National ICT coordinator was also selected as an informant. From CDC, one ICT coordinator was also purposively selected to be part of the sample. This brought the total sample size to 80

Purposive sampling, also known as *judgmental*, *selective* or *subjective* sampling, is a type of *non-probability sampling* technique (Kumar, 1999). Homogeneous sampling is a purposive sampling technique that aims to achieve a homogeneous sample. In this respect, homogeneous sampling is the opposite of *maximum variation sampling* (Leedy and Ormrod, 2001). A homogeneous sample is often chosen when the *research question* that is being addressed is specific to the characteristics of the particular group of interest, which is subsequently examined in detail, in this case the college lecturers, principals, ICT coordinators were regarded to have such unique characteristics.

Semi-structured interview schedules were mainly used to collect data from the principals, CDC ICT coordinator, and national ICT coordinator at MoE headquarters. An administered questionnaire was used to collect data from college lecturers.

The use of semi-structured interview facilitated follow-up questions to obtain deeper insight on certain issues that were raised by the respondents during the direct interviews. The researcher also used simple observations of respondents' non verbal cues during interviews and surroundings so as to confirm whether some of the issues they claimed to have been happening were existent or not. Questionnaires were administered to selected lecturers. Peterson (2006) notes that a questionnaire enables quantitative data to be collected in a standardized way so that the data are internally consistent and coherent for analysis. Mugenda and Mugenda (2003), state that an interview is an oral administration of a questionnaire. He further adds that the observational method's key feature is a standardised, planned, and systematic approach to objectively observe and record behaviour so as to generate all-important data upon which to base any conclusions. The combination of these methods of data collection helped in ensuring validity and trustworthiness of data through the process called triangulation (Sidhu, (2009).

Secondary data were obtained from documentary sources, reports, print and electronic media and some dissertations, books, among others from the University of Zambia library and other sources. The researcher got permission from relevant authorities of each institution visited. When undertaking any research, it is important to consider ethical issues. Mugenda and Mugenda (2003), note that awareness of ethical issues will protect the integrity of the people involved in the research, some of whom may not be able to represent themselves in the event of being misrepresented, and also protecting the integrity of the researcher and ensure authentic results.

In the analysis of data, both descriptive and inferential statistics were used. Descriptive statistics involved manual coding of data and subsequent tabulation into frequencies and percentages. For open ended questions, the coding of data involved classification of words and phrases that related to the same content into major themes (Leedy and Ormrod, 2001). The idea was to allow the actual existing pattern, themes and phrases of the research results to emerge from the data. After the summary of the results from the interview questions, main emerging themes and ideas were manually coded, synthesized and quantified into percentages and presented in form of tables of frequencies and percentages. In the analysis of data using inferential statistics, Chi-square (X^2) test was used to establish the linkage of some variables with ICT integration in teaching process. The findings in the context of the research questions are presented in order to clarify the data.

Table 1: Distribution of respondents by Age, Gender and Institution

A. Background Characteristics	Number	Percentage (%)
Age		
Below 30	4	5
Between 30-50	60	75
Over 50	16	20
TOTAL	80	100
B. Gender		
Male	50	62.5
Female	30	37.5
TOTAL	80	100
C. Institutions		
National In-Service Teachers' College	20	25
Kitwe College of Education	19	23.75
Chipata College of Education	20	25
Solwezi College of Education	19	23.75
MoE	1	1.3
CDC	1	1.3
TOTAL	80	100

Table two below shows that most of the respondents (71.3 per cent) had first degree as their highest academic qualification whereas, 12.4 per cent were holding masters degrees. The least qualified (five per cent) were holding a diploma.

Table 2: Distribution of respondents by professional/academic qualifications

Professional Characteristics	Number	Percent
Master's	10	12.4
First Degree	57	71.3
Advanced Diploma	9	11.3
Diploma	4	5
Total	80	100

Table three below shows that the most commonly used (42 per cent) ICT equipment among CEs was a desktop computer and the least used (8 per cent) being LCD. Although the TV is such popular ICT equipment, it only scored 21 per cent of all ICT equipment that were in use.

Table 3: Distribution of responses by type of ICT equipment used in CEs

ICT equipments	Frequency of response	Percentage of responses
Desktop computer	63	42
Laptop computer	21	14
Liquid Crystal Display	12	8
TV	32	21
Radio	22	15
Others	0	0
Total	150	100

Figure one below shows that NISTCOL had the highest number of desktops, seconded by Chipata College of Education and the least being Solwezi College of Education. In terms of laptop computer possession,

Chipata College of Education had the highest number and the least being Solwezi. Furthermore, NISTCOL

Table 4: General use of ICT by lecturers in CEs

had the highest (seven) number of LCDs. Figure one further shows that ICT equipment such as video camera, TV and radios were the most uncommonly used ICT equipments probably due to technological advancements.

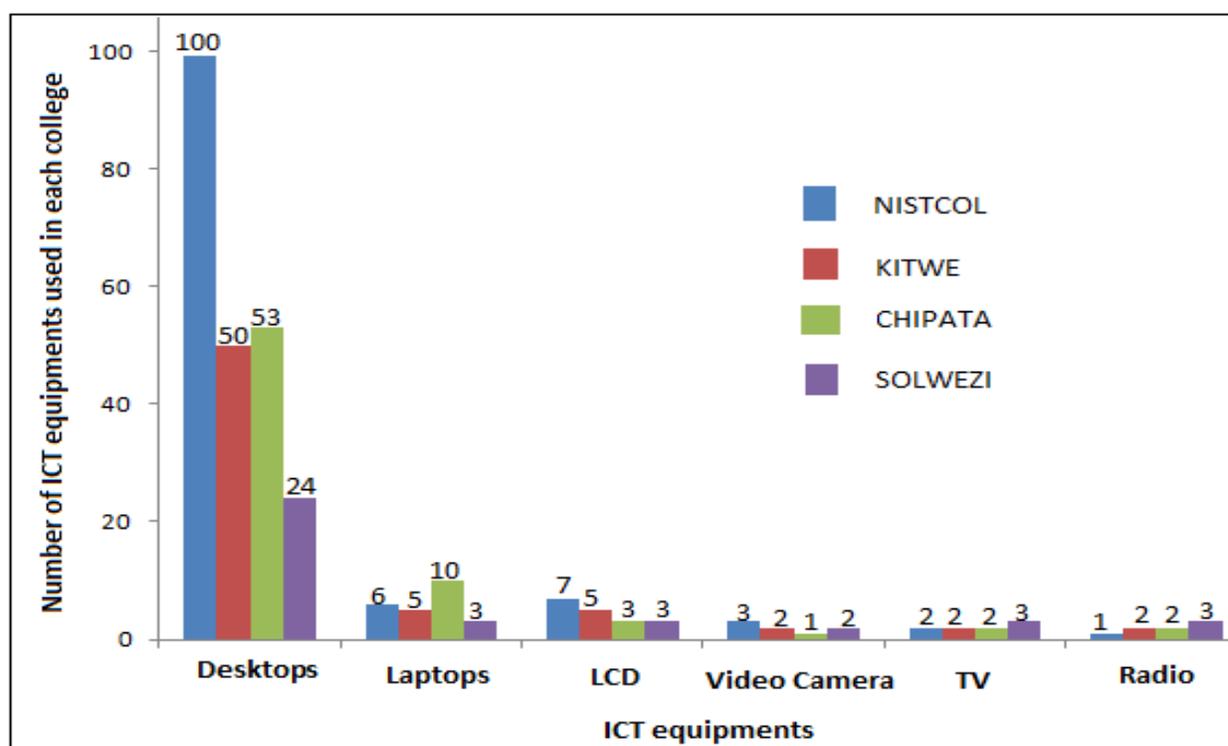


Figure 1: Number of ICT equipment by each College of Education in Zambia

Of all the lecturers interviewed among Colleges of Education, the findings revealed that only 43 per cent were already literate and 26 per cent were still undertaking ICT training. Thirty-one per cent of them were not yet literate in ICT.

Table four below shows that ICT equipment were in general terms mainly (30 per cent) used in making presentations. Other areas in which ICT was fairly used included preparing educational reports (15.7 per cent) and teaching computer skills (8.6 per cent)

General use of ICT equipments	Frequency	Percentage
Teaching computer skills	6	8.6
Finding/Accessing educational information	6	8.6
Making presentations	21	30
Communicating with students	5	7.1
Administrative tasks	3	4.3
As a Learning Management System e.g. Moodle	1	1.4
Monitoring and Evaluating students' progress	7	10
Preparing Educational Reports	11	15.7
For personal development	2	2.9
Teaching specific lessons	2	2.9
Networking	1	1.4
Preparing lessons	2	2.9
others (please Specify)	0	0
Total	70	100

There was no significant association between ICT literacy and effective use of ICT in teaching process ($X^2_{cal}: 52.34 > X^2_{tab}: 36.42$), $df=24$, significance level >0.05 ; as shown in Appendix 3a).

Although there were some ICT equipment in CEs, the findings revealed most lecturers (62 per cent) did not have access to them and only 38 per cent of them had access to ICT facilities as shown in figure two below:

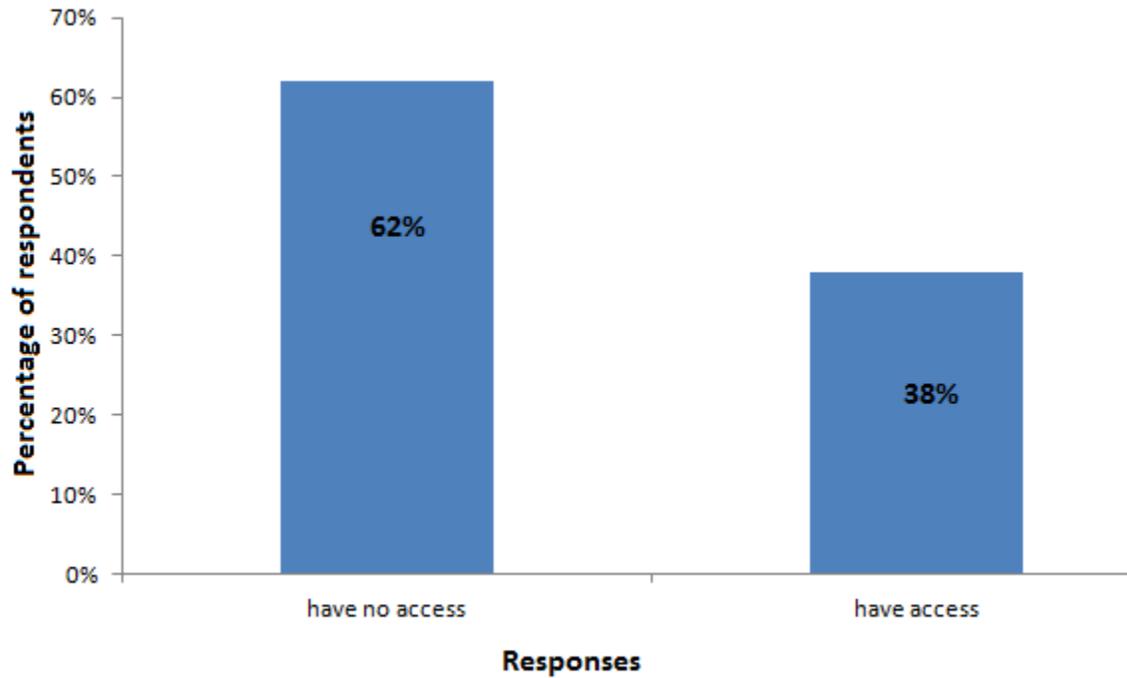


Figure 2: Whether or not respondents had access to ICT facilities in the colleges

As regards the existence of an ICT policy, most respondents (50 per cent) said that their colleges did not have ICT policy framework whereas, 29 per cent of them said that it existed. Only 21 per cent were not sure as to whether it existed or not

Table 5 below shows some of the effects of ICT in teaching process among selected Colleges of Education

Table 5: Distribution of responses on the effects of ICT integration in teaching process

Table 5 above shows that ICT had made teaching to be easier (25 per cent) and that it was a good system of storing or keeping records (22.5 per cent) and easy networking. On the other hand, most (46.7%) of the responses on the negative side of ICT showed that ICT integration disadvantaged those

Effects of ICT in teaching process		
POSITIVE	Frequency	Percentage
Teaching is now easier	20	25
Help quick access to updated information	14	17.5
Easy networking with other lecturers	12	15
Information sharing has been easier	16	20
Good storage of students' assessment record	18	22.5
Others (specify)	0	0
Total	80	100
NEGATIVE	Frequency	Percentage
Disadvantages those who do not know yet	42	46.7
Over reliance on internet data by both students and lecturers	12	13.3
Risk of losing data when ICT systems crush	17	18.9
Teaching through ICT is not easier for beginners	19	21.1
Others (specify)	0	0
Total	90	100

who were literate yet. Moreover, 18.9 per cent of responses evinced that there was a risk of losing data when the ICT system crushes.

In figure three, most (62 per cent) of the respondents were very convinced that the integration of ICT in teaching process was not effective whereas, 38 per cent of them argued that it was effective.

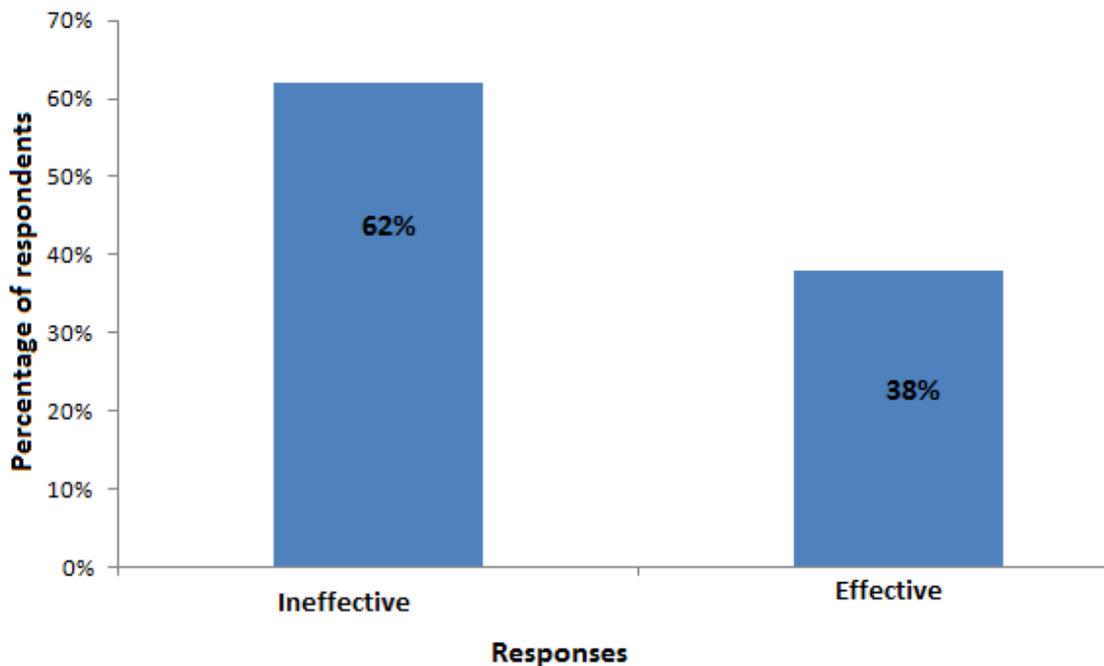


Figure 3: Effectiveness of ICT integration in teaching process among CE

Since the calculated Chi-square value ($X^2_{cal}: 72.46$) was greater than the tabulated value ($X^2_{crit}: 5.99$), the null hypothesis (H_0) was rejected. Therefore, there was no significant link between support from the government and ineffective or effective integration of ICT in teaching process.

4. DISCUSSIONS

The majority (75 per cent) of the respondents were between the ages of 30 and 50. Only a few (5 per cent) were below the age of 30. The majorities (62.5 per cent) of respondents were males and only 37.5 per cent were females. This indicated that overall, tertiary education institutions studied were still lagging behind in terms of gender balance.

Furthermore most of the respondents (71.3 per cent) had a first degree as their highest academic qualification whereas, 12.4 per cent were holding a masters degree. Whilst 11.3 per cent of the respondents had earned advanced diplomas, the least qualified (5 per cent) were holding a diploma. Given such a trend especially in CEs, we can safely say that majority of the teacher trainers had not yet upgraded their education levels to make them more qualified as trainers' trainers.

The findings further show that the most commonly used (42 per cent) ICT equipment among CEs was the desktop computer and the least (8 per cent) used being LCD. Although the TV is such popular ICT

equipment, it only scored 21 per cent of all ICT equipments that were used, besides the radio which scored 15 per cent, 14 per cent of the responses showed that laptops were also used in the teaching process.

There were variations in the ICT use for teaching by lecturers and the variations were as a result of levels of access to computers, institutional rules and regulations and the level of ICT skills by the lecturers. In terms of ICT use by course or subject, most responses (20 per cent) showed that they were mainly in computer classes, seconded by mathematics and natural sciences (15 per cent each) given that 17.7 per cent of responses indicated total none use of ICT equipments in any subject or course. Other courses in which ICT was used included social sciences (10 per cent), Local Languages (6 per cent), Music (6 per cent), English Language (4 per cent), Art (6 per cent) and the least was Physical Education which accounted for 1.5 per cent. The above picture is showing us that there were inter subject variations when it comes to integration of ICT in the teaching process. Computer course was found to be more advanced in use of ICT equipment possibly because it was the source of ICT and lecturers were specifically trained into such fields. The differences in terms of integration were already showing the different levels of accessibility and literacy in ICT skills.

It was established that laptops, desktops, LCDs and others were used during power point presentations of lessons. Desktops were also widely used for administrative tasks. Video cameras were used to record events during a workshop and not necessarily with a view to be used in the teaching and learning process. Radios and TV sets were usually put in staffrooms and used as sources of news and entertainment.. Furthermore, ICT equipment were used in teaching computer skills, searching for educational information, making presentations as well as monitoring and evaluating students' progress. Generally, it was noted that the use of ICT equipment and skills was more biased towards certain courses and subjects unlike being uniformly distributed among different subjects. Moreover, it was also observed that some uses to which ICT skills were used might not have been for the purpose of enhancing the teaching process as they were used for personal interests.

Moreover, the conclusions through the Chi-square test showed that there was no significant association between ICT literacy and effective use of ICT in teaching process ($(X^2_{cal}:52.34) > (X^2_{tab}:36.42)$, $df=24$, significance level >0.05). This also confirms that although a good number of lecturers could have done ICT training, they did not effectively use the acquired skills for the teaching process.

The revelation that 43 per cent of the lecturers were already ICT literate and 26 per cent were still undertaking ICT training inherently implied that there would be more ICT literate lecturers in colleges. Thirty-one per cent of them were not yet literate in ICT. Despite the majority of the lecturers having

undergone training in ICT in various programmes, it was observed that there was general lack of knowledge on how to use ICT for subject integration. Most lecturers were competent in Microsoft Word and use of internet to search for information but generally expressed lack of adequate knowledge even in the use of Excel, an application that is essential for teachers in analyzing students' results, drawing graphs, carrying out routine calculations and others. They attributed this to the fact that they had not undertaken any training that was specifically tailored for integration of ICT for the teaching process.

Without adequately trained teachers in ICT and computer skills, the utilization and integration into the curriculum might be minimal. Pelgrum (2002) contends that teachers who did not have adequate skills in ICT might not use ICT for curriculum integration. A good number of lecturers who did ICT training did not undertake it to enhance teaching but for various reasons such as earning additional income (31.2 per cent), prestige (6.3 per cent), personal growth (6.3 per cent), and career enhancement (25 per cent), which were not precisely aligned to the teaching process.

Therefore, there is need to carefully tailor the ICT training towards the teaching process unlike doing for the sake of it otherwise we may end up having a lot of ICT-trained teacher educators who cannot deliver lessons using ICT

Despite having some ICT equipment in CEs, most lecturers (62 per cent) did not have access to them and those who had access (38 per cent) had a variety of motives for using them. The ICT coordinators in all the four colleges complained that the inadequacy of the desktops was felt when a task required students to use the desktops since the lowest student to computer ratio was at 20: 1 and the highest at 25: 1. The students to computer ratios in the CEs were not very conducive for effective use of these gadgets for teaching. "Studies show that the U.S.' student to computer ratio of 5 : 1 is tied for the first in the world, along with Australia and Latvia, with New Zealand and Norway a close second at 6 : 1 (Tearle, 2004).

Most respondents (50 per cent) said that their colleges did not have ICT policy framework whereas, 29 per cent of them said that it existed with 21 per cent not sure as to whether it existed or not. The denial and uncertainty that policy frameworks did not exist by the majority of the respondents inherently pointed to the weaker and unpragmatic ICT policy framework. So even if they existed, lecturers would doubt their existence because of lack of impact on the ground. Even the officials from MoE and CDC also confirmed that Government support and policy frame work had generally been poor and there was therefore need to re-strategise in order to meet the goals.

Although poor government collaboration with CEs was cited to be one of the hindering factors to integration of ICT, inferential statistics showed that there was no significant link between support (be it

good or poor) from the government and ineffective or effective integration of ICT in teaching process. This was because the calculated Chi-square value (X^2_{cal} : 72.46) was greater than the tabulated value (X^2_{crit} : 5.99), the null hypothesis (H_0) was rejected.

The study established that there was an absence of a national policy that governed all educational institutions in the country on how to integrate ICT in education. Two colleges did not have well written out ICT integration plans; what the researcher found at institutional level were the expressed views and ideas of the ICT committee. Furthermore, it was established that all the institutions did not have written down strategic plans to sustain the ICT they had acquired. The non approval of a MoE national ICT contributed to the CEs not taking the policy seriously. An ICT policy is very essential in setting up rules and regulations to ensure the smooth execution of ICT integration into the curriculum. A good policy can play a role in building a rich, lively and attractive ICT environment. It is conceptualized as a tool that can effectively support the implementation of teaching and learning, contribute to improving efficiency and quality of education through use of ICT (DoE, 2004).

There was a claim by those who believed that it was conducive to integrate ICT into the teaching process and that there were good targets set for the learner and that ICT equipment, ICT infrastructure were good enough in addition to a good environment. But if we refer back to figure one, we can safely conclude that the ICT equipments were not as good as claimed. On the contrary, the majority who argued that the environment and resources were not conducive for integration provided their own reasons such as poor ICT tools (23 per cent), poor ICT literacy (eight per cent), lack of good ICT policy (eight per cent) and lack of cooperating partners (8.6 per cent). Other reasons cited to prove that ICT integration environment was not ripe were lack of adequate funding (20 per cent) and poor ICT infrastructure (26.6 per cent). Based on the observations, each college had only one computer laboratory with the sitting capacity ranging from 14 to 30, in a rare situation that all computers were functional.

Furthermore, the computers were arranged in a manner that supported the traditional teacher-centered approach as opposed to constructivist theory. Moreover, most of the refurbished desktop computers were of poor quality and were taking long to log on according to observations. According to UNESCO (2004), most educational managers stress the importance of access to ICT, but also the necessity to maximize the potentials of available equipment. To meet standards for integration of ICT in teaching and learning there needs to be sufficient equipment, installed in computer multimedia rooms. Teachers and learners should all get access to ICT for their work and study. Managers and administrators need ICT for improved education management. Faculties and departments need to effectively manage and optimize the potential of available equipment by categorizing and allocating equipment

appropriately. Favorable conditions have to be created for learners to be able to study in any place, at any time and to be able to access appropriate content.

The general impression of the discussed findings inherently revealed the importance of administrative will, school governance and leadership in managing ICT integration in CEs. Baylor and Ritchie (2002: 412) are of the view that leadership is a critical predictor of ICT integration since it focuses on promoting the use of ICT at a strategic and action level.

In a nutshell concerning factors influencing integration of ICT in the teaching process, we have established that several factors were involved. Among these were poor ICT policy framework, poor ICT literacy, poor partnership with government and the private sector, poor ICT equipment, poor technological skill, unsuitable environment and resources to mention but a few.

Screening all the studied CEs through the UNESCO framework and in the context of the evidence provided in this research, it can safely be concluded that the integration of ICT in teaching process has not been effective in all the CEs which were studied. The exact opposite of the UNESCO standards and parameters were the most common cases among the CEs. Therefore, Zambia and particularly the MoE need to quicken up the process of effective implementation of ICT into the teaching process. We cannot always rely on a draft policy document if we are to meet the criteria as set by the UNESCO.

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Introduction

Implementing change in education in Africa is both urgent and problematic. It has been suggested (SEIA, 2007) that secondary education in Sub-Saharan Africa does not contribute to human capability development as effectively as it could and that student learning and achievement remain low. This paper describes a project that is based on the premise that changes in education will come through improving teaching practices through a focus on promoting effective pedagogy (Hardman et al, 2011), and that change is more likely to be successful if it takes place with closest proximity to the problem (Elmore, 1979; Landson-Billings, 1994). This is significant because too often the focus is on ‘what shall we teach?’ rather than ‘how shall we teach?’, New Governments coming to power, often wish to improve the education system and immediately set up a review of the curriculum. Evidence suggests, however, that it is the ‘how’ that is likely to make a difference (Hardman et al, 2011; Leach and Moon, 2008). The focus of this project is on teaching science, in the lower secondary school, which is appropriate as strong performance in maths and science is associated with economic growth.

The project described here is an extension of ‘Teacher Education in Sub-Saharan Africa’ (TESSA). TESSA ran from 2005-2010 and focussed on improving primary education. A resource bank, including 75 units of work, rooted in the primary curriculum and versioned for different countries, has been made available as Open Educational Resources (OER). In 2010, funds were secured (from The Waterloo Foundation) for TESSA Secondary Science, which will extend the TESSA approach to lower secondary level in five countries – Ghana, Kenya, Tanzania, Uganda and Zambia. This paper describes the thinking behind TESSA Secondary Science and argues that, whilst it is impossible to cover the whole of the secondary curriculum in resources in the form of OERs for five different countries, it is possible to identify a range of appropriate pedagogies that can be adapted for different contexts. In the process of doing the adaptation, teachers will better understand new pedagogies, and will be encouraged to enact them in their classrooms. The project has been shaped by the context in which we are working, learning from the TESSA project and a firm belief that improvements in pedagogy will deliver improvements in educational outcomes.

Evidence from TESSA suggests that the resources developed are making a difference in many primary schools (TESSA Case studies, 2010). TESSA Secondary Science is therefore based on the same key principles, with the details being adapted for the different context. We will begin therefore by

articulating those principles, describing the context and explaining how the difference between the primary and secondary contexts have influenced the way in which the project has developed.

Introducing TESSA Secondary Science

The TESSA Approach

There are five important principles that underpin the TESSA approach to effecting educational change:

Educational outcomes can most effectively be improved by improving the quality of teaching.

To be sustainable, the resources used to improve teaching need to be developed in Africa by Africans.

The most effective way to produce high-quality materials that will be widely used is through collaboration.

The materials must be freely available, with the ability to be adapted for individual use (TESSA, 2008)

The materials can be versioned for use in different countries. In this way the resources 'speak' to teachers more effectively and the process of versioning provides an opportunity for teams within the partner institutions to become involved in the project.

Furthermore, TESSA embodies a model for change advocated by Richard Elmore (1979) in which the intervention takes place at the point at which the change is needed i.e in the classroom. Elmore argues that solving problems in complex systems involves maximising discretion at the point where the problem is most immediate and 'the closer one is to the problem the greater is one's ability to influence it' (Elmore, 1980, 605). Formal organisational structures with a high degree of hierarchical control are not necessarily helpful and the more steps that are required for implementation, the less likely that a policy will be successful. For this reason the targets of the TESSA approach are teachers and teacher educators, rather than policy makers and district officials. The template for the TESSA units is described in box 1.

The TESSA Template

All TESSA units contain the following components:

Learning outcomes for the teacher. These are statements, which describe what the teacher will learn to do as a result of running the activities described in the unit, in their classroom.

Three activities that the teacher could carry out in their classroom.

Three case studies that show how the activity, or a similar one might run, taking into

account contextual factors such as large classes, and few resources.

Resources to support the teacher in running the activities and understanding the pedagogical strategies being introduced.

A narrative, which explains to the teacher the benefits of the approaches that are being promoted.

The secondary context

Secondary schools in Sub-Saharan Africa are under considerable pressure at present (Verspoor, 2008), with shortages of space, equipment and teachers. This is partly because of considerable advances towards the achievement of Millenium Goal 2: universal primary education by 2015 (UNDP, 2011). Countries in Sub-Saharan Africa (SSA) that previously educated around 50% of primary aged children are now achieving 70-80%. There is therefore an urgent need for the expansion of secondary education with more schools, resources and teachers, and a focus on quality, particularly in science and mathematics. Many primary school teachers have very little formal training and are often inadequately prepared or trained (Vandenbosch, 2002) and in many countries there is therefore a culture of in-service development with teachers working towards certificates and diplomas. TESSA resources are being used in a variety of ways on many such programmes (Thakrar et al, 2008). In the secondary sector, however, there are well-established pre-service programmes. Secondary teacher training typically takes four years and involves subject knowledge development and pedagogic preparation, with these often being conducted in different faculties within an institution. Collins and Gillies (2008) believe that the structure of the current system for training teachers will not allow for the necessary expansion. Criticisms of the programmes (Verspoor, 2008) include:

an over-emphasis on theoretical studies which are not explicitly linked to practice;

insufficient supervision and mentoring;

the tendency of pre-service teachers to teach as they themselves were taught.

Collins and Gillies (2008) suggest that pre-service training needs to be accelerated with shorter periods of pre-service education and a greater emphasis on in-service training. They believe that pre-service programmes need to be re-designed with a greater emphasis on the practical application of the theory. It is in these circumstances that educative resources that support student teachers and teachers in

developing effective pedagogy could make a difference, and it is likely that there will be a subsequent growth in in-service training.

Given the fact that nearly all secondary school teachers follow a pre-service course, which includes a period of school experience, it was decided to target student teachers and teacher educators in the production of the TESSA Secondary Science units, whilst being aware that the units would also find an audience in in-service courses.

TESSA Secondary Science

It was agreed by the project co-ordinators that TESSA Secondary Science should follow the same principles and use the same template as the original TESSA project. A bid for Funds was made and were secured to develop a total of 15 units. The pressure of external examinations and overloading of the curriculum, mean that the classroom activities suggested in the units are often very short. This is important, as it became clear during the initial workshops that teachers were unlikely to engage with anything that they perceived would stop them completing the syllabus. The activities often involve 'standard' experiments for exactly the same reason, but also include a flavour of some of the 'big issues' facing the continent, in order to encourage secondary school students to engage with the debates. The units are constructed around five pedagogical themes.

Pedagogical themes and contexts

Defining pedagogy in a short sentence is very difficult; it embraces the skills of an individual teacher, the ways in which they present material, and their mode of engagement with social processes. Good teachers see pedagogy as a dynamic process, manifested in the daily interactions between teachers and learners. They are curious about pedagogy and are reflective and evaluative about what they do. Crucially, pedagogy is informed by theories and beliefs (Leach & Moon, 2008). The starting point therefore for a project to develop and support effective pedagogy was the explicit articulation of the values and beliefs shared by the group.

Representatives from each of the five partner institutions in Ghana, Tanzania, Kenya, Zambia and Uganda, gathered in Tanzania and the first morning was spent considering the question: what makes an effective secondary science teacher? Colleagues worked in pairs to identify the skills, knowledge, practices and attributes displayed by an effective teacher. A discussion followed in which the ideas were captured; no idea was recorded that wasn't completely understood and agreed by everyone. The result was a description of an effective teacher (appendix 1), which embodies the values and beliefs of the group. The next challenge was to convert this into a set of pedagogical themes that would be highlighted in the materials. After much discussion and debate, drawing on the collective experience of

teachers and teacher educators from five African countries, five themes were identified and agreed. The themes were cross-checked against the definition of an ‘effective teacher’ and the group were satisfied that in writing resources based on the five pedagogical themes, they would be supporting teachers in learning to become more effective (table 1).

Pedagogical theme
Probing students’ understanding
Making Science practical
Making science relevant to everyday life
Problem solving and creativity
Dealing with challenging ideas

Table 1: Pedagogical themes exemplified in TESSA Secondary Science

It is interesting to note that using a completely different approach, a group of researchers in the USA came to a broadly similar conclusion.

Davis and Krajcik (2005) describe a project to produce ‘educative curriculum materials’ for use in secondary science teacher education in the USA. They describe a set of nine ‘design heuristics’, based on what they consider to be the important parts of a teacher’s knowledge base: subject knowledge, pedagogical content knowledge for specific topics, and pedagogical content knowledge for disciplinary practices. The heuristics are based on the challenges that teachers face as identified through a review of the literature. The ‘themes’ underpinning the TESSA Secondary Science project are based on the collective experiences of teacher educators from five African countries and the UK, and our agreed vision of an effective secondary science teacher. Interestingly there is considerable overlap (see Table 2), which gives support to both the TESSA approach and the framework that presented by Davis and Krajcik.

Table 2: A comparison of the design heuristics for educative curriculum materials as identified from the literature (Davis & Krajcik, 2005) and the TESSA Secondary science themes.

Themes of TESSA Secondary Science	Design Heuristics
Science lived – making science relevant to the everyday	Supporting teachers in engaging students with topic-specific scientific phenomena
Probing students' understanding	Supporting teachers in anticipating, understanding and dealing with children's ideas about science
	Supporting teachers in engaging students in questions
Making Science practical	Supporting teachers in engaging students with collecting and analysing data
	Supporting teachers in engaging students with designing investigations
Dealing with challenging ideas in science	Supporting teachers in engaging students in making explanations based on evidence
	Supporting teachers in using scientific instructional representations
These feature across all the themes through the resources that accompany each TESSA unit.	Supporting teachers in promoting scientific communication
	Supporting teachers in the development of scientific knowledge

The theme identified in TESSA secondary science that does not seem to be represented in the 'design heuristics' for educative curriculum materials is 'problem-solving and creativity'. This theme emerged from discussions surrounding the need for teachers (particularly in Africa) to be resourceful and creative, and from the belief that the ability to solve problems and to be creative were skills and attributes that should be fostered in pupils through the curriculum. Students can become more effective problem-solvers through science training that emphasises problem-solving and while de-emphasising

exercises (Staver, 2007). The three units within this theme will support the teacher in being creative and resourceful whilst developing these skills for their pupils. A possible explanation for the absence of this theme from a review based on the literature is that a clearer identification of the nature of science and what children should learn about it, has taken place in recent years (Osborne et al, 2003; Bartholemew et al, 2004), which sees working scientifically as more than doing experiments. It is possible that Davis and Krajcik might include a heuristic based on promoting creativity if they were to revisit this work today.

There is further support in the literature for the pedagogical themes that we have identified. Grossman et al (2009) argue that teacher education should be organised around a set of core practices based on pedagogies of enactment. In their model for teacher education, knowledge, skill and professional identity would be developed in the process of learning to practice. They suggest some ‘core practices’, which include eliciting student thinking. Their ideas on re-structuring teacher education courses are developed in the USA but are perhaps even more pertinent in the African context, where traditionally theory and practice are treated separately.

Thus the pedagogical themes identified through the process described provide a credible structure for the resources. They are exemplified in a number of different scientific contexts.

Scientific contexts

It was clear at the planning stage that we did not have sufficient resource to cover the whole of the lower secondary science curriculum and decisions would need to be made as to which contexts were used to exemplify the themes. Some preliminary work was done to identify topics that are taught in all five countries in the lower secondary curriculum. These topics were presented to the group and they were asked to use their knowledge of schools in their country, the science curriculum and the topics that student teachers find harder to teach, to select a topic for each theme. It quickly became clear that it would be most appropriate to choose topics that could clearly be identified as ‘physics’, ‘chemistry’ or ‘biology’. Thus, titles for 15 units were chosen, enabling each theme to be exemplified in physics, chemistry and biology (Table 3).

Theme	Biology context	Chemistry context	Physics context
Probing children’s’ understanding / learning	Classification and adaptation	Elements, compounds and mixtures	Mechanics & properties of matter

Making science practical	Transport	Acids, bases, salts	Measurement
Science lived (relevant and real)	Respiration	Combustion	Pressure
Problem solving – creativity – innovation in science	Nutrition	Chemical families & Periodic Table	Forces
Dealing with challenging ideas in science	Cells	States of matter	Electricity and magnetism

We would argue that we are aiming to affect change by establishing a particular way of thinking about learning and teaching. Once this way of thinking has been understood and embraced, the activities described in the units, can, with the help of the case studies, be adapted for different contexts.

Effecting change

The approach to learning and teaching that is embodied in the collective vision of an effective science teacher is one which is learner-centred, in which students construct knowledge as a result of engaging in and discussing, different activities. The role of the teacher is to enable the learners to construct knowledge, to understand and engage with their ideas and to provide opportunities for students to work together to extend and develop their knowledge. All the participants in the exercise were committed – as many teachers are - to learner-centred approaches. However, enacting these approaches is often more difficult than it seems. Brodie et al (2000) refer to the ‘form’ and the ‘substance’ of learner-centred teaching and their ideas have influenced this project. They argue that embracing the ‘form’ of learner-centred teaching is relatively straightforward; it involves for example, thinking about how resources are used, using group work, thinking carefully about the nature of the tasks being set and the careful use of questioning. Embracing the ‘substance’ involves understanding and engaging with students’ ideas and enabling learners to develop new knowledge. Not surprisingly perhaps they found in a project conducted over three years, that an encouraging number of teachers

embraced the 'form' of learner-centred approaches, but relatively few embraced the 'substance'. They also found that none of the teachers in the study embraced the 'substance' without the 'form'.

This has implications for the implementation of TESSA Secondary Science and emphasises the challenge of establishing new ways of thinking. We are reconciled to the fact that it will take time to embed this way of thinking in the institutions with which we are working but it is worth highlighting three principles that have emerged during the project to date and from the literature, that will drive the implementation phase.

Firstly, we are convinced of the importance and value of modelling the activities (Staver, 2007). Student teachers are unlikely to have been taught in this way, and by working with teacher educators who are in a position to model the activities in their own teaching, we are creating the opportunity for student teachers to experience learner-centred teaching especially that the new science curricula in the content demand change in the instructional approaches, that is, from teacher-centred to learner-centred approaches (Ottevanger, Van Den Akker & Feiter, 2005). Secondly, we are mindful of the link between the 'form' and the 'substance'. The activities in the TESSA Secondary Science units support teachers in making small and therefore manageable changes in their practice. Experience in TESSA Primary shows that as teachers build confidence, they are prepared to take risks, but getting to that stage is a gradual process. Finally, the idea that new knowledge is socially constructed is particularly pertinent in this context. Student teachers and teachers will benefit greatly from working together to adapt activities and evaluate their own experiences. Even if teachers are well trained, they often find it difficult to teach effectively because of lack of adequate teaching and learning support materials that are relevant to the local situation (Vandenbosch, 2002). The growth of the OER movement is particularly helpful in this respect as by engaging with the TESSA Secondary Science units and adapting them to new contexts, student teachers and teachers will really begin to change their thinking.

Conclusion

Effecting change in the secondary context presents many challenges, not least the size of the curriculum, the pressures created by the examination system and entrenched attitudes about what is and is not possible. However, whilst educational outcomes remain poor, it is an argument that we must continue to make, and the barriers to change must be addressed. The TESSA Secondary Science resources are based on a strong rationale and include activities and case studies that support effective teaching and learning. They are based on a model of change that has been proved to be effective in the primary context. Encouraging teachers and student teachers to adapt the activities to different contexts will be crucial as through that process the ideas and practices promoted in the units will be understood and developed.

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EDUCATION FOR SUSTAINABLE DEVELOPMENT: THE ROLE OF TEACHERS IN THE UPPER BASIC EDUCATION LEVEL (Izuagba & Obilo)

Introduction

Sustainable development have been explained in many ways, Brundtland Commission (1987:1) defines it as “development which meet the needs of the present without compromising the ability of future generations to meet their own needs” This implies that for the environment to be sustainable, there is need for respect for nature, human rights, economic justice and cultural peace .In other words , education for sustainable development demands the production of learners who in contributing to improving the quality of lives , and social and economic equity and ensuring that the eco-system is protected.

The need to educate learners for sustainability stems from the fact that a sustainable environment and the continued existence of man are intricately interwoven as it is from the environment that food, water, clothing, medicine and the air we breathe are derived. The extent to which we protect or abuse our environment determines how harsh or clement the weather will be and also, how fruitful and fulfilled our lives and that of the up-coming generations will be. Specifically, our daily activities impact on the environment and these activities can be social, economic and technological which have adverse effects on the ecosystem. The social impact is visible in bad governance and policies that lead to inequality, exclusion and discrimination which magnify poverty and unsustainable development. The economic effects manifest in the adverse effects of man`s irresponsible consumption of finite natural resources such as over exploitation of economic and natural resources, adverse effects of industrialization and technological development on the environment.

In Nigeria some adverse impacts of human activity on the environment include:

- increasing urbanization which leads to over-population that put a lot of pressure on non-renewable finite earth resources.
- the use of coal , wood for cooking and bush burning which has not only depleted forest reserve but has lead to desertification in the northern part of the country and gully erosion in the Southern Nigeria that is washing away of soil nutrients , affecting agricultural production and infrastructures.
- Increased mining and oil exploration and oil spill that have caused great damage to the soil, eco-system and sea food as in oil producing areas of Nigeria.
- Emission of gas from industries , vehicles and other house-hold equipments has adversely affected the atmosphere and led to green house effects

- Indiscriminate dumping of refuse that has blocked drainages, caused air pollution, diseases and environmental damage.
- Indiscriminate falling of trees that has caused gully and sheet erosion in different parts of the country
- The use of pesticides, chemical fertilizer and other chemicals in agriculture has polluted sources of safe drinking water and increased soil acidity
- The use of dynamite in fishing which has depleted sea food
- Increase in the use of irrigation for farming , 'growth in industrial , intensive dam construction for the generation of power have affected the availability of safe drinking water
- Decrease in crop yield due to pollution arising from the use of polythene, plastic pollution and other non-degradable products

Since all these problems emanate due to man's interaction with the environment and unethical consumption; this call for the need to integrate environmental sensitivity and responsibility in curriculum implementation to help the learners not only develop responsible way of living, critical thinking and problem solving skills that will enable them address causes of environmental decay and evolve long lasting solutions that will lead to sustainability. Supporting this, UNESCO(1997) argues that education can facilitate sustainable development if through the curriculum learners are made to realize the interdependence between man, the society, the economy and the eco-system. Illustrating this further cdupless@csir.co.za(2002) add that:

The economy exist entirely within society, because all part of the human economy require interaction among people. Society in turn, exit entirely within the biophysical system. society and its economic systems can never exist independent of the biophysical environment biosphere p34.

In other words, the choices, actions and activities of human beings in the society as they strive to eke a living can have adverse effects on the environment if they fail to develop responsible attitude and sensitivity towards the finite nature of non-renewable earth resources. The question is how do we develop in the learners the positive and responsible attitude towards the environment? How can learners develop empathy towards the complex environmental problems that plague the Nigerian society today? How can creative and critical thinking be developed in learners so that they can learn to think, reflect on the consequences of their actions, develop responsible attitude and come up with solutions to the mirage of environmental problems in Nigeria? As a matter of fact, the aim of education is not to produce learners who have acquired only sound knowledge of the subject matter and are able to regurgitate same in the examination. Rather, it is to equip the learners with knowledge and

competences that will help them understand themselves and be able to take good decisions that will lead to individual and societal development.

This the Federal Government aptly couched this in the National Policy on Education FRN(2004)

- the inculcation of national consciousness and national unity;
- the inculcation of the right type of values and attitudes for the survival of the individual and the Nigeria society;
- the training of the mind in the understanding of the world around, and
- the acquisition of the appropriate skill, abilities and competence both mental and physical as equipment for the individual to live and contribute to the development of the society.

A close look at the above lofty aims of education shows that they reflect a nation's overall philosophy and how the nation hopes to use education as a tool to develop individuals who in turn will use the knowledge and competences acquired to develop the nation and make development sustainable. It is on the bases of the above goals that the curriculum of the Upper Basic Education is developed ,(Obanya,2004b). The curriculum equally prescribed the methods to use so that learners are adequately prepared for sustainability. Specifically, the curriculum of the Upper Basic Education level demands that the learners must offer the twelve core subjects and four electives. The 9-year basic education curriculum prescribed the use of the learner centred methods which includes some constructivist pedagogies as the active learning and collaborative learning strategies. It equally recommended the use of realistic and genuine tasks are emphasized at the expense of traditional methods of teaching, Awofala (2012:6). This is one of the positive development in the new lower basic education curriculum in addition to the fact that it keeps pace with the emergent global and national issues, Obioma (2009).

The above can only be achieved in the learners through apt use of pedagogical strategies/ techniques in implementing the curriculum. Apt use of pedagogical techniques help the teacher to use different ways to represent knowledge and make it real and comprehensible to the learners (Obanya, 2004a; 2007, Izuagba& Nwigwe,2010). This can be through the use of most useful forms of representation such as still or motion pictures, simulations, the most powerful analogies, illustrations, group work, scaffolding, cognitive apprenticeship, modeling, mentoring, advance organizers explanations, and demonstrations.

The use of the above active and collaborative strategies will help the students understand the dilemma Nigeria faces as a result of people`s insensitivity and over-cropping of the environment. Tilbury & Wortman (2008) support that the most appropriate learning strategies to use to develop in learners the skill for sustainable development are the active and participatory learning strategies. In addition to these, the researchers will add the collaborative learning strategies as these will make the learners to actively explore environmental issues, share different perspectives and come up with solutions.

Pedagogical techniques like: case studies, simulations, jigsaw, group work, thought shower, mind maps, concept mapping, projects etc will make the students to think for themselves, reflect on their learning in relation to the needs of their immediate society in order to develop a more responsible attitude to life and living. These learner-centred strategies allow students to actively participate in discovery learning processes from an autonomous viewpoint. They will learn to collaborate, construct new understanding of the concept learnt without being passive, but rather proactive, using a variety of hands-on activities which facilitate successful learning.

The Concept of Pedagogical Techniques

The word pedagogy according to Wikipedia was derived from a Greek word 'paidagogos', which literally means to 'lead a child'. Today it is usually used in particular reference to the science or art of teaching. In this paper pedagogy refers to the teacher's ability to weave in appropriate pedagogical/instructional techniques / strategies taking into consideration the needs of the learner and the society in order to help the learner discover and construct knowledge him/herself. It is in teaching that knowing resides, and is revealed ; and effective teaching is defined in relation to student's learning. It is a truism that one cannot see the knowledge until the learning is apparent in the behavior of the learner or becomes obvious when the learner utilizes the new competences and knowledge, which hitherto they did not have to address life issues and problems. The extent to which teachers in the education system use the apt pedagogical techniques to prepare learners for life has been the subject of research by scholars,(UNESCO 2000, Obanya,2007). Over the years, teachers use of pedagogical techniques have been a source of worry given the predominance of the teacher centred strategies ,(Anyanwu &Obi 1979 ; Obanya 2002; 2004a and Izuagba 2005; Ezenwa &Izuagba 2010). The use of this method merely encourage learners to memorize facts in order to pass their examination without equipping them utilize knowledge and skills acquired to impact on their environment. What is obvious from the above is that the methods used by teachers encourage mainly the development of the learners' cognitive function. This does not equip the learners for sustainable development which demands not just cognitive development but change in attitude and disposition and application of psychomotor skills in ameliorating problems in their communities.

It was in the bid to address this problem that made the National Teachers Institute to embark on nationwide retraining of primary and junior secondary schools teachers in core subjects such as mathematics, English language, basic science, social studies etc since 2006 in order to improve the quality of instructional delivery at those levels but the extent to which these teachers have reflected this in their practices is yet to be confirmed.

It is on the above premise that the researchers set out to find out if teachers of Social studies and English language, which are core subjects at this level, use apt pedagogical techniques in teaching,

in order to develop in learners the expected competences and knowledge that will enable contribute to sustainability. Specifically, since the use of active and collaborative learning techniques are found to be more apt in developing problem solving skills and other competences necessary for them to contribute to sustainable development (Tilbury & Wortman 2008), this study therefore set out to find out to what extent teachers of English language and social studies use these active and collaborative learning strategies in teaching. The study is guided by the following research questions:

1. To what extent do teachers of English language use the active learning strategies in teaching reading?
2. To what extent do teachers of English language use the active learning strategies in teaching writing?
3. To what extent do teachers of English language use the collaborative learning strategies in teaching reading?
4. To what extent do teachers of English language use the collaborative learning strategies in teaching writing?
5. To what extent do teachers of Social studies use the collaborative learning strategies in teaching?
6. To what extent do teachers of Social studies use the active learning strategies in teaching?

Methods:

The study is a sample survey eliciting information from the teachers of English language and Social studies on the use of the active and collaborative learning techniques in secondary schools in Owerri Municipal. Six research questions guided the study. From the population of 298 teachers of social studies and 311 teachers of English language in the Imo State Upper Basic education a sample of 140 teachers of English language and 140 teachers of Social studies were selected using the simple random sampling technique. The researchers developed a three point likert structured questionnaire which was validated, subjected to a reliability coefficient and administered on a sample of 50 teachers of the same level of education in Orlu Educational Zone and the reliability index was found to be 0.86. The data was analysed using mean and a mean of 2 was accepted as the decision mean. Mean was used for data analysis.

Results

Table 1: Teachers Response on English Language

S/N	ITEMS	ALWAYS	SOMETIMES	NEVER	Total	X	Remark
1	English language teachers use the following active learning strategies in teaching reading						
I	Prediction activities	110(330)	24(48)	6	384	2.7	Accepted
li	Brain storming/ thought shower	-	-	140	140	1	Rejected
lii	Graphic organizer	74(222)	60(120)	6	348	2.4	Accepted
Iv	Concept mapping	-	46(92)	94	186	1.3	Rejected
V	Know-Want to know-Learn (K-W-L)	122(366)	18(36)	-	402	2.8	Accepted
Vi	Retelling	30(90)	66(132)	44	266	1.9	Rejected

2	The English language teachers use the following active learning strategies in teaching writing skills						
I	Prediction activities	-	105(210)	35	245	1.7	Rejected
li	Brain storming/ thought shower	20(60)	88(176)	50	286	2	Accepted
lii	Graphic organizer	-	16(32)	124	156	1.1	Rejected
lv	Concept mapping	50(150)	4(8)	86	243	1.8	Rejected
V	Know-Want to know-Learn (K-W-L)	46(138)	10(20)	84	242	1.7	Rejected
Vi	Retelling	80(240)	48(96)	12	348	2.4	Accepted

3	The English language teachers use the following collaborative learning strategies in teaching writing skills						
I	Group activities	14(42)	86(172)	40	254	1.8	Rejected
li	Jigsaw	-	97(194)	43	237	1.7	Rejected
lii	Pair work	100(300)	16(32)	24	356	2.5	Accepted
lv	Think-Pair-Share	26(72)	89(178)	25	275	1.9	Rejected
V	Discussion	40(120)	21(42)	79	241	1.7	Rejected
Vi	Scaffold	13(39)	67(134)	60	233	1.6	Rejected
vii	Value clarification	20(60)	62(124)	58	242	1.8	Rejected
viii	Peer teaching	19(57)	61(122)	60	239	1.7	Rejected
ix	Cognitive Apprenticeship	-	36(72)	104	176	1.2	Rejected

S/N	ITEMS	ALWAYS				SOMETIMES	NEVER
4	The English language teachers use the following collaborative learning strategies in teaching READING skills						
I	Group activities	-	44(88)	96	184	1.3	Rejected
II	Jigsaw	-	33(66)	107	173	1.2	Rejected
III	Pair work	80(240)	46(92)	14	346	2.4	Accepted
IV	Think-Pair-Share	40(120)	61(122)	39	281	2	Accepted
V	Discussion	26(78)	64(128)	50	256	1.8	Rejected
VI	Scaffold	-	40(80)	100	180	1.2	Rejected
vii	Value clarification	6(18)	44(88)	90	196	1.4	Rejected
Viii	Peer teaching	68(204)	70(140)	2	346	2.4	Accepted
Ix	Cognitive Apprenticeship	-	19(38)	121	159	1.1	Rejected

The above table shows that items i, iii, and v on the active learning strategies were used in teaching reading by the English language teachers were accepted with ($x=2.7$, $x=2.4$, $x=2.8$ respectively means greater than the acceptable means of 2, while items ii,iv and vi with ($x=1$, $x=1.3$, $x=1.9$ respectively) have means less than the acceptable mean.

Still on table 1:2, item I,iii,iv and v on the active learning strategies in teaching writing skills by English language teachers were rejected with ($x=1=7$, $x=1.1$, $x=1=8$, $x=1.7$ respectively) means less than the acceptable means of 2 while items ii and vi with $x=2$ and $x=2.4$ means respectively were accepted for being greater than the acceptable mean.

No 3, item iii on collaborative learning strategies in teaching writing skills used by English language teachers were found to be greater than the acceptable mean of 2($x=2$) while items (I,ii,iv,v,vi,vii,viii and ix of the same category) with ($x=1.8$, $x=1.7$, $x=1.9$, $x= 1.7$, $x=1.6$, $x=1.8$, $x=1.7$, $x= 1.2$ respectively means were less than the acceptable mean.

No 4, items iii, iv, viii on collaborative learning strategies in teaching reading skills used by English language teachers were accepted with ($x=2.4$, $x = 2$, $x = 2.4$ respectively) means were found to be greater than the acceptable mean of 2 while items i,ii,v,vi,vii and ix (of the same category) with ($x = 1.3$, $x=1.2$, $x = 1.8$, $x = 1.2$, $x = 1.4$, $x = 1.1$ respectively) means were less than the acceptable mean.

Table 1: Teachers' Response n Social Studies

S/N	ITEMS	ALWAYS	SOMETIMES	NEVER	Total	X	Remark
1	Social Studies teachers use the following active learning strategies in teaching :						
i	Prediction activities	110(330)	21(42)	9	381	2.7	Accepted
ii	Brain storming/ thought shower	80(240)	40(80)	20	340	2.4	Accepted
iii	Graphic organizer	36(108)	24(48)	80	236	1.6	Rejected
iv	Concept mapping	13(39)	27(54)	100	193	1.3	Rejected
v	Know-Want to know-Learn (K-W-L)	-	12(24)	138	162	1.1	Rejected
vi	Retelling	83(249)	20(40)	27	316	2.2	Accepted

2	Social Studies teachers use the following collaborative learning strategies in teaching:						
I	Group activities	131(393)	9(18)	-	411	2.9	Accepted
li	Jigsaw	-	16(32)	124	156	1.1	Rejected
lii	Pair work	110(330)	30(60)	-	390	2.7	Accepted
lv	Think-Pair-Share	-	33(66)	107	173	1.2	Rejected
V	Discussion	124(372)	16(32)9	-	404	2.8	Accepted
Vi	Scaffolding	-	91(182)	49	231	1.6	Rejected
vii	Value clarification	1(3)	39(78)	100	181	1.2	Rejected
viii	Peer teaching	11(33)	37(74)	92	199	1.4	Rejected
ix	Cognitive Apprenticeship	-	9(18)	131	149	1	Rejected

The table above shows that items iii,iv,v on active learning strategies used by social studies teachers were rejected with ($x=1.6, x=1.3, x=1.1$) means below the acceptable means of 2 were rejected while items I,ii and vi (belonging to the same category) were accepted with ($x=2.7, x=2.4$ and $x=2.2$ respectively) means greater than the acceptable mean.

Items ii, iv, vi,vii,viii,ix on collaborative learning strategies used by teachers of social studies were rejected as their means were below the acceptable mean ($x=1.1, x=1.2, x=1.4, x=1$) while items I, iii and v were all accepted because their respective means were greater than the acceptable mean ($x=2.9, x=2.7, x=2.8$)

Discussion of Result

The study investigated the extent to which teachers of English language and Social studies teachers use the active and the collaborative learning strategies in teaching. The first question tried to establish the extent to which English language teachers use the active learning strategies in teaching reading. Results in Table 1 shows that prediction activities, graphic organizer and know-Want to know-Learn (K-W-L) were accepted. The result shows that the other active learning strategies like concept mapping, retelling, jigsaw etc were not used by the teachers. This agrees with Obanya (2002) that says

that teachers' instructional strategies are not in line with current trends in teaching as frontal teaching dominant classroom activities.

The second research question sought to determine the extent to which the English language teachers use the active learning strategies in teaching writing. No2, table 1, only brainstorming/ thought shower and retelling were the only active learning strategies that were accepted with ($x=2$ and $x=2.4$) means respectively. This result shows that English language do not use prediction activities, graphic organizers, concept mapping and K-W-L active learning strategies in teaching writing. The findings agree Anyanwu&Obi(1979) & Obanya,(2004) that assert that teachers dominate class activities by using the teacher centred methods and this affect learners' ability to develop proficiency in the language

The third question sought to find out the extent to which teachers of English language use the collaborative learning strategies in the teaching of reading. No 3 table 1, shows that only pair work out of all the stated collaborative strategies were accepted while the rest were below the acceptable mean of 2. This shows that English language teachers do not employ group activities, jigsaw, think –pair-share, discussion, scaffold, value clarification, peer teaching and cognitive apprenticeship in teaching writing. This result agrees with Izuagba(2005);Izuagba & Ezenwa2010; Izuagba&Nwaigwe 2010 that confirm English language teachers inability to use the learner centred methods in teaching.

Question four sought to determine the extent to which teachers of English language use the collaborative learning strategies in teaching writing. Table 1, No 4 shows that pair work, Think-Pair-Share and peer teaching were accepted ($x=2.4,x=2$ and $x=2.4$ respectively) while the rest were rejected. This shows that teachers of English language do not use group activities , jigsaw, discussion, scaffold, value clarification and cognitive apprenticeship were all rejected , their means ($x=1.1, x=1.2,x=1.6,x=1.2,x=1.4,x=1$ respectively) were all rejected because they were less than the acceptable mean of 2. This result shows that teachers of English language do not use enough of the collaborative learning strategies in teaching.

The sixth question sought to find out the extent to which teachers of social studies use the active learning strategies in the teaching , the result shows that teachers confirm they use the following active learning strategies :predictive activities, brainstorming ,re-telling , $x=2.7;x= 2.4; x=2.2$ respectively and the following collaborative strategies: group activities, pair work and discussion($x=2.9;x=2.7$ and $x=2.8$ means respectively) in teaching. The teachers confirm they do not use graphic organizers, concept mapping , K-W-L, Think-Pair- Share; neither do they use scaffold, jigsaw, value clarification, peer teaching and cognitive apprenticeship in teaching. These results confirm Obanya (2007) that teachers implementing the UBE curriculum use old tools to address current problems. There is no doubt that the poor instructional skills of these teachers will not adequately prepare the learners for sustainability. The ability to the use strategies like the cognitive apprenticeship, jigsaw, concept mapping, peer

teaching, value clarification will really make the learners think deeply about the concepts thought in order to come up with their own understanding as vis-a-vis their lives and their environment. .

Conclusion

The results show that teachers of English language do not use many of these active learning strategies such as concept mapping, retelling, jigsaw and use prediction activities, graphic organizers, concept mapping and K-W-L active learning in teaching reading and writing respectively. They use only these collaborative learning strategies like pair work, think-Pair-Share and peer teaching in the teaching of reading and writing while the rest were not used. There is no doubt that the limited use of these collaborative activities has a lot of implications on the learners' ability to achieve the curriculum objectives .

Similarly, the use of the active and collaborative learning strategies by teachers of social studies is limited too. There is no doubt that their inability to use these strategies could have negative impact on the learners' rate of learning, retention and their ability to use what is learnt to impact on their environment. This assertion is based on the fact that learning is activity-based and its through the use of these strategies can the learners have a good comprehension of what is taught and utilize it in solving problems in their immediate environment.

Recommendations

In the light of the above, the researchers made the following recommendations:

1. There is need to build the capacity of teachers in the use of these strategies in order to make the learners acquire the necessary knowledge and competences they need to function effectively in their environment.
2. There is also the need to introduce a net-working programme for teachers so that more skilled teachers can help others build their skills on the use of some of these innovative strategies for the achievement of curriculum objectives.
3. Supervision of teaching should be regular and facilitative , since the quality of teachers that implement the curriculum determines the quality of output of the system.

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Introduction

Microteaching is a critical component of the curriculum for teacher education in Nigerian higher institutions. In the curriculum, it exists as a separate course or an integral part of the subject method courses in the Sciences, Arts and Humanities. It is considered a prerequisite experience that every pre-service teacher must have before embarking on teaching practice. The significance of microteaching is hinged on the fact that it is the melting point of theoretical knowledge of teaching and its actual practice though under a simulated classroom environment. Over the years, microteaching has been relegated to the background or has become merely a routine and was no longer accorded its pride of place in teacher preparation. Its importance in teacher preparation has continued to diminish and its actual practice mundane, uneventful and obsolete. Yet, the quality of teachers and standard of education continue to attract frequent criticism in the society. There is therefore the need for teacher preparation programs at all levels of the educational system to rise to its responsibility and begin to pay more attention to the components of teacher preparation programs in order to engender professional growth and development of prospective teachers. Aspects of teacher education curriculum that aim at providing teacher trainees with opportunities to link theories of teaching with practice thus stimulating acquisition of teaching skills and competence has to be encouraged (Korthagen, Loughran and Russell, 2006). There is a call by Aisiku (2002) for a more authentic, stimulating, motivating and worthwhile teacher education program that will enable prospective teachers acquire skills that will chart the course for their life-long professional development.

What is Microteaching?

Micro-teaching is a scaled-down, stimulated teaching encounter designed for training of both pre-service and in-service teachers. Its purpose is to provide teachers with the opportunity for safe practice of an enlarged cluster or teaching skills while learning how to develop simple, single-concept lessons in any teaching subject. Fernandez and Robinson (2007) conceptualized microteaching as a cooperative learning experience aimed at challenging prospective teachers' thinking about teaching and supporting their connection of theory and practice. Similarly, Pringle, Dawson and Adams (2003), view microteaching as an on-campus way of introducing pre-service teachers to the complexities of teaching and as a bridge that connects theory to practice. Microteaching helps teachers improve both content

and methods of teaching and develop specific teaching skills such as questioning, the use of examples and simple artifacts to make lessons more interesting, effective reinforcement techniques, and introducing and closing lessons effectively. Immediate, focused feedback and encouragement, combined with the opportunity to practice the suggested improvements in the same training session, are the foundations of the microteaching protocol.

The history of microteaching dates back to the early and mid 1960's, when Dwight Allen and his colleagues from the Stanford University developed a training program aimed to improve verbal and nonverbal aspects of teacher's speech and general performance. The Stanford model consisted of a three-step (teach, review and reflect, re-teach) approach using actual students as an authentic audience. The model was first applied to teaching science, but later it was introduced to language teaching. A very similar model called Instructional Skills Workshop (ISW) was further developed in Canada during the early 1970's as a training support program for college and institute faculty. Both models were designed to enhance teaching and promote open collegial discussion about teaching performance.

Importance of Micro-teaching in Teacher Education

Microteaching is an excellent way to build up skills and confidence, to experience a range of lecturing/tutoring styles and to learn and practice giving constructive feedback. Furthermore, microteaching gives instructors an opportunity to safely put themselves "under the microscope" of a small group audience, but also to observe and comment on other people's performances. As a tool for teacher preparation, microteaching trains teaching behaviors and skills in small group settings aided by video-recordings.

According to Amobi (2005) and (Kpanja, 2001) the basic importance of micro-teaching is that of exposing students to their roles as teachers and the realities of teaching. Micro teaching makes the teacher education program, more purposeful, goal oriented and helps to decide common objectives for the program. It provides individualized training with more realistic evidence to students which enable them to develop competency in using specific teaching skills in view of their unique needs. It also provides a democratic type of behavior among faculty members and student teachers. In the same perspective, micro-teaching facilitates supervision which is not critical on threatening type, but is of a helpful and suggestive type, which equip them for transition to school teaching. It is a system of controlled practice that makes it possible to concentrate on specific teaching behavior and to practice teaching under controlled conditions. This way micro teaching is a teacher education technique which allows teachers to apply clearly defined teaching skills to carefully prepared lessons in planned series to

five to ten minutes encounters with a small group of real students ,often with an opportunity to observe the result on video-tape.

Assumptions of Micro Teaching

Researchers (Gess-Newsome and Lederman, 1990; Brent, Wheatley, Thomson & Scott, 1995; Benton-Kupper, 2001) have identified the notion of micro-teaching in terms of helping students and teachers engage in dialogue and discussion centered on making connections between theories of teaching and practice. They assume that in every micro-teaching experience five knowledge bases are integrated and translated into actual practice, namely, knowledge of self as a teacher, knowledge of content, knowledge of teaching and learning, knowledge of students and knowledge of school and social context. The quality of micro-teaching can thus be broken down into different dimensions:

- i. Micro teaching can reduce the complexities of education. It simplifies the study of inter-action between the teacher and the students.
- ii. It can develop teaching skills. It provides an opportunity of integration of theory and practice. Specific skills can be developed.
- iii. It is completely an individualized training programme. It is a successful technique for individual training and thus facilitates continuity in the training of the teachers.
- iv. It is real teaching. Micro-teaching technique is useful for both pre-service and in-service teachers.
- v. It can control the practice by feedback. Self evaluation is possible by tape recorder, video tape or digital camera.
- vi. Feedback can be provided by various means, such as criticism by a teacher, preparing video film of the lesson, etc. There is provision of immediate and effective feedback.
- vii. Its objectives can be written more clearly and specifically.
- viii. Its use helps in the research work related to class-room teaching.
- ix. Helps students build their confidence for teaching, and,

- x. It inculcates the values of reflective and interactive learning.

Reflective Learning and Microteaching

Reflection is a conscious activity undertaken by someone to recall, think –over, consider and evaluate an event that has already taken place based on certain already specified parameters or purpose. It occurs with the intention of evaluating an event for the purposes of gaining an insight necessary for decision making on future plan of action concerning similar event. Amobi (2005) Freiberg and Driscoll (1992) defined reflective teaching and learning as ‘strategies that stimulate students to use experiences to discover learning for themselves and to lead, gain knowledge, understandings, skills and attitudes’. Schon, (1983) and Mezirow, (1990) described reflective learning, as a dialectic process used to improve the professional practice of teachers. It involves the student- teacher identifying the assumptions, values and beliefs that frame his or her practice and then critically analyze his or her teaching in terms of such assumptions. Bartlett (1990) further pointed out that becoming a reflective teacher goes beyond the teacher being primarily concerned about the methods of instruction and ‘how’. It also entails the teacher also asking the ‘what’ and ‘why’ questions regarding instructions and managerial techniques not as an end but as part of broader educational purposes. At the heart of reflection activity, therefore, is a cyclical process leading to a construction of meaning by the students.

Bartlett (1990) further provided a description of reflection in microteaching as an enquiry that emphasizes an ethics of caring, a constructivist approach to teaching and creative problem-solving. A constructivist approach, as emphasized in this study, also seeks to connect theory to practice and views the student as ‘thinker, creator, and constructor’. Integral to a constructivist theory of learning, therefore, is creative problem-solving by which teachers are asking ‘what decision should I be making?’, ‘on what basis should I be making them?’ and ‘what can I do to enhance my students’ learning?’ (Mezirow (1990). These considerations confer on the teacher a certain measure of power and control over his or her teaching. Central to any approach of reflection are four events: the event itself, recollection of the event, review and response to the event, peer and supervisor’s observation.

Schon (1983) considered the capacity to reflect in order to engage in a continuous learning one of the defining characteristics of professional practice. He argued that the model of professional training which

he termed 'technical rationality' merely charges students up with knowledge in training school so that they could discharge their duties when they enter the world of practice. It is in this perspective that Atherton (2005) considered the cultivation of the capacity to reflect in action (while doing something) and on action (after doing the something), an important feature of professional training programmes in any discipline.

Rationale for Using Multimedia Technology in Microteaching

James Steven cited in Ushigiale (2007) defines multimedia as "a story which combines text, still pictures, video clips, audio, graphics and interactivity presented on a web site in a non- liner format in which the information in each medium is complementary, not redundant" (p.12). Multimedia are the forms or vehicles by which instruction or information is formatted, stored and delivered to the learner or to an audience (Pippert & Moore, 1999). The use of multimedia in the recording of microteaching performance is one of the most effective strategies that enhance the benefits of interaction and reflection in microteaching. Furthermore, videoed microteachings helps to promote critical interactive and reflective activity, by providing student teachers' and course instructors with the opportunity to review lessons taught, make observations, provide feedbacks and constructive criticisms. Video recordings of microteaching have since become a necessary requirement for the stimulation of self-reflection for student teachers during microteaching (Lee and Wu, |2006). However, its use has not been encouraged in especially developing economies primarily as a result of financial and time constraints coupled with the issue of large class sizes in teacher preparation institutions (Karthegiyan, 2006).

The Purpose of the Study

The purpose of this study was to determine the perceptions of pre-service Biology and English teachers on the interactive reflective learning sessions in microteaching. Furthermore, the study sought to determine the extent to which students perceive the usefulness of multimedia technology as a self-motivating mechanism in micro-teaching.

Research Questions

The following research questions were posited:

- 1) What are the pre-service teachers' perceptions on the use of Multimedia technology for microteaching?
- 2) What are the pre-service teachers' perceptions on the interactive reflective learning sessions in microteaching?

Methodology

The following section provides an overview of the Research Methodology. The overview includes the following subheadings: design, population, sample, instrumentation, validity and reliability as well as the microteaching sessions.

Research Design

This is an action research which utilized quantitative and qualitative methods in data sourcing. Qualitative and Quantitative research stems from different philosophical assumptions that shape the ways researchers approach problems and collect and analyze data. Quantitative research uses objective measurement and statistical analysis of numeric data to understand and explain phenomena. It generally requires a well-controlled setting. Qualitative research, in contrast, focuses on understanding social phenomena from the perspective of human participants in the study (Ray, 2003 : 27).

Population and Sample

The population of this study comprised all pre-service teachers in a Faculty of Education in one Nigerian University. The sample consisted of a total of 40 (20 Biology and 20 English) pre-service (300 level) students randomly drawn from the Department of Science and Technology and Department of Arts and Social Science Education, in the Faculty of Education, University of Lagos, Nigeria. These were student-teachers admitted into 4year degree programme. During the first two years of their programme, the students took compulsory and elective courses in Arts and Sciences respectively. However, both groups of pre-service teachers took similar compulsory professional Faculty of Education courses which included courses in Educational Foundation, Philosophy and Sociology of Education and Educational Administration The ages of the participants ranged from 19-38 years.

Instrumentation

The instruments for this study were: Questionnaire on pre-service teachers' perceptions on the use of interactive reflective learning and multimedia; microteaching feedback sheet; and semi- structured interview. The questionnaire comprised three sections namely: Demographic data (Section A), Pre-service teachers' perception of Interactive Reflective Learning (Section B) and Pre-service teachers' perception of the use of Multimedia (Section C). Four- Likert Scale of: Strongly agree (SA), Agree (A), Disagree (D) and strongly disagree (SD) was used with numerical values of 4,3,2,1 in that order for positive statements and 1,2,3,4, for negative statements

Validity and Reliability

The content and face validity of the questionnaire and the Microteaching Feedback Sheet were ascertained by submitting the two instruments to two other experts in the area of research in addition to the two researchers. Their comments and suggestions resulted in the reduction of the number of items of the questionnaire from 25 to 10. This resulted in each of the two variables under investigation to have five (5) items each. The Microteaching Feedback Sheet comprised 20 criteria which were reduced to 12. The criteria retained included: clarity of lesson goals and objectives, lesson presentation style, implementation of constructivist teaching and learning goals, mastery of content, teaching strength and weaknesses, communicative skills, time, class management and evaluation to mention just a few. A number of researchers (Vaidya, 1970; Amobi, 2005; Karthigeyan, 2006) have observed that when feedbacks are to be generated from pre-service teachers during microteaching, there is need for the evaluation criteria to be a bit more detailed rather than general.

The questionnaire showed a test-retest reliability coefficient of 0.85 with two weeks intervals between the tests while for the Microteaching Feedback Sheet, test -retest reliability coefficient obtained was 0.75. Semi- structured interview was primarily used to elicit more detailed information from some pre-service teachers depending on their perceptions of certain variables of the questionnaire.

Biology and English Method Courses

The students who registered for the Biology and English method courses met for two hours lectures, twice a week with their respective course instructors for six weeks out of the thirteen weeks duration of

the course work. The course contents for the two method courses covered similar topics which included: objectives of the method course, methods and techniques of teaching, constructivist theory of teaching and learning, students' learning modalities and learning style, lesson plans, objectives of each lesson, roles of the teacher and student in the teaching and learning process, goals of microteaching, criteria for microteaching assessment, use of technologies in teaching and learning among others. Student teachers in the two cohorts were expected to use constructivist epistemological framework in their microteaching and peers were also to assess microteaching performance using the same framework. The lecture part of the course lasted for six weeks of two hours per week. The second part of the course was the 'microteaching session' during which each student teacher had the opportunity to present two microteaching sessions of ten minutes.

Pre-microteaching activities

For the pre-microteaching activities, a modification of the assumption set by Brent and Thompson (1996) was adopted. In this connection student teachers were put through the following procedures:

- (1) They were put into small cooperative groups of four students with each group comprising two Biology and two English Education students ;
- (2) The goals and objectives of the microteaching sessions were explained to all the students' teachers;
- (3) They received briefing on microteaching guidelines that included information regarding preparation and conduct of the microteaching;
- (4) Received instruction on the use of the Microteaching Feedback Sheet;
- (5) Prepare forty minutes lesson plan to be submitted to his or her course instructor /supervisor on any general topic of choice for assessment before the group's microteaching;
- (6) Prepare a ten minutes, single concept lesson plan as an excerpt from the forty minutes lesson plan. The teaching sessions were expected to also conform to the constructivist's teaching and learning paradigm as well as other goals of the microteaching session; and
- (7) To come to the microteaching group sessions with personal new Compact Disk.

Two Digital Video Disk recorders were provided by the researchers. Digital Video Disk recorders were preferred since it is a newer technology and students generally have easy access to facilities around the campus they could use it to record their teaching in full).

Phases of Microteaching

Generally, the microteaching was structured in four phases.

- Phase one- Pre-micro-teaching / Orientation
- Phase two- Micro-teaching (Knowledge Acquisition)
- Phase three- Micro-teaching (Skill Acquisition)
- Phase four- Post-microteaching (Consolidation)

Phase one : Pre-Micro-teaching /Orientation(1 week)

The course instructors modeled the entire processes of teaching by presenting a ten minute single concept lesson each on a neutral topic which was also video recorded. The pre-service teachers were asked to use the Microteaching Feedback Sheet to assess the course instructors' lesson presentation. During a replay of the videos, students were encouraged to comment freely on the presentations. The instructors (researchers) themselves, also, commented on their own lessons by explaining to the students the thinking behind certain actions taken in the video in the course the lessons.

Phase two: Microteaching (Knowledge Acquisition) (3weeks)

Two periods of two hours each were scheduled per week for the microteaching. To ensure the participation of all the student teachers, groups were asked to feel free to schedule their presentations at other times in the week convenient for them and their supervisors. Pre-service teachers each made ten-minute presentations in their respective groups in the presence of their respective supervisors. In each group, during presentations, pre-service teachers simultaneously assessed the roles of teacher, student, classmate and peer/friend (Bell, 2007). They were expected to act as much as possible as the real students in a normal classroom situation. Each presenter made his or her presentation bearing in mind the goals of the microteaching and other attributes and features of good teaching. For every presentation, a student member of the group was appointed as a scribe and had the responsibility of summarizing the groups' interactive reflective feedbacks. As each member of the group made his or her 10 minutes presentation, the other three teacher trainees in the group used the Microteaching Feedback Sheet to assess their peer's presentation.

At the end of all presentations, the interactive reflective session commenced with a time frame of 15minutes for each presentation. To kick-start the process, the Digital Video Disk was played back in turns. For each presentation, the presenter commented first on the presentation while indicating his or her challenges. Peers and the supervisors made observations and constructive criticisms based on comments recorded in the Microteaching Feedback Sheet for each presenter. Evidences of controversial observations were sorted from the video clips. The stipulated time limits for reflective interactions were strictly adhered to. For this reason, peers were often advised to make not more than one positive and one constructive criticism each without repeating each others' observations.

At the end of this session, the scribe appointed for a specific student's presentation presented the groups' summary of observations including areas to improve on. The presenter also was expected to assess his or her video recording using the microteaching feedback sheet. With this self assessment and that of the group, each student teacher wrote a final report on his or her microteaching and submitted the report to the supervisor indicating clearly areas he or she needed to work on. The self reports contained 4 sections: an introduction, teaching strengths, teaching weakness and areas for future improvement. Students were encouraged to watch some recordings of students in other groups before the next round of presentations.

Phase Three: Microteaching (Skill Acquisition) (3 weeks)

During the next phase of microteaching, each pre-service teacher in a group prepared a new 10minutes single concept lesson plan based on the topic of choice earlier submitted to the supervisor. The lessons were presented and video recorded. Similar procedure, as in Microteaching session 1, was followed in obtaining the necessary feedbacks. These assessments, as well as the video recordings, provided enough evidence as to the extent of improvement and skill acquisition per student in comparison to the previous presentations. Interactive, reflective discussion sessions were videoed in both phases of microteaching to enable all pre-service teachers have access to discussion sessions in all the groups.

Phase Four: Post-Microteaching Activities (Consolidation): (1Week)

After the microteaching sessions that lasted for six weeks, a questionnaire titled: Pre-service Teachers' Perceptions on Interactive Reflective learning and use of multimedia was administered on all 40 pre-service teachers. On analysis of the responses to the statements of the questionnaire, there arose an urgent need to carry-out some follow-up interviews of some Biology and English language pre-service teachers' in order to throw more light on certain responses they had made in the questionnaire.

Data analysis:

Descriptive statistic (mean and standard deviation) were used to analyze the responses of the pre-service Biology and English students to each of the items of the questionnaire. Interviews of some pre-service Biology and English students using the semi- structured Interview schedule were also audio-recorded and transcribed.

Results and Discussion

The results of the study with respect to the two research questions are hereby presented.

Table 1

Descriptive Statistic of Perception of Pre-service Teachers on Interactive and Reflective learning

Items	Statements	Groups	N	Mean	SD
1.	Interactive and Reflective learning sessions motivated me to begin to re-evaluate my beliefs and attitudes about teaching generally.	Biology	20	3.20	0.951
		English	20	3.35	0.912
		Total	40	3.28	0.925
2.	Through interactive and reflective learning sessions, I learnt the need to always reflect back on my teaching in order to do better next time...	Biology	20	3.00	0.794
		English	20	3.10	0.911
		Total	40	3.05	0.845
3.	During the interactive and reflective learning sessions, for my presentations, I felt tensed up and uneasy because of the observations and corrections being made on my presentation	Biology	20	3.00	1.123
		English	20	3.05	0.944
		Total	40	3.02	1.025
4.	The interactive reflective learning sessions was fun and I felt 'safe' expressing my observations about the teachings of others and mine.	Biology	20	2.80	0.833
		English	20	2.60	0.940
		Total	40	2.70	0.882

5.	I believe there was no need for the interactive and reflective learning sessions because it merely repeated what we had entered into the microteaching feedback sheet.	Biology	20	3.10	0.967
		English	20	3.10	0.911
		Total	40	3.10	0.928

From the Table 1 above, Biology and English pre-service teachers' responses to Item 1 showed a mean of 3.20 and 3.35 respectively. For Item 2 also, Biology and English student teachers' responses showed a mean of 3.00 and 3.10 respectively. These results clearly indicated that both groups were in agreement with the two statements 1 and 2 above. For Item 3, with a mean of 3.00 and 3.05 for Biology and English student teachers, it appeared that both groups of students disagreed with statement 3. However, with $SD = 1.123$ for Biology groups, the perception of the groups appeared more dispersed from their mean of 3.00 than that of their English language counterparts. With respect to Item 4, with a mean of 2.80 and 2.60 respectively, Biology and English pre-service teachers' appeared to disagree with the statement that interactive and reflective learning was fun and also provided a comfortable environment for self expression. With a mean of 3.10 in response to Item 5, both groups of pre-service teachers' disagreed with the statement that there was no need for the interactive reflective learning sessions with the microteaching feedback sheet already used to obtain feedback.

Research Question 2

Table 2

Perception of Pre-service Teachers on the use of multimedia technology for microteaching

Items	Statements	Groups	N	Mean	SD
1.	Use of video recordings in microteaching helped me to focus on improving my areas of weakness.	Biology	20	3.20	0.894
		English	20	3.00	0.917
		Total	40	3.10	0.900
2.	The use of videos in microteaching did not benefit me except for entertainment it offered.	Biology	20	3.20	0.894
		English	20	3.25	0.910
		Total	40	3.23	0.891
3.	I was distracted by the video recordings and so could not concentrate fully on my teaching during my presentation.	Biology	20	2.90	1.071
		English	20	2.85	1.182
		Total	40	2.88	1.113
4.	During the playback of the video, a lot of time was wasted because the technicians spent so much time adjusting the pictures and sound effect.	Biology	20	3.10	0.852
		English	20	3.35	0.670
		Total	40	3.23	0.767
5.	Video recordings of presentations made it possible for me to view the presentations of peers in other groups and to learn and expand my teaching	Biology	20	2.85	0.933
		English	20	2.55	1.099

methods.

Total 40 2.70 **1.017**

Results on Table 2 showed the mean response to Item 1 for Biology and English pre-service teachers' to be 3.20 and 3.00 respectively. This indicated that the two groups were in agreement that the use of multimedia helped them focus on improving their areas of weakness. However, with a mean of 3.20 for Biology and 3.25 for English pre-service teachers' in response to Item 2, both groups disagreed with the view that the use of multimedia merely offered them entertainment during the microteaching. With respect to Item 3, and with a mean of 2.90 and 2.85, respectively, Biology and English pre-service teachers' appeared to be in agreement with the statement that the use of multimedia was somehow distracting. Table 2 above also showed the mean responses of Biology and English student teachers' to Item 4 to be 3.10 and 3.35 respectively. These means indicated that both groups disagreed with the perception that the use of multimedia used was time wasting. Responding to Item 5, with a mean of 2.85 and 2.55, respectively, Biology and English pre-service teachers' disagreed that the use of multimedia for microteaching made them learn and expand their teaching method and techniques through watching the videos of others outside the groups.

Findings from the study appeared to indicate that pre-service Biology and English teachers' hold the perception that interactive and reflective learning motivated them to begin to re-evaluate their beliefs and attitude to teaching generally. This finding may not be unconnected with the fact that during the reflective learning sessions, the students had opportunities to review their conception of what teaching is especially from a constructivist perspective. Also, as a result of the interactive and reflective learning sessions, the two groups of pre-service teachers' learnt to reflect back regularly on their teaching in order to improve on their future teaching. These finding accorded well with Wilkinson (1996), Amobi (2005), Benton-Kupper (2001), Pringle, Dawson and Adams (2003). Although, the pre-service groups of Biology and English students teachers' did not experience tension and discomfort while their presentations were being commented on, they did not perceive the interactive reflective sessions as fun either. Perhaps, these observations may be due to the fact that interactive and reflective learning is a new experience for the pre-service students. An attempt was made to find out why a few of the Biology and English student teachers' indicated a feeling of tension and discomfort with the interactive and reflective learning sessions. On interviewing two of such students, it was clear the student teachers'

were yet to get used to their presentations being critically but objectively analyzed. One of the students responded this way:

'I want to say that I liked the reflective sessions. But people in the group talked on everything I did and ended up embarrassing me.

Furthermore, the findings of this study, with respect to the perception of Pre-service teachers on the use of multimedia, indicated that the use of multimedia in microteaching helped Biology and English pre-service teachers' to focus on improving their professional skills in teaching. This result appeared to be in harmony with Pippert and Moore (1999) who observed that the use of multimedia helped to capture the attention and interest of the students. Another interesting finding of this study showed that Biology and English pre-service teachers' found the use of multimedia distracting. On further interview of two students from the two groups, it became clear that this was due to the fact that the students were yet to get used to being videoed while teaching.

A biology student had this to say:

While teaching, the video (video camera) was almost permanently (focused) on me .I could not concentrate fully on my teaching. I mean, I was self conscious most of the short period'.

The second student made this response:

'I did not like the way I looked in the first video. I tried to improve on my appearance more than on my teaching'

Studies like Brent, Wheatley and Thompson (1995) and Pippert and Moore (1999) attested to the fact as observed in this study, that the use of multimedia assisted pre-service teachers obtain objective assessment of their microteaching. It also helped them to be specific as to the areas of the teaching they needed to work on or change. Further findings of the study showed that the students disagreed that watching the video of others helped them learn and expand their reflection. Through the interview of two students, each from both groups, it became obvious that students were reluctant to give their videos to

others outside their groups to observe. This was attributable to the fact that they did not feel comfortable allowing others outside their microteaching group to see their mistakes. These comments indicate that the pre-service teachers were self-conscious and were yet to get used to being corrected by others. On the whole, the pre-service teachers' did not perceive the use of multimedia for microteaching as having no effect or a waste of their valuable time. Hougham (1992), Thomson (1992) and Amobi (2005) to mention just a few, appear to be in agreement with these findings.

Implications of the findings

One major implication of this study is the urgent need for teacher Education programmes in Nigeria and other African countries to begin to pay greater attention to the microteaching experience of pre-service teachers. Specifically, teacher educators especially subject method course instructors need to re-define microteaching experiences to incorporate interactive, reflective learning and the use of multimedia technology as explicated in this study. Microteaching, being the first contact with teaching for most pre-service teachers, needs to incorporate opportunities that will sensitize and encourage prospective teachers to begin early to acquire the skills of constantly reflecting on their teaching for sustainable growth of teaching skills and general competence in teaching. Interactive and reflective learning practices as well as the use of multimedia especially in small groups have been demonstrated in this study to be an effective means of improving student teachers' professional growth in teaching. Also, microteaching sessions for each student needs to be extended to give them enough time to get used to the camera and become familiar with the process and concentrate more on growth in their teaching skills. This study has further shown that microteaching experience can be multidisciplinary. The implication of this finding is that microteaching can be effectively managed by any method course instructor provided contexts are well specified and presentation topics are open-ended rather than subject-bound. It is expected that the results of this study, will help to address the problem of large class sizes which had tended to make a mockery of microteaching in some subject areas in Nigeria

(Odusina, 1991:49-73).

Conclusion

In concluding this paper, the following recommendations are made to enhance the effectiveness of microteaching experiences of pre-service teachers in higher education:

- (1) Teacher Education should emphasize the pivotal role of microteaching in the entire experiences of pre-service teachers by increasing its credit load and status to the level of that of Project Writing in the curriculum. This is in view of the fact that it is the first initial experience of the pre-service teachers that defines teaching as a real profession to them.
- (2) Interactive and reflective learning using multimedia preferably (DVD) should be made important features of pre-service teachers' microteaching experience since the ability to reflect holds the key to growth in teaching skills.
- (3) Course instructors and peer assessments should be encouraged during reflective learning sessions.
- (4) The use of Microteaching Feedback Sheets by microteaching instructors and students should be encouraged as it was observed to compliment interactive reflective learning.
- (5) Small multidisciplinary groups are recommended for microteaching as it will help to make the experience more meaningful and manageable to students' and supervisors' respectively. By making microteaching an interdisciplinary experience, method course instructors with large classes can be assisted by colleagues with smaller class size.
- (6) Extra copies of some groups' presentations should be made and student teachers should be encouraged to view them with the purpose of learning and enhancing their teaching skills, methods and techniques.
- (7) Workshop should also be organized to awaken in-service teachers' consciousness to the benefits of the new microteaching.

Finally, the findings of this study draw the attention of all Teacher Education institutions to the need

to begin to accord microteaching experience its pride of place in the teacher preparation program. The effectiveness and success in the professional growth of pre-service teachers' especially in the teaching practicum and in their subsequent future careers as teachers are dependent on the level of success achieved during microteaching, which will enable them to acquire the basic teaching skills and the arts of teaching. Microteaching provides an effective avenue for teacher educators to begin early to sensitize prospective teachers' on the need to always reflect back on their teaching and constantly strive to improve on mistakes of the past. Based on the findings of this study, interactive, reflective learning and the use of multimedia and feedback sheets should be an integral component of every education process. Inter-disciplinary microteaching in small groups should also be considered as one of the best practices in Teacher Education in view of the challenges that large classes pose to microteaching presently.

Limitations of the Study

Although, it is not our intention to discourage future researchers, we will at this point review some of the limitations of this study that might be helpful in thinking through potential problems for futuristic researchers. First, there was nothing easy, fast or simple about this type of research and ensuring its rigor becomes even more demanding. Not only was the handling of the qualitative data difficult, but we needed to carefully manage the data. Secondly, the themes that emerged from the interview data clustered within the four phases of the study. It is possible that these themes could have been recorded and further merged together in presentation. However, this study was exploratory in nature, and so the decision was made to display only a few excerpts from the interviews. Third, the process of transcribing the interview data and creating a quantitative data set were all very rigorous, labour intensive and financially involving. Fourth, getting the subjects to assemble together at the right time in the same venue was not an easy task. We had to spend a lot of money on phone cards calling them and reminding them about the lessons. Fifth, a lot of delays were encountered on adjusting the pictures and sounds and this added to the rigor of the exercise. Finally, more Universities and Colleges of Education could have been utilized to provide more insights into the culture of reflective learning and microteaching teaching in Nigeria. Nevertheless, researches involving more Universities should be carried out to properly understand and articulate the dynamics and dimensions of interactive reflective learning in multidisciplinary small groups

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Introduction

There is no universally accepted definition of development. Nevertheless, development is the process of gradual improvement in human life. The indicators of development are low infant mortality rate, low maternal mortality, an improved quality of life. Education is fundamental to development; in fact true development cannot exist outside of a supportive education system. In its generic sense, education is all those processes of learning which enable a person or society to acquire skills, behaviours, values, and knowledge which are considered necessary to live a happy and successful life. Education experiences may best be categorized as informal education, non-formal education and formal education. These categories are differentiated according to the degree of structuring which they display. Informal education is completely unstructured; it refers to learning experiences which take place unconsciously and naturally. Non-formal education refers to learning experiences which are moderately structured (Barker, 1996). Formal education is highly structured and is carefully organized into programmes, syllabuses and timetables. It is implemented in schools, colleges or universities. Formal education is a vehicle for true development and teacher education is the medium for transmitting skills, behaviours, values, and knowledge which are considered necessary to live a happy and successful life. Teachers implement this type of education in a formal teaching and learning environment. In this discussion a teacher is an individual who has successfully completed a teacher education programme. Teacher education refers to all the formal learning experiences that teachers undergo in their preparation to become qualified agents of development (transmitters of knowledge and skills to society). This paper examines the nexus between the system that produces teachers (teacher education) and development in Africa.

Education for Development

Three models of development are common in the development discourse. These are basic needs, economic and human development. The needs model of measuring level of development focuses on provision of food, water, shelter, education, information and security. According to Maslow's hierarchy of needs, this category of needs is basic to human survival. The second model (economic) emphasises the need to create wealth for a community or society. Without wealth, it is difficult for people to purchase the basic needs. The third model is human development. It focuses on improving the productive capacity of an individual. This is where schools and teacher education intersect with development. True development should also consider the effect of human activity on our environment. Development refines the socio-economic and political outlook of our society. It commands the education system to

change in responds to changes in the local and international scene. Useful education is that which of good quality. Of course, the concept of quality education is broad and complex in application, and in simplistic ways, quality education is measured in terms of its ability to attend to poverty and underdevelopment in Africa.

During the colonial era, quality education in Africa was one that promoted the development of whites. The exploitative education of the colonial era cannot by any standard be considered of good quality in the new political dispensation. Rather, quality education is one that champions the developmental needs of previously marginalized parts of our society. Such education is an effective tool for fighting poverty, building democracies, and fostering peace in the continent. Quality education upholds African's right to full life, which is the right to development. Inherent in quality education is the notion of empowering Africans to open their pathways to self-actualization.

Teacher Education influences Development

Teachers' role in development can be viewed from three main stand points. First and foremost, they are leaders because of the special place they occupy in communities (Zvobgo, 1986). Second, teachers have a special responsibility to make towards the mental and physical development of all learners through instruction, professional guidance and training in formal and informal settings. Third, teachers have an important role to play in the overall development of communities in which they operate; they participate in such programmes as adult literacy, community development and health education.

Teacher education is not just as a sector of development but a pervasive element which must be integrated into all development efforts. In Africa, early colonial work was exploitative; it was centred on creating wealth for whites and their home countries. This was to be achieved in a geo-social setting whose education system and development path did not have a capitalistic orientation (Gumbo 2008; Barker 1996). The indigenous African education systems were ignored; this impacted negatively on African people's developmental path. To date, the continent's development struggling far behind that of its former colonial masters.

The education system of the developed economies is more advanced and sophisticated than that of the developing economies. What are disturbing development practitioners is that the education system in Africa is not only less sophisticated but that the teacher education system is struggling to produce a 'perfect' teacher for the continent. Zvobgo (1986) laments that in most countries in Africa, teachers are, to say the least, unprepared and unwilling to serve in rural areas. Teachers are forced to work in rural communities although they are fully aware that these areas are most undeveloped and disadvantaged because of the lack of human, material and financial resources.

Simple logic decrees that powerful economies are supported by a powerful education system and weak economies require a powerful education system to develop. The Republic of Guinea has a third of the world's recoverable reserves of high quality bauxite and has the world's largest untapped reserves of iron ore. Yet the country is one of the poorest in the world, ranked 156th on the UNDP Development Index (Hamann, Woolman and Sprague, 2008). What is the entire education system in the country doing to exploit the resources for its development? Multi National Corporations from the developed world use their powerful education systems to exploit development opportunities in Africa in their development.

Teacher Education and Basic Needs

Development influences the quality and quantity of infrastructure in schools, number of education institutions, teaching equipment, and support given by the state. For instance, in South Africa the best schools in the country are found in developed communities. The schools prepare children to occupy influential positions in commerce and industry and in the public sector (Jean, 2009). The quality of education and infrastructure is far superior to that which is found in townships and rural communities. The situation above is comparable with what exists in Zimbabwe and many places in Africa.

According to Zvobgo (1986), no system of education can function effectively without a sound and well planned teacher education system. The quality of the teacher education system operating in any society is also depended on the output of the teacher education (teachers). The teacher education should have practical components like woodwork, metalwork, fashion and fabrics and agriculture. The curriculum should be made relevant to the natural capital of rural communities. What is happening in Zimbabwean schools today is that schools teach agriculture but students fail to practice modern agriculture. It is not unusual to find high school students with distinctions in Agriculture at 'O' level failing make use of the skills acquired at school to improve agriculture productivity even in cases where the empowerment programme has availed the necessary input. Development that fails to influence education in a positive ways tends to create discord in the education-development environment. In this regard, Zvobgo (1986) warns that a development process that fails to synchronize the relationship between education and development is bound to fail. Every development process calls for refined of skills, attitudes and knowledge. In that respect, education is then charged with the responsibility of researching into new ways of production of goods and services that are required by our dynamic society. Development creates the wealth that is required to finance research which also influences development.

Teacher education should encourage entrepreneurial skills and acumen so that teachers can cascade it to their learners in rural communities. The idea is to move away from elitist education as if all learners are equal in their intellectual endowment. Our teachers should also be able to diagnose the development potential of all their students. Teacher education should seek to affect changes in our

social and environmental order. Now education, even more than before is called upon by society to attend to such issues like climate change, waste management, environmental degradation, communication, and gender. The education system is then empowered financially by the proceeds of development to search for best practices in development. Even at family level, development has created a window for people to educate their children and relatives to increase their opportunities to ascend out of generational and intergenerational poverty and underdevelopment.

Teacher education and gender sensitization

Women constitute 60 percent of people in Africa, and yet absolute poverty and underdevelopment is most rampant among them. According to Pauli (2000), over the past two decades, the number of women living in absolute conditions has risen by 50 percent compared to 30 percent for men. The above statistic shows that the feminization of poverty is growing in Africa. The poverty and underdevelopment among women is closely linked to their poor access to education. Without a sound education base, the development of women is compromised. It is the responsibility of our teacher education to attend the economic disparity between sexes. Africa needs to learn from the Panama disaster; during the military rule of Presidents Omar Torrijos and Manuel Noriega, the Civil Codes made divorce illegal and married women's property subject to control by their husbands. The Penal Code made rape and abduction a matter of family 'honour' rather than making it a crime against women. Economic development programmes have not succeeded in helping women to lift themselves and their families out of poverty. According to de Pauli (2000), the number of rural women living in absolute poverty has raised by 50 percent since the 1980s.

The feminization of poverty is a growing phenomenon in Africa. The primary cause of the feminization of poverty is gender bias, which prevents women from obtaining the education, training and legal status they need to escape poverty. In most parts of Africa, women's economic activity dominates the non-wage economy, either as unpaid work for household subsistence, or as paid work in the informal sector. Lacking education and skills, women settle for badly paying jobs. Women are especially vulnerable to the impact of economic restructuring, both because they hold a significant share of paid labour and because of the peculiarities of women's participation in the job market.

Underlying the feminization of poverty of women in Africa is the high rate of women unemployment, resulting from persistence of labour market discrimination, lack of education and training and the persistence of cultural myths about suitability for women. Teacher education should encourage research on women and development. According to Brnzei and Peneycad, despite increasing research on women empowerment in Tanzania, compared to Kenya and Ethiopia, there is limited understanding

of which policies (teacher education) resources and capabilities mattered most (Hamann, Woolman and Sprague, 2008).

In many African states, most young women attend primary and secondary education and few proceed to university. These gender inequalities require strong advocates and formal education is one such. The teacher education curricular in Africa should go beyond educational foundation to emphasize the need to eradicate these gender biases in economic development in our society. The teacher education as an instrument for change should be based on the notion that women are just as good as men. Women are more tenacious and patient than men in learning skills as well as applying them to jobs.

Africa could also learn from the success story of Panama, where after 1989, women are empowered to take up the do-it-yourself jobs in the construction industry were subjected to a teaching programme that empowered them with skills and education. With adequate education and training, women are more likely to raise income for their families. Presently in most African states, credit and finance policies greatly affect women's access to credit, while pricing policies affect the value of their products, national policies. An agenda for the promotion of economic empowerment of women should be based on the principle of social justice that addresses women's livelihood needs in terms of their access to and control over economic resources. Our teacher education system is the vehicle for empowering women in the midst of a men-dominated society. The deployment of learners to subject areas at all levels should also be gender sensitive. One university in Zimbabwe is championing such a curricular. All students are exposed to a compulsory module called Gender Studies. Females, who do not qualify to enroll in Science, are allowed to undergo an 8 months bridging course before they are admitted into a degree programme.

Teacher education and economic development of Africa

Education is one of the most fundamental tools for meaningful and successful socio-economic development. Yet in some African countries, education is not yet performing well in this area. According to Trialogue (2008), South African education is not yet creating a meaningful opportunities for disadvantaged learners and to produce the skills that are required by the economy. The observation above reflects badly on the teacher education system and curricular of the country. The major attack against the teacher education in Africa is that the teachers are inadequately trained.

The weakness of the teacher education system and curricular are reflected in poor literacy rates among Africans in South Africa, which is a shadow of the apartheid teacher education curricular. The teacher education system in the country needs a face lift so that it produces graduates that are desirable in the new democratic South Africa. However, the government alone may not be able to meet the needs of the

teacher education in the country. The corporate world should empower the teacher education with financial and technological support required to produce a new generation of teachers for the economies in the continent. According to Trialogue (2008), more than any other sector in South Africa, the education system requires systemic support. It is appropriate that corporates work in partnerships with government and teacher education institutions. Popular areas of support of teacher training include infrastructure and technology development.

Moderators of the nexus between teacher education and development in Africa

Social policy is one of the factors that moderate the link between teacher education and development. In colonial Africa, the education landscape was characterized by inequality of education and development opportunities between the European settlers and their African counterparts. Education was compulsory for all Whites of school-going age. The schools had the best-trained teachers, a strong teacher-pupil ratio, and the latest teaching-learning technology. Tuition was free, schools received liberal financial support from the state and the curriculum was designed to produce leaders for industry and government. The social policy of the settlers allowed Africans to suffer deprivation in education through. An inferior teacher education system supported the marginalization of the Africans. In Tanzania, the British and the Germans established laws and regulations which stifled the expansion of education of the indigenous populations (Robb, 2002). The legal provisions resulted in income poverty for the Africans, which also made it difficult for them to afford competitive education.

In Zimbabwe, South Africa and many other parts in the continent, the education system for the Africans was underfunded and the teachers ill-qualified. The system was tailored to produce semi-skilled workers who would be 'hewers of wood and drawers of water' for European masters. According to Maphosa, Kujinga and Chingarande (2007), the education system was based on Aristotle's philosophy of a 'slave education' that emphasized the teaching of basic menial skills. The teacher education curricular was meant to prepare Africans to serve the European masters efficiently. Academic subjects were deliberately played down on the excuse that such subjects in the curriculum would produce 'educated vagabonds' (Zvobgo 1986). The disparity in education and development opportunities between white communities and black communities in Africa forced nationalist leaders in the continent to believe that unseating of colonial administrations would lead to prosperity of the African people. Hence Nkrumah's (1965) motto, "seek ye first the political freedom, and all things shall be added unto you."

Pandemics such as HIV/AIDS do moderate the link between education and development. A study by the UNDP South East Asia HIV and Development Programme in 2004 established that 69 percent of the people in countries most affected by HIV/AIDs live in Africa (Forgy and Mwanza, 1994). The effect of

HIV/AIDS on poverty is that it depletes savings and investment- which are key aspects of development. The cost of health care and funeral expenses often erode community savings and livestock. According to Guerny's study, medical treatment and mourning costs together exceed three times the average annual income, creating long term consequences for Africa (Guerny, 2002). A pro-development education curriculum should seek to eradicate the pandemic in the interest of development.

Political conflicts

Teacher education and development are moderated by political conflicts. In Zimbabwe, education and development gains were reversed by the political polarization between the Movement for Democratic Movement and the ruling ZANU PF. There was an unprecedented brain-drain both in terms of numbers and quality of human resources from the teacher education institutions. Teacher output from colleges and universities was compromised. The volatility of the political environment affected the training of teachers impacted negatively on teacher education (Chimhowu, Feresu and Manjengwa 2010). Huge shortages of science teachers are still haunting the ministry as neighbouring countries like South Africa continue to attract our teachers. During the same period the development momentum of Zimbabwe was severely affected to the advantage of South Africa which did not have enough qualified teachers to teach Mathematics and Science.

In the Democratic Republic of Congo, teacher education and indeed development is among the lowest in the world. According to Hamann, Woolman and Sprague (2008), the human development index of the country is one of the lowest in the world. Yet, the country has large deposits of gold, copper and cobalt. Teacher education curricular needs to be vigorous in championing peace and reconciliation in the country. Teachers have to be skilled to preach the gospel of peace and development among their students and the entire communities in which they are deployed to work. It is therefore imperative that teacher education refrains from producing non- political cadres for our society. The inherent risk associated with conflict is weakening of social capital as well as weakening of institutions, rule of law and destruction of infrastructure for development. The dysfunctionality of armed conflicts (civil wars) has been witnessed in Libya, Egypt, Somalia, Sudan, Liberia, Sierra Leone and Cote d Ivoire.

Development is dependent on the quality of leadership. Countries that have suffered many years of leadership crisis have experienced development challenges. For example, Sudan and Somalia have suffered many years of poor development due to leadership crisis. Despites having a reasonable pool of skilled labour and educated manpower, the leadership are bankrupt of alternative ideas for development.

Conclusion

The paper noted that there is a close link between education and development in Africa. The discussion was centred on formal education. The paper argued that education just like development is dynamic and not static. It was noted that teacher education is an instrument for producing agents for socio-economic transformation. The agent must acquire and possess a correct ideological orientation. An admirable teacher education curriculum is one that responds to socio-politico-economic and technological changes in our society. The education of yester centuries is different from that of the present socio-economic and political order. Then, the education system concentrated more on basic literacy and numeracy. Society's continuous pursuit for development has raised new concerns for the education sector to respond to. Now education is expected to respond feverishly to climate change, HI/AIDS, gender, terrorism, child labour, and human trafficking. Chances are high that with development, what we consider to be issues for education to day may be not in the next century. The paper highlighted some of the factors that affect or mediate the relationship between education and development in Africa.

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1.0 INTRODUCTION

Changing society and technologies have reshaped the image of education to prepare people for new ways of working and living in the 21st century. Teachers are the torch-bearers of any society serving as the catalysts for development as they mold its citizens.. Therefore, the role of professionally trained teachers has changed dramatically. A modern teacher does not just pump knowledge into learners but allows them to fully participate in learning activities, thereby developing his natural powers and abilities from within. In the 21st century teachers are also agents of change. It is therefore, imperative that measures be put in place to bridge the gap created by these challenges.

The Kaduna State Sector Project on Teacher Professional Development SESPTPD is aimed at rising up to these challenges by instilling appropriate skills in teachers to improve teaching and learning as well as instilling leadership qualities in them. The project provided professional development to teachers in both Primary and junior secondary schools, their head teachers and principals, and affiliated school supervisors and inspectors who are already in positions of authority/leadership.

- This paper therefore, discusses sustainable teacher education for the 21st century. The project is sponsored by the World Bank and aimed at training teachers for Kaduna State in Northern Nigeria. The paper critically examines the implementation of the project, challenges, its impact on learning outcomes and to make appropriate recommendations on how to improve future in-service training and how to sustain it gains.
- **i Personal sustainability** :Can our teachers communicate through language, number and the arts? Are they independent learners/teachers? Are they resilient? Do they have strategies to manage stress in their lives and in the classroom? Do they have joyous hobbies and activities? Do they understand health issues, from AIDS to obesity to mental illness?.
- **ii Environmental sustainability**: What do biology, chemistry, and physics teach us about our world. How do teacher actions affect nature?
- **iii. Cultural sustainability**: Do teachers understand other cultures, their values and systems? Do they understand that political decisions have social, economic and cultural components? Over-riding all of these questions is the need for teachers to place issues in a global context, to connect themselves and compare their experiences to communities in other parts of the world and to consider the effects on future generations.

2.0 NTI TPD WORLDBANK PROJECT

The central idea was that unless all involved were carried along, there might be friction somewhere in the full implementation of the project.

NTI conducted a three-year (2008-2011) World Bank project on behalf of Kaduna State and trained 2,663 teachers, their head teachers, JSS principals in 169 schools as well as supervisors and inspectors of two LGEAs.

2.1 Specific TPD Objectives

These were to:

- improve the school experiences and learning achievements of pupils served by the project schools;
- support school-based professional development;
- raise the performance and effectiveness of teachers;
- build the leadership capacity of head teachers and principals;
- develop a cadre of teacher educators as an effective training resource for improving teacher competencies.

The TPD's approach (philosophy) to teacher improvement was to transmit:

- self-confidence, respect, professionalism and personal excellence.
- life-long, self-motivated, reflective learning and practice.
- development knowledge, skills, attitudes, professional satisfaction and motivation.
- learning for all and from each other: equality, inclusivity, collaboration, teamwork and peer learning.
- sharing experiences and exploring strategies to address common challenges.

The groups who received face-to-face training over the three-year project conducted by the NTI in two LGEAs were:

- trainers who comprised eight educator mentors (EMs) and their contract manager, fourteen school supervisors and two inspectors, teachers, head teachers and principals in 169 schools.
- School supervisors and inspectors.
- primary head teachers (139) and JSS principals (30) received training throughout the project's three years.
- four teachers from each of the 169 project schools for one academic year, and who continued to be involved through school workshops and school cluster workshops and were visited by educator mentors supervisors and inspectors throughout the three years.

As stated earlier, the capacity-building was for all involved in primary education in order to enable them support each other towards achieving quality learning in pupils. Everyone was trained in the three years. The buzz word for all groups was “mentoring,” as everyone was expected to pass on the concept learnt to others along the line.

Each term face-to-face training for teachers was followed by:

- school workshops which included non-**project teachers** (i.e. teachers in 169 project schools who did not take part in the face-to-face training).
- School cluster workshops which included non-**project schools** in the two LGEAs, i.e. the ones not included among the 169 schools.
- There were follow-up school support visits from Educator Mentors (EMs), MSs and MIs.

2.2 The Capacity-building Process

The project began with an intensive ten-day workshop for the EMs titled **Train-the-Trainer (TOT₁)** meant to prepare them to conduct the workshops for the three years to follow. This was conducted by three international consultants supported by a national consultant and Kaduna State Ministry of Education officials. It focused exclusively on actualizing a child-centered approach to teaching that emphasized interactive, participatory, and collaborative group activities with adequate resources.

Educator mentors were shown how to provide leadership in organizing and running effective teacher professional development through practical involvement. There was elaborate discussion on every manual covered, especially as regards possible challenges in actualizing ideas in a real classroom situation.

2.2.1 Training of Inspectors and Supervisors (TOT₂):

The first assignment of the educator mentors [Ems] who had been trained for ten days as TOT₁ was to train the mentor

inspectors (MIs) and mentor supervisors (MSs) who were referred to as TOT₂. In addition to the initial three days of training given them, they were also trained for one day before the beginning of each of the four blocks in a year for three years. Throughout the project, they job-shadowed the EMs for all other training workshops for head teachers (139) and principals (30) (dubbed TOT₃) as well as for school teachers. They also participated in school visits and school cluster workshops throughout. Basically, TOT₂ were to internalize the same concept of learner-centeredness and related issues and to show primary and JSS teachers how to actualize them. They would eventually run their Local government education areas [LGEA] workshops, after the EMs had left. The following were the details explicitly transmitted to them:

- The need for establishing ground rules in order to control the smooth running of LGEA workshop and discipline.
- The use of grouping and the assignment of responsibilities within groups to ensure full participation by all.
- The techniques of listing, pairing, and sharing ideas in problem-solving.
- How teachers/children were to learn from each other cooperatively.
- Language across the curriculum and the techniques associated with its integration/actualization.

From the summary of their evaluation forms, **MIs and MSs** (TOT₂) believed that they learnt the following:

- Learner-centered teaching methods and related techniques.
- The importance of assessment and evaluation and how to go about them.
- Using PBI (Practice-Based Inquiry) to evaluate and assess teaching and learning.
- Family Life and Health Education and HIV/AIDs and related issues.
- Using religion and culture to teach FLHE and HIV/AIDs.
- The importance of resources in teaching and the use of storytelling, people, and culture as resources.
- Managing school resources, classrooms, and the school.
- Application of knowledge, skills and culture to teaching.
- Sharing experiences in solving common problems.
- Working together cooperatively and collaboratively among teachers and learners.

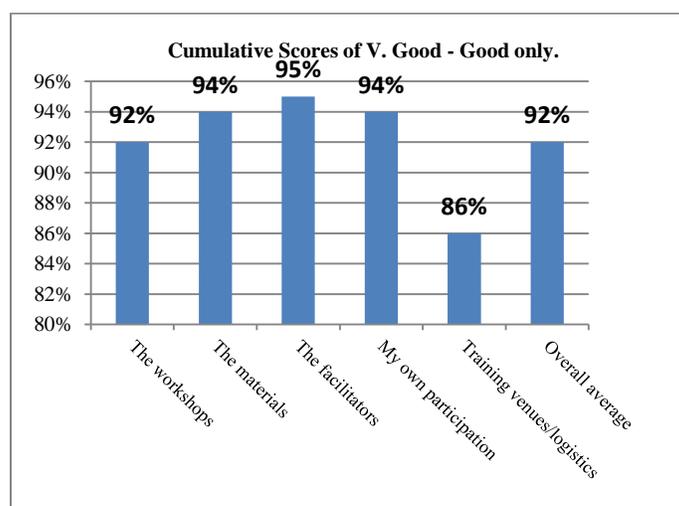
Table 1 figure 1 below represents TOT₂'s evaluation of the workshops delivered to them by the EMs.

Table 1: Supervisors' and Inspectors' (TOT2) Evaluation of Workshops

S/No	Categories	Cumulative Scores of V. Good - Good only.
1.	The workshops	92%
2.	The materials	94%
3.	The facilitators	95%
4.	My own participation	94%
5.	Training venues/logistics	86%
	Overall average	92%

Venues and logistics were consistently scored lower than any other category.

Fig. 1



2.3 Training Head Teachers and Principals (TOT₃): The EMs collaborated with the MSs and MIs in the training of head teachers and principals. Presentations by EMs varied in quality, but, wherever necessary, other EMs came in to support or shed more light in a team teaching fashion. The handbook on language across the curriculum generated much discussion, due to the problems of communication through the medium of English, especially in rural Hausa communities such as Birnin Gwari. The contract manager, a language educator, provided clarifications here and there. When well-trained, head teachers and principals should be able to ensure quality teacher performance in their schools.

Table 2: TOT₃ Evaluation of Workshops

S/No		Cumulative Scores of V. Good - Good only.	
		B/Gwari	Chikun
1.	The workshops	94%	95%
2.	The materials	94%	96%
3.	The facilitators	93%	96%
4.	My own participation	95%	97%
5.	Training venues/logistics	89%	92%
	Overall average	93%	95%

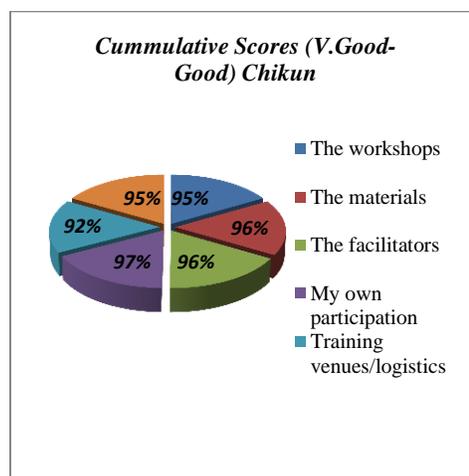
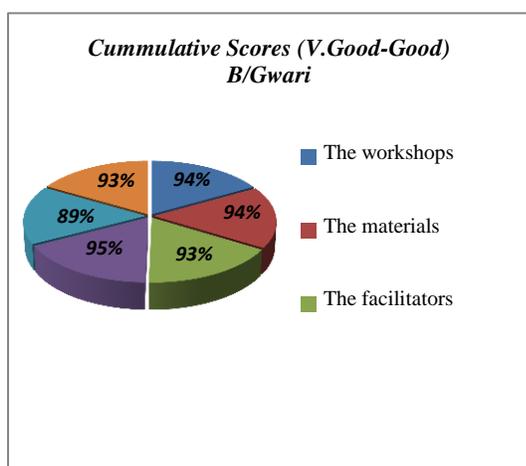


Fig..2

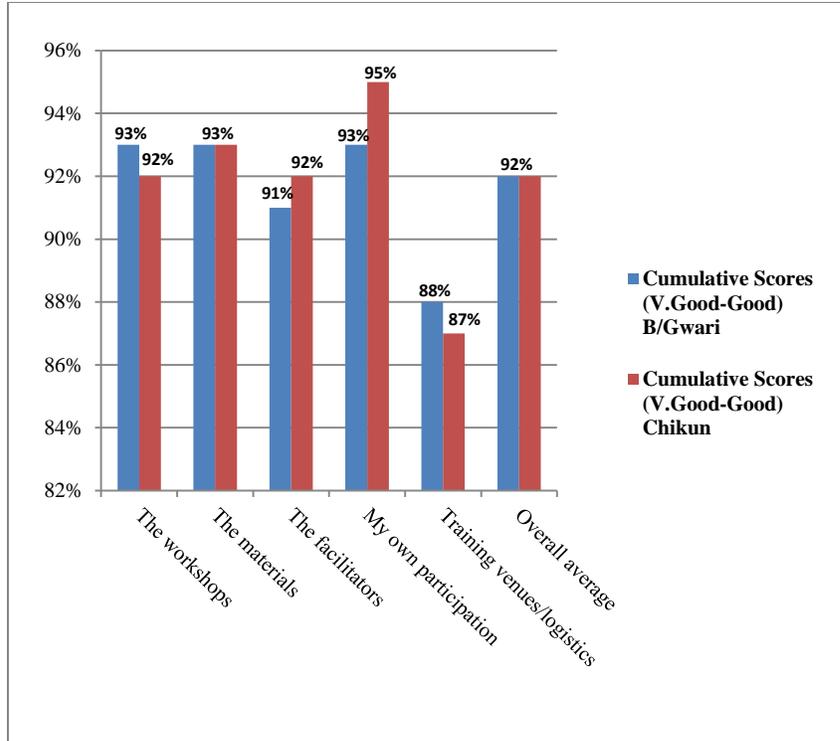
Head teachers and principals (TOT₃) from the two local governments, Birnin Gwari and Chikun, rated their workshop as high, in virtually all of the five categories and appeared to have learnt much.

2.4. Teachers Face-to-Face Workshops: Teachers had eleven days of contact per year with the EMs, MS, and MIs at the workshop venues in both LGEAs and were visited in schools for a total of six days in the year, i.e. two days each at the end of each term's workshop in the first three terms of the year. This continued for three years. Participants to each workshop showed much enthusiasm because most never had this kind of opportunity for very many years. There were lively exchanges within groups. Mentor supervisors and inspectors as well as mentor educators guided the discussion wherever needed. The workshops were a perfect model of learner-centered approaches: teachers sat in groups of 6-8 to interact on assigned tasks. There were lots of activities and resources. They shared responsibilities and learnt from each other. They reflected on the modules and critically examined the practicability of their ideas to their school situations. Mentor educators used Hausa as an auxiliary language to allow for free exchanges in a relaxed atmosphere. Teachers rated the workshops as consistently above 90% for every category, except for the venue and logistics.

Table 3: Teachers Face-to-Face Evaluation of their Workshops, 2008-2011.

S/No	Categories	Cumulative Scores of V. Good - Good only.	
		B/Gwari	Chikun
1.	The workshops	93%	92%
2.	The materials	93%	93%
3.	The facilitators	91%	92%
4.	My own participation	93%	95%
5.	Training venues/logistics	88%	87%
	Overall average	92%	92%

Fig.3



2.5 School Workshops and School Cluster Workshops: As noted earlier, one most disheartening aspect of the TPD three-year workshops for teachers of Kaduna state was that the headteachers (139) and JSS principals (30) attended virtually every workshop, in order for them to replicate same in their schools and to mentor staff generally, but failed to organize expected workshops themselves. School and cluster workshops were all conducted once a term across each LGEA, bringing together 676 teachers from non-project schools in the two LGEAs.

However, there was constant complaint of lack of instructional materials to share with these teachers. Often, far more teachers turned up than expected. Word had spread about the benefits derived from the workshops funded by the World Bank. It was, therefore, near impossible to control attendance at the initial stage. So enthusiastic were teachers to attend the one-day school cluster workshops that 1,252 turned up in the two local governments, i.e. 745 from Birnin Gwari and 506 from Chikun, instead of the expected 676 (328 and 348 respectively) making it difficult to pay the full stipulated

transport fares. No provision was made for cluster schools to get the seven manuals and private schools were left out of the TPD programme. Even so, participants' responses and questions showed that they appeared to have benefitted from the workshops.

2.6 School Visits : Cluster workshops were generally followed by school visits lasting two days in each case. In some cases, a few trained teachers in the TPD programme were discovered to have been transferred to schools not in the SESP project. These at first seemed like undermining the project, but such teachers could actually spread the gospel in their new schools in the same LGEA.

A total of 135 out of 169 schools were visited representing 80%. However, it was clear that, even though there was improvement in the supply of textbooks on core subjects to all schools by Kaduna government in the second year of the project (2009), good teaching and learning were still lacking in most schools visited. Only few teachers complied with the learner-centered approach. Pupils were still sitting in the traditional church-like manner. It was clear that, due to insufficient classrooms, and furniture, there was difficulty in actualizing this approach.

Other problems observed during the school visits included inadequate and unqualified teaching staff, (especially in the four core subjects), poor toilet facilities, children travelling long distances to fetch water during school hours, overcrowding, and termite attack on textbooks, and roofs/ceiling of classrooms. Poor remuneration and late payment of salaries also demoralized teachers. Did these anyway relate in to the constant demand for more allowances at the workshops?

Lesson plans were checked, and suggestions/recommendations made for improvement.

Other lapses were:

- poor record keeping, especially assessment and evaluation records.
- non-sensitization of teachers on the TPD programme in some schools, except in those where head teachers or principals were doing well.
- poor supervision of teachers and learners by school heads, leading to ineffective school management/control.

Nonetheless, these teachers from non-project schools cited the following as things they learnt at the one-day workshops:

- Grouping learners for effective learning whether e.g. according to mixed activity or gender.
- Learner-centered approach.
- Classroom and time management.
- Various methods of assessment, evaluation and record keeping, including self-assessment.
- Sharing ideas with other teachers.
- How to move from the curriculum, to the scheme of work, and lesson planning, using appropriate resources.
- How to be a role model.
- Materials/resources improvisation and use.

3.0. Challenges

- Effective leadership always calls for communicative competence. However in this project
- teachers and many supervisors and inspectors were weak in communication and reading skills, and were far more at home in Hausa, the local language than in English, the official language of education.
- Educator mentors often dominated the presentations and assigned very little responsibility to the mentor supervisors and inspectors who were to eventually sustain the TPD in their LGEAs after 2011.
- Perhaps, even more disheartening, state and LGEAs didn't take the notion of sustaining the project after June 2011 very seriously. Thus, at the end of the three years the project merely stopped without any clear road map thereafter.

4.0. Recommendations

- There was therefore the need to change attitude towards donor-sponsored projects and to get local officials to genuinely buy into the project for any hope of sustainability.
- Head teachers, principals, supervisors and inspectors, parents, state ministries and SUBEBs are especially critical, if teachers are to sustain gains from painstakingly organized and effectively delivered workshops projects.

- Regular school visits by supervisors and inspectors are absolutely necessary to monitor teachers' implementation of the inputs aimed at improving pupils.

5.0 Conclusion.

The teacher professional development discussed in this paper illustrates some of the problems associated with providing a democratic leadership that aims at carrying everyone along in the education system. Everyone is assigned a specific role that enables him or her to contribute to quality of education. Failure to involve any level of officials may mean a break down in the implementation of the gains made and, therefore, not sustaining the project.

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DECONSTRUCTING AND RECONSTRUCTING PROFESSIONALISM: THE 'PROFESSIONAL' DEMANDS OF THE PCET TEACHER EDUCATION PROGRAMME IN THE UK (ADE-OJO)

Introduction

Interest in the development and award of a specialist teaching qualification for teachers in the Post-compulsory education sector (Now referred to as Life-long learning and Skills sector: LLS) began gathering pace from the turn of the century. The earlier adventure into this zone culminated in the production of standards for teaching and learning in further education (FENTO) in 1999. Following this were a series of initiatives including policies such as the introduction of compulsory teaching qualifications for all new Further Education (FE) teachers (2001) and Success for all, which claim to present a blueprint for the reform of education in the sector (2002). On the face of it, these initiatives were all focused on the singular goal of professionalising the workforce in the sector (Ingleby, 2011, Orr and Simmons, 2010). This is particularly significant because FE teachers have traditionally located their professionalism in the context of their subject area know-how, and as such, 'subject expertise rather than knowledge and skills in education would be the chief determinant of the quality of teaching and learning' (Orr and Simmons, 2010:78, Harkin, 2005:166).

Resultant upon the policy context of Further Education Workforce Reforms (2007) which was 'integral to a policy thrust intended both to improve teaching and learning and to professionalise the PCET workforce' (Orr and Simmons, 2010:78)., FE teacher education, assumed what many have described as 'standard driven' (Ingleby, 2011:25) and 'prescribed' (Orr and Simmons, 2010:79, Lucas, 2004b and Nasta, 2007). This prescriptive and standard-driven feature of PCET teacher education is manifested in the structure of the training programme with the demand for a 'professional element' and a specific requirement that all such programmes must meet a specific standard prescribed and monitored jointly by the now outgoing agency named Lifelong Learning, UK (LLUK), Standard verification, UK (SVUK). The main source of evidence of professionalism is tagged on to a specific module which can be generically can be labelled the professional development module with its actual name varying from provider to provider. Consequently, the development of professional competence and provision of evidence of such a development is generally located within the professional development module of teacher education programmes.

As might be expected of such a standard-driven and prescribed programme, there have been evidence of unease from both trainees and trainers on Post Compulsory Education and Training (PCET) teacher education programmes. While this element of unease has been variously isolated and related to specific elements of the programmes, there is no doubt that the perceived central anchor for these problem areas has been the demand for professionalism (Bryan and Carpenter, 2008, Hale, 2008 and Lieberman, 2009). Illustrating these individualised elements, Ingleby, (2011) explored the nature and structure of mentoring in the professional development journey of trainees, Orr and Simmons (2010) review the duality of trainees' identities, while Bryan and Carpenter (2009) dwelled on the effect of standards-driven requirements on the social processes influencing professional behaviour. In the context of the mono-dimensional foci of these studies, there are two clear issues that need to be addressed. First, there has been little exploration of the role that the structure of training programmes play in reinforcing these elements of tension for PCET teachers and trainee teachers. What is it about the nature of the programmes that contribute to the emergence of these areas of tension? In this respect, the focus, in my view, needs to be placed on the content and processes stipulated within the framework of the programmes. Second and also deriving from the perceived importance of the training stage, very little

has been offered in terms of the perceptions of trainees engaged on these programmes. For example, very little has been offered in terms of trainees' views on the elements of their professionalism module that has been the source of much of their problem. Finally, these studies have not comprehensively responded to this problem area through an exploration and theorization of the differing perceptions of what constitutes professionalism. Central to

this is the question; can we justifiably classify what we demand of our trainees through the imposed structure of our programmes as genuine elements of professionalism? Have we, for instance, been imposing the elements of what, for instance, has often been classified as 'performativity' (Ball, 2003) as a false discourse of professionalism?

Developing from the ongoing, this paper is anchored onto two central goals. First, the desire to introduce the element of trainee voice and second, the desire to re-evaluate the structure of PCET teacher education in terms of content and process so that a clear proposal could be made in terms of remedying the seemingly inevitable tension that the demand for professionalism appears to be imposing on both the PCET teacher education programmes and the trainees who study on them. In order to achieve these goals, this study will carry out the following. It will draw from an original empirical research to identify trainees' views on the nature, sources and structure of the problems they face in respect of the demand for professionalism. In explaining the findings of the research, it will revisit and re-theorise the concept of professionalism and drawing on the two initial foci above, will offer suggestions on how the concept of professionalism can be deconstructed and reconstructed in the context of PCET teacher education.

Research design: Sample, methods of data collection and analysis.

Sample The participants all study on a Professional Graduate Certificate (PGCE) programme offered by one university in the UK, although they study in different local colleges. This means that they are all exposed to the same programme content and processes as dictated by the awarding body, the University of Greenwich. The sample group was made up of fifty four (54) trainee teachers who are also employed in the PCET sector. This means they are open to the demand of what is generally termed dual professionalism (IFL, 2009, Orr and Simmons, 2010) and subject to an examination of the impact of emergent issues in the two contexts of work and training. Although the number of subjects in the sample group might be considered small, it was felt that this number was adequate for a number of reasons: In the first instance, the group formed a 'typical and convenient sample' (Kerr 2009: 280). Convenient because the researcher's management role on the programme delivered by a Network of colleges, makes access to the sample of trainees quick, easy and available (Anderson, 1998, p124) and typical because it represented the expected 'norm' of PCET teachers (Anderson, 1996, p124) in terms of career aspiration, age range and work history. Furthermore, the sample group was reasonably representative of PCET provision in the UK, as most provider types in the spectrum were represented. Twenty six members of the group taught in mainstream further education colleges, twelve taught in services education including the Prison, the Police and the Fire services, nine in adult community education centres, while the remaining seven taught with private training providers. Although there was a form of uneven distribution in terms of gender with only nineteen members of the group being males, this was considered representative of the gender distribution pattern in the FE sector where teachers are predominantly female (Cara, Litster, Swain, and Vorhaus 2008, Ade-Ojo 2011).

Data collection methods: Survey questionnaire and focus group interview:

The data for this study was collected through a combination of survey questionnaire and focus group interview methods. The focus group interview was used as a supplement to the survey, as it provided the opportunity to further explore issues raised through responses to the questionnaire. The questionnaire was designed around three main foci namely: trainees' understanding of professionalism, impact of the drive towards professionalism and their perceptions of the sources of disharmony in their training programmes. Around each of these foci, a few simple questions were asked. In using these two data collection methods, cognisance was taken of their limitations. In the case of the questionnaire survey, the established problems of low survey return rates and high item non-response rates (Atteslander 2000, Churchill & Iacobucci 2005) were considered. However, because the subject group was a 'convenience group', this problem had limited significance, as all members of the sample group responded to the questionnaire. The focus group interview was employed in this study in spite of limitations such as the 'unnaturalness of setting' and the loss of focus (Cohen, Manion and Morrison 2000: 288, Ade-Ojo, 2009 and Ade-Ojo and Sowe, 2011), In the context of this study, this method was chosen in recognition of the fact that group interaction is one of the prominent features of the learning culture into which the participants have been socialised. As such, the interaction was effectively among the participants rather than with the interviewer, thus leaving room for the views of the participants to emerge.

Research approach and data analysis methods

The orientation of the research is essentially iterative (Lucas, Nasta and Rogers, 2011). This orientation facilitated a synergy between the paradigmatic allegiance to a mixed method approach and the method of data analysis. Drawing from the principles of mixed method approach (Cresswell, 2003), the study employed a mixture of quantitative and qualitative methods of data analysis. Data collected through the use of a questionnaire were subjected to simple statistical analysis through the SPSS tool, in order to identify patterns of distribution and their significance. The initial findings were then used as the springboard for iteration as they informed the development of key themes which were then tested out and revised during the focus group interviews. The subsequent findings were then subjected to a simple form of content and discourse analysis. In both cases, the responses presented by the subjects were examined to see how notions were constructed by the choice of words and language forms used. This method was chosen for two reasons. First, in addition to providing the opportunity for the researcher to 'discover, and describe the focus of individual, group, institutional, or social attention' (Webber 1990, Stemler 2001:1), it also allowed 'inferences to be made' using the inherent tool of conceptual analysis (CSU 1993-2009). Given that the focus of the present research involves the identification of individual perceptions from which inferences about groups and institutions are expected to be made, this method was considered to be highly suitable. The data collected through focus group interviews were first codified using simple semantic signification. Following this, the data was then analysed in order to establish the semantic import of the range of responses which then formed the basis for analysis. The result is that the data in this study is presented through a combination of statistical and textual media.

Theorising professionalism: a de-construction

The debate around the concept of professionalism has endured in academic discourse and has consequently thrown up a variation of perceptions. However, a lot of the contemporary studies in this area have tended to focus on the implication of professionalism in various contexts and have been silent on the crucial issue of what constitutes professionalism. Illustrating this contextualised dimension of engagement with professionalism, Lucas and Nasta (2009, 2010) offer us a model of theorising the mediation of 'state-imposed professionalism'. A similar theme is explored in Lucas, Nasta and Rogers,

(2011) with a focus on how standards for teachers are translated as they move between the context of policy makers, regulators and practitioners' (p.5). Consequently, the crucial question of the real nature of professionalism has remained largely unanswered in relatively current engagements with professionalism.

Historically, the concept of professionalism has been presented in a most elusive form. Indeed, that element of elusiveness is reflected in the twenty three traits (and counting) that have been included in its various definitions (Millerson, 1964 and Hughes, 2000). Nonetheless, the definitions and characterisations of professionalism can be summed up within the framework of two general thematic headings. First, professionalism reflects a lengthy period of training in the subject matter, that is, training in a body of abstract knowledge (Goode, 1960, Hughes, 2000). The second, which is often referred to as the trait perception of professionalism, focuses on the establishment of a particular way of delivering services which reflects a mode of functional relevance for the relationship between professionals and their clients (Barber, 1978, Hughes, 2000).

In the context of the deconstruction I propose here, particularly in the context of teacher education, I offer two terms, content professionalism and pedagogical professionalism to represent the two typologies identified above. With the former, the emphasis is on the degree of knowledge that the 'professional' has acquired in their specialist subject area before (s)he can qualify to be classified as a professional. But, as Hughes (2000) points out, that knowledge base alone is not sufficient for the execution of the role that an engineering tutor, for example, has to carry out. With the latter, the emphasis is on the professional's competence in the productive procedures of their profession. The combination of the two accounts for what the IFL UK (2009) refer to as dual professionalism. A tutor in the context of the PCET sector in the UK, therefore, is not considered a complete professional unless (s)he is able to demonstrate an appropriate level of competence in the two areas. This may be one of the reasons why there has been so much demand on trainees and practitioners in the field in terms of professionalism.

While most constructs of professionalism appear to take into account the two elements identified above, I argue that there is a third element which is often either overlooked or conveniently subsumed under the second typology highlighted above. For this strand of professionalism, I use the term 'procedural professionalism. Although several studies in the literature have verged on some of the features of this strand of professionalism, none has really integrated it as an independent variable in their construct of professionalism. That, in my view, is one of the reasons why professionalism in PCET teacher training has been so vulnerable to the dictates of standard-driven regulatory quasi-government agencies. Within this strand of professionalism, I identify competences in a range of routine activities in the execution of the professional's roles which serve as an evidence base for meeting various elements of standard demanded by policy. This element of so-called professionalism is, therefore, an instrument through which what Ball, (2003) calls 'performativity' can be monitored.

Drawing from anecdotal and empirical evidence (Phillips and Harper-Jones, 2003, Maxwell, 2004), it is evident that this strand of professionalism is most held responsible for the problems encountered by trainee teachers, teachers and teacher educators in the process of developing professionalism. There are two possible explanations for this. First, because this element is subject to mediating regulatory bodies (Orr and Simmons, 2009), there is no standard expectation which can be developed in the same way as content and pedagogical professionalism can be. The second factor hinges on the fact that this element of professionalism relies mostly on professionals being able to provide evidence of instances of performance. This again echoes the discourse of performativity and shrouds professionalism with the

cloak of subjectivity. Decisions as to the quality and adequacy of evidence of instances of performance is often subject to the views of individuals and, therefore never really has a standard form against which it can be objectively valued. As a result, there are myriads of evidence types in various context of practice that are imposed on trainee teachers.

Developing from the de-construction above, there are two key points to acknowledge here. First, it is important that we recognise that there are three strands of professionalism in the development of teachers: content, pedagogical and procedural The second follows; once we recognise the existence of the thir strand, we must have a dialogue on where this strand fits in within the framework of teacher education. **Data findings and discussion**

The first set of data presented was generated from the quantitative analysis of findings from the questionnaire. The questionnaire, in addition to mapping out general distributional patterns of gender, experience and nature of provision in which participants practise, is focused on three key issues: the most difficult components of training, perceived reasons why the components are considered difficult, and the impact of the difficult components on trainees. The findings are then analysed through the use of the SPSS statistical tool in order to get a straightforward distributional pattern and in some cases, a comparative configuration of the patterns. The findings presented statistically were then used as drivers for emergent themes which were then explored through focus group interviews. The findings from interviews together with the statistical data are subsequently discussed with existing theoretical paradigms and frameworks utilised to explain some of the emergent patterns and themes.

General distributional pattern of participant

Table 1:VAR00002 Gender distribution

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid male	19	35.2	35.2	35.2
female	35	64.8	64.8	100.0
Total	54	100.0	100.0	

As indicated in table 1 above, the distributional pattern of participants indicate 64.8 percent female and 35.2percent male. This is not significant for this study because it falls within the range of expected pattern of gender distribution in the FE sector in the UK (Ade-Ojo, 2011, Hamilton and Hillier, 2006). As such, the researcher can rely on the views provided by the participants as representative of the general workforce in the FE sector

Table 2: VAR00003 Experience of participants

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid less than 5 years experience	43	79.6	79.6	79.6
more than 5 years experience	11	20.4	20.4	100.0
Total	54	100.0	100.0	

Table 2 above shows the distribution pattern in terms of experience of participants. This is considered significant because pre-research postulations suggests that experience might be significant in terms of

Table 3: VAR00006 Type of provision

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid mainstream FE college	26	48.1	48.1	48.1
services	12	22.2	22.2	70.4
adult and community centres	9	16.7	16.7	87.0
private trainers	7	13.0	13.0	100.0
Total	54	100.0	100.0	

how trainees cope with the demands of their training and the ways in which they respond to it. As such, this variable is central to the paired sample tests carried out in this analysis.

Table 3 above shows the various types of provisions within which participants work. This is considered significant because it is conceivable that the nature of their work location might inform the way in which they respond to the demands of training. As such, this variable will be subjected to a paired sample test for correlation. The distribution pattern conforms with the general distribution pattern of FE provision in the UK with mainstream FE colleges representing close to 50%.

The difficult components of teacher training programmes

Table 4: Difficult components of teacher education

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid CPPD module	41	75.9	75.9	75.9
Theory related courses	7	13.0	13.0	88.9
pedagogy related courses	3	5.6	5.6	94.4
a mixture	3	5.6	5.6	100.0
Total	54	100.0	100.0	

As indicated in the table above, 76 percent of participants reported that they find the CPPD component of their training most tedious. CPPD is a module that is specifically designed to help trainees provide evidence of their professional development. More importantly, the module is used to account for the range of LLUK demands in terms of professionalism. Some of the criteria demanded by LLUK as evidence of trainees meeting the professional values and practice include; 'encourage the development and progression of all learners through recognising (AP 1.1), valuing and responding to individual motivation, experience and aspirations, use opportunities to highlight the potential for learning to positively transform lives and contribute effectively to citizenship (AP 2.1), apply principles to evaluate and develop own practice in promoting equality and inclusive learning and engaging with professional standards (AP 3.1), implement appropriate ways to enthuse and motivate learners about own specialist area (CP 2.1)' (LLUK, 2007:14-15), and a range of eleven other criteria. On the teacher education programme under investigation here, trainees are expected to provide evidence of these rather verbose criteria through the CPPD module. This naturally attracts a range of paperwork, use of specialist meta-language and endless hours of brainstorming. More importantly, evidence of achievement is often subjective, as the views of the tutor are supreme regardless of the trainee's rationales and intentions.

As indicated in the table, a minority of participants identified other modules including the theory based module, pedagogy based modules and a mixture of modules as the more difficult aspects of their training. It is significant to note that the combination of participants with this view is less than 25%. As such, it was considered this theme was worthy of further exploration during the interview.

The main focus in respect of this theme during the focus group interviews was why so many participants

Table 5: Paired Samples Test

		Paired Differences					t	df	Sig. (2-tailed)
		Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference				
					Lower	Upper			
Pair 1	VAR00003 - VAR00007	-.204	.683	.093	-.390	-.017	-2.190	53	.033
Pair 2	VAR00006 - VAR00007	.537	1.463	.199	.138	.936	2.698	53	.009
Pair 3	VAR00003 - VAR00005	-1.111	.861	.117	-1.346	-.876	-9.478	53	.000
Pair 4	VAR00006 - VAR00004	-1.593	1.743	.237	-2.068	-1.117	-6.714	53	.000

considered the CPPD module as the most difficult. A number of points emerged from the interviews in this respect. First, many trainees felt that it was so demanding because of the ‘bittiness’ of the criteria. One participant said ‘there are so many bitty parts to this module. You never really know what is being demanded of you. It just hangs around your neck forever’. Another point emerging from the interviews was the distance between the theoretical demands and the reality of practice: ‘How on earth are you ever going to demonstrate these in the reality of your class?’ Another view was the fact that some participants see the module as a tool for managerialism: ‘Your managers, who cannot really teach these classes go around with clipboards looking for evidence that you have met these criteria. It is just killing. They forget that you are actually training’. The last comment is very insightful in that it draws attention to two central issues in the theorisation of professionalism. First is Ball’s (2003) concept of performativity in which he decries the terror of performativity and its impact on the teacher’s soul. According to Ball (2003:1, abstract) performativity ‘requires individual practitioners to organize themselves as a response to targets, indicators and evaluations. To set aside personal beliefs and commitments and live an existence of calculation’ It would seem that this trend that Ball describes in the context of practising teachers is seen as replicated on trainees and as such, elicits similar responses from them. Similarly, the allusion to managerialism echoes the argument of Ingleby, (2010: 15) that standards-driven education has become imposed on aspects of PCET teacher education. One could argue that the response of participants in this regards is a bye-product of that imposition. A final point offered by participants in respect of the choice of CPPD as the most difficult component of their programme is its seemingly non-defined structure. One participant who typified this view said ‘you just don’t know what they are asking for. You simply jump through the hoop whenever any demand is made of you. You cannot on your own identify what these demands are’

Because of some of the views expressed by participants in these interviews, particularly the suggestion that it is a replication of the imposed principle of performativity, it was felt that it was necessary to see if there was a correlation between the findings in terms of difficulty of modules and years of experience. If indeed, we could justifiably claim that the view on CPPD was informed by the translation of work routine to the training setting, there is a possibility that the years of experience of participants might be significant. This was tested through the use of a paired sample T- test between years of experience and the difficult component of their training. The finding is presented below in table 5 below which also contains other paired sample T-test between variables that were considered significant.

Table five below presents the overall result of four pairs of variables which have been subjected to a paired sample T-test because of the view that some of the variables might significant in terms of their impact on other variables. The first line which reports the result of the Paired sample T-test between variable 003, years of experience and variable 007, modules found most difficult, indicates that the relationship between the two variables is significant with a 2-tailed significant figure of .033. In effect, this suggests that trainees who have had over 5 years experience before embarking on their training do not generally find the CPPD module as difficult as their colleagues with less than five years experience. This can be seen as an affirmation of the argument that part of the problem that trainees face in respect of this module is the fact that it is structured to replicate the tedium of performativity at work, and so, the more experienced trainees are already familiar with.

What makes CPPD difficult?

Table 6: VAR00004 difficult elements of CPPD

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid documentation	7	13.0	13.0	13.0
finding evidence	9	16.7	16.7	29.6
time	11	20.4	20.4	50.0
meta language	11	20.4	20.4	70.4
overbearing	7	13.0	13.0	83.3
management				
combinations	9	16.7	16.7	100.0
Total	54	100.0	100.0	

As indicated in table 6 above, there are a wide range of reasons from documentation through attitudes, to meta-language for considering the CPPD module as difficult. One conclusion that can be drawn from this is the fact that none of the reasons provided relate to actual pedagogical or subject area knowledge. In effect, this lends some credibility to the argument offered earlier in this work on de-constructing professionalism, that there is a need to acknowledge three elements of professionalism, particularly the need to acknowledge an imposed element of procedural professionalism. It would seem that what participants were acknowledging here was the demands of procedural professionalism. This again

formed a basis for identifying a theme that was explored through the focus group interview with the findings presented below.

Central to the contributions of participants in respect of the feature of CPPD they most resent was the issue of imposed form of presenting evidence. This tied in with the issue of paperwork and time spent on creating evidence. It would seem that one of the major problems for trainees is the fact that there is a demand that their evidence is provided in a particular form using a specific language form. One participant said, 'Even when you have tried and done all these things, you have to write your evidence using a million and one different forms and you must write your reports and documents in a particular way'. Another said 'you cannot use your own language. It must be written in a particular way and if you don't, forget it'.

Another explanation emerging from the focus group interviews was the issue of seeing the relevance of these activities in practice. Linked to this is the issue of different perceptions of what should be prioritised. In the view of participants, many of the demanded elements of CPPD are mere exercises in ticking the box, as they do not see the real importance of doing them to their learners. This was linked to the notion of time being wasted on irrelevances rather than spending time on actual teaching and learning. One participant said, 'why do I have to write out an ILP. Is it not sufficient that my students and I know what we want to address. The time we spend writing out these useless ILPs could be better spent with students or even creating resources. The problem is that your tutors want to see these in your folder, just like your managers do too'. Again, this echoes the argument around the replication of work ethos in training setting which is driven by the nature and structure of LLUK criteria.

Impact of the demands of CPPD on trainees

Table 7: VAR00005 Impact of demands on trainees

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid overworked	15	27.8	27.8	27.8
helpless	16	29.6	29.6	57.4
lost	14	25.9	25.9	83.3
not unduly worried	9	16.7	16.7	100.0
Total	54	100.0	100.0	

This focus sought to establish the impact of the tedium of the demands of the CPPD module on trainees. As indicated in table 7 above, participants offered a range of impacts, most of which have psychological manifestations. It is interesting, however, to note that some participants (16.7%) did not feel unduly worried. This provided a theme to be explored during the focus group interviews. Was there something peculiar to trainees who reported that they were not unduly worried? In addition, it triggered the quest to carry out another comparative analysis to see if any of the other variables was significant in this respect.

Opinions emanating from the interviews were focused on two broad themes. For those who felt that the CPPD module had a negative impact on them, arguments revolved around psychological wariness, fear of failure and a seeming never ending demand on their time. One respondent said 'it just wears you down, doesn't it' while another said, 'it just goes on and on forever'. More instructive, however, was the view that the timing was simply wrong. Many participants felt that at the time that they were just getting their heads around the principles and theories, the demands of professionalism in the CPPD module is not only at the wrong time, but also lacking significant context. One such participant said 'you are only learning about differentiation and other such things, but they immediately want you to demonstrate how you have planned it out in a lesson and how it affected your learners. Is not enough to talk about it? but you've got to provide documentary evidence. That is what is killing'.

For participants who did not feel unduly worried, the emergent theme was familiarisation with the process. In essence, many felt that it was something they had done for many years and are, therefore, no longer wary of it: 'you just get on with it don't you?' and 'it is not any different from what your managers get you to do all the time'. This again introduces the element of replication of work culture into training through a standard-driven curriculum. The differences in opinion reported above prompted a comparative analysis of variables and as indicated in table 6 pair 3 above, variable 0003, years of experience was found to be significant for variable 0005, impact on trainees, as it has a two-tailed significant figure of .000.

Other paired tests.

The result of a paired sample testing to see if there is a reciprocal significance between variables is worth reporting, as it is considered as significant to the context of this study.. Variable 00006, type of provision and Variable 0007, modules that participants find difficult, were subjected to a paired sample T-test. The result indicated that there is a significant relationship between the two with a two-tailed significance figure of .009. Participants who work in mainstream FE colleges have a sizable representation amongst those who found modules other than CPPD difficult. This might suggest that the nature of mainstream colleges is such that these participants have become more familiar with the procedural elements of professionalism than their colleagues from non-mainstream provisions.

Through the combination of statistical pattern and qualitative data from the focus group interviews, it was evident that the CPPD module could be seen as the more difficult and demanding part of FE teachers' training programmes. This on its own is perhaps not a cause for concern. What rings alarm bells is the perception that the elements of this module are not particularly useful and are simply a way of replicating work ethos in training, responding to what Ingleby (2010) refers to as 'bureaucratic education' and standards driven education. Do we go to these lengths because we are convinced that a module like this on the teacher education programme is beneficial to trainees?

The alarm raised by participants in this study about the usefulness of LLUK imposed standard is not in isolation. In a recent study, Lucas, Nasta and Rogers (2011) explored the views of teacher educators on whether the state-dictated standards evident in the teacher training programme have the 'desired effect'. They conclude on the basis of the evidence provided by teacher educators that 'there is little evidence of the enriching of the experience of trainees on ITT courses' (p1). Based on findings such as the one reported by Lucas et al (2011) and the current study, it becomes imperative that the structure of the so called professionalism-driven teacher education programmes be review. An attempt at doing that will be offered in the next section as a recommendation from this study.

Conclusions and recommendation

The findings from this study established two central points: the CPPD module constitutes the most problematic module for trainee teachers in the PCET and the vast majority of trainees experience negative impacts from their engagement with this module. Given that the goal of professionalism is desired by all stakeholders, teacher educators, trainees and policy makers, it is crucial that we explore the reason why the module within which teacher professionalism is developed carries so much negative ambience. I offer two potential explanations for this; the structure and expectations of the module. As suggested in the analysis of data, the structure of the module in terms of its content can be described as standard-driven. This means that the module itself is designed to respond to policy standards rather than actual professional standards. While there is nothing particularly wrong with responding to the requirements of a policy-driven set of standards, there is a valid question about the context in which such requirements are imposed. Drawing from the metaphor of the choice between Asclepius and Hippocrates invoked by Downie and Randall (1999) and further reinforced in Ingleby (2011), the question to be asked is whether it is desirable to entertain the audit driven philosophy embodied by Hippocrates or the alternative reflection-driven philosophy embodied by Asclepius. The answer to this question must reside with all stakeholders including trainees, policy makers and trainers. Nonetheless, it is plausible to argue that the standard-driven nature of the CPPD module in particular echoes the misgivings and apprehensions that have been chronicled in the analysis of other elements of the PCET teacher education programme (See e.g. Coffield, 2004, Lieberman, 2009, Lucas et al, 2011 and Ingleby, 2011). These studies have all concluded in part by questioning the legitimacy of imposing education as an 'aspect of bureaucracy' (Ingleby,2011:15).

The bureaucratically imposed structure also makes a demand on the expectations on the CPPD module. In this regards, I make recourse to theory for explanation. I draw from Ball's concept of performativity to account for this situation. . Drawing from Ball's construct in the analysis of the expectations on school teachers, Boxley, (2003) offers the argument that performativity reigns supreme when the personal characteristics of teachers are embedded into professionalism. According to him, 'Evidencing capability in this regard rests upon claiming personal qualities which include such immeasurable descriptors as 'Respect for Others', 'Conceptual Thinking', 'Initiative', 'Holding People Accountable' and 'Understanding Others'. This has necessitated the construction of a relationship between '*personal characteristics*' and performativity. It is a similar attempt to relate training to performativity that has raised the expectations imposed on trainees in PCET teacher training and which is responsible for the negative impact on trainees.

How then do we resolve this problem? I argue that many elements of what is demanded by this culture of performativity are essential for professional teachers. However, the crucial question is whether these are characteristics that can and should be developed in the context of training. This brings to the fore the argument offered earlier in this work about the need to deconstruct the concept of professionalism into three. In my view, many of the characteristics demanded of trainees under the general classification of professionalism should really be classified as procedural professionalism. If we accepted this deconstruction, where and when do we cater for the development of these elements? I argue that this

is something that is better addressed post-ITT. In the current framework for professionalism of PCET teachers, there is a requirement to achieve the Qualified Teacher in the Lifelong Learning and Skills sector (QTLS). Achieving this status requires applicants to provide evidence from their practice. This is distinctly different from the imposed situation in which trainees are required to provide evidence about issues they sometimes have very limited understanding of. In essence, I argue for a reconstruction of the structure of PCET teacher education such that evidence of what I call procedural professionalism to be relocated within the framework of QTLS. Such a reconstruction will achieve three things. First, it would allow trainees the space to internalise the theories they have learned, it would allow them to contextualise the theories in the reality of practice and also enable them to provide evidence for their QTLS status. Adopting this structure has more merit than the half way house approach which in addition to reducing the time available to spend on developing subject and pedagogical professionalism never really provides suitable opportunities for developing procedural professionalism.

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DESIGN AND IMPLEMENTATION OF A POSTGRADUATE PROGRAMME IN TEACHING AND LEARNING IN HIGHER EDUCATION FOR ACADEMICS IN GHANA (MEREKU)

Introduction

Today, programmes in teaching and learning for academics in tertiary education can be found in very few universities. In Ghana, the training and education of teachers and other academics in tertiary institutions before the inception of the 'Training and Continuing Professional Education of Tertiary Educators (TCPETE)' project at the University of Education, Winneba (UEW) had not been formal.

Three decades ago the Main (1987) observed that the current practice in Ghana where the training and education of teachers in tertiary education was largely an in-service activity, voluntary and left to local initiative was the common practice in many parts of the world. He explained that in most countries, institutions of higher education employed a great number of criteria for the selection and promotion of faculty members. Teaching skill was then not universally regarded as a major criterion; and as a result, training for teaching was not a highly developed activity in tertiary education. But with the recent changes in tertiary education, planned training and education of academics have become major requirements of institutional and national quality assurance measures (Ramsden, 2002; Fry, Ketteridge and Marshall, 2003).

The aim of tertiary education institution as 'a centre of excellence that promotes the imaginative acquisition of knowledge' (Whitehead, 1967) has for a long time remained unchanged. To fulfill this aim, academics in tertiary education 'are expected to teach or provide high quality teaching that will make students learn effectively. However, recent changes in tertiary education have resulted in growing concerns about the way in which many students are made to learn in tertiary education institutions. These changes have included

- substantial increases in student enrolments and consequent widening of the ability range of entrants;
- modularisation of programmes;
- semesterisation of the academic calendar;
- advances in pedagogical integration of ICTs;
- review of programmes of study to re-focus on preparation of students for employment and for meeting the new demands of higher education
- introduction of new institutional and national quality assurance procedures (GMOE, 1999; Anamuah-Mensah, et al, 2002, Ketteridge and Marshall, 2003).

In many parts of the world, these changes have resulted in growing concerns about the way teaching/learning is organised in HE and have spurred initiatives to offer academics (both new and old) some form of induction and accredited programmes to assist them with their roles. Academics - both teaching staff and others not directly engaged in teaching - in tertiary education are performing an

increasingly diverse range of roles. In addition to research, teaching, administrative and managerial functions, they are also being expected to engage in entrepreneurial (or income generating) activities such as marketing of courses, responding to new initiatives, preparing strategic plans, writing grant proposals, etc.

Consequently, in many parts of the world today, tertiary education institutions have designed programmes to provide for the training and development of their staff in performing these roles (Gibbs, 1996). The programmes include those for *continuing professional education (CPE)* as well as for *initial training* of teachers in tertiary education. Though the form of these programmes varies greatly from one university to another, their goals are often similar (Hale, 2003). In some institutions, such programmes comprise a series of seminars or workshops. In others, they are accredited academic programmes offered by their institutes (or centres) leading to the award of certificates.

This paper reports a design research project which led to the establishment of a postgraduate diploma in teaching and learning in higher education (PGDTLHE) programme at the University of Education, Winneba. The following specific objectives were addressed by the project:

- To carry out needs assessment and prioritise areas that academics in tertiary institutions in Ghana need training and/or continuing professional education;
- To design and trial test a post graduate diploma programme for the training and continuing professional education of tertiary educators.

Methodology

The study began with a needs assessment survey which covered all public tertiary institutions, two polytechnics and three private universities in Ghana. A random sample of 211 lecturers were reached (with 50% from public universities, 29% from private universities; 37% from polytechnics; and 12.4% being female and 87.6 being males). To ensure the design (i.e. the programme) is usable and applicable to tertiary institutions, the study employed a design-based approach, a research methodology which is interventionist, participatory, theoretical and generates theory. Design-based research approach is a relatively new methodology developed by and for educational researchers aimed to improve educational practices through iterative analysis, design, development, and implementation, based on collaboration among researchers and practitioners in real-world settings (Wang and Hannafin, 2005).

A number of workshops were organised in the process between 2007 and 2009 to write the programme proposal, design of course manuals and review of course manuals. Each workshop was followed by a series of meetings by collaborating researchers to discuss, elaborate and revise the documents. The proposal for the Post Graduate Diploma in Teaching and Learning in Higher Education (PGDTLHE) programme got the ratification of the School of Research and Graduate Studies on April, 2008. The programme was trial-tested on three cohorts of beginning lecturers in UEW since 2008. At the end of the programme each year group of participants were given questionnaires to complete, and in addition some were also interviewed, to evaluate the programme.

Results

The results of the needs assessment indicated that majority of the lecturers had limited skills in ICT use. Over 50% agreed they do not use the computer to support student learning, communicate with students, assess student progress and improve accessibility for people with special needs. The assessment also revealed that CPD activities though were common in all tertiary institutions, were not as common in the polytechnics as in the public universities. The largest proportion of lecturers (37%) not participating in CPD activities in the last five years were found in the polytechnics. The areas they rated lowest in their preparedness to teach at the tertiary level were in designing online courses and pedagogical integration of ICT. But when asked to rate areas that they prefer to have in CPD activities, most of them indicated writing research proposals to access research funding, writing papers for presentation in faculty seminars/public lectures as well as for publication in peer review journals, and pedagogical integration of ICT as the three most important areas.

The participants' responses during the end of project evaluation indicated they found the programme to be very relevant and useful. When asked to state things they would do differently as lecturers as a result of the knowledge and experiences gained during the programme, two common statements made were (i) the preparation of course manuals to replace course manuals to promote effective course delivery; (ii) facilitate learning rather than just transmitting knowledge to students; etc. The major achievements of the project were

- i) The handbook which contained course manuals for the PGDTLHE programme was designed to train beginning lecturers, lecturers with no formal qualifications in teaching in Higher Education¹⁵
- ii) 43 beginning lecturers had completed the programme and awarded the PGDTLHE.

Conclusion and recommendations

The programme had been successful in achieving the major intended outcomes of the project. The lecturers who had undergone this professional development programme have found it very useful and have changed in their perceptions of what constitutes quality teaching in tertiary institutions. They have also developed better understanding of their challenging and continually changing roles as academics in higher education as well as learnt how to network and collaborate with their peers across faculties in carrying out these roles which involve teaching, research, community service and entrepreneurship. The following recommendations were made for improving the effectiveness of the programme:

- i. universities should sponsor their lecturers to participate in the programme (which is run on sandwich basis)

¹⁵ Details about the course can be found at the University of Education, Winneba website at www.uew.edu.gh

- ii. the University of Education, Winneba should liaise with head of departments in participants' institutions to identify faculty who will mentor and supervise the work of beginning lecturers who enroll on the programme.
- iii. the University of Education, Winneba should seek support from ICET to mount the programme online in order to extend access to lecturers not only in Ghana but also in the sub-region.

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MONITORING AND EVALUATION OF TEACHING AND INSTRUCTION

EVALUATING SCIENCE LABORATORY CLASSROOM LEARNING ENVIRONMENT IN OSUN STATE OF NIGERIA FOR NATIONAL DEVELOPMENT (AKINBOBOLA)

Introduction

Laboratory work is an integral part of most science courses and offers an environment different in many ways from that of traditional classroom setting. A good laboratory environment promotes students' curiosity, rewards creativity, encourages a spirit of healthy questioning, avoids dogmatism, and promotes meaningful understanding, where wait-time is essential in promoting thoughtful responses and dialog. A good science classroom welcomes all students and strives to enable all motivated students to be successful.

According to Akinbobola and Afolabi (2010), a productive laboratory environment is a student-centered classroom, which is interactive, comfortable, and collaborative learning is encouraged. NABT (1994) sees a laboratory learning environment as a place where students work individually, or in a small group to solve a problem. The students make use of scientific processes and materials to construct their own explanation of scientific phenomena. They make use of science process skills such as observation, collection and interpretation of data during scientific process. The distinction between laboratory learning and traditional classroom learning according to NABT (1994), is that in laboratory learning, activities are learner-centred, with students actively engaged in a hands-on and minds-on activities using laboratory materials and techniques.

In its broad sense, the science laboratory has no boundaries. It encompasses every environment in which nature may be observed and investigated whether in the field or within the equipped classroom. The focal point for teaching science as investigative or inquiry is found in the laboratory.

Through experiences in the laboratory, the student can find opportunities to verify basic scientific concepts for himself. These experiences can lead to a greater insight into the meaning of science and the nature and procedure of science in general.

The teaching laboratory involves both an illustrative and investigative function (Akinbobola, 2011a). The illustrative function has been emphasized in past science curriculum. Today, it is recognized that a static laboratory programme in which the student is told the answers to a series of recipe-type activities is not conducive and stimulating to the spirit of inquiry. Rather, if the student is to gain an understanding of the nature of science as a process of inquiry, he must actively participate in investigations of problems to which he knows no answers. The investigations may or may not lead the learner to correct answers, but in learning to ask relevant questions to seek reliable information, design effective experiences and to interpret data efficiently and honestly, the student will gain an insight into the nature of science. With problems or questions posed as the basis for an investigation, and with no answers given the student is faced with an unknown, and the path is open for a personal discovery (Akinbobola & Afolabi, 2009).

Methods found reliable and successful by scientists of historical importance may be studied and followed, or the student may follow his own creative imagination and strike out on an entirely new original approach to a problem-solving situation (Akinbobola & Ikitde 2011). According to Afolabi and Akinbobola (2012), conducting scientific discovery requires that students have easy equitable and frequent opportunities to use a wider range of materials, equipment, supplies and other resources for experimentation and direct investigation of phenomena. Therefore, schools must make every attempt to ensure that facilities are well equipped and maintained to ensure safe and effective learning environment.

Science classroom/laboratories should therefore be designed with the following goals in mind.

- Technology is integrated into the space for use by teachers and students.
- Furniture and utilities promote access by all.
- Adequate supplies, instruments, equipment and secure space to store these items is available in science laboratories.
- Facilities, support team teaching and integrated curricular activities.
- Laboratory and outdoor space is available for investigations, demonstrations and research.
- Facilities, materials and equipment provide a wide selection of experiences and opportunities for varied interests, capabilities, and learning styles of all students.
- Capable of supporting all of the objectives of the science program (Akinbobola, 2011b).

The proper teaching of science in particular calls for theoretical explanation and demonstrations by the teacher, enriched by questions and answers, as well as practical work by students. This in turns call for a space modification to accommodate all these activities (Ikitde, 2011). At the senior secondary level in Nigeria, two different spaces are provided; one for theoretical presentation and the second one for demonstration and students' practical work. Akinbobola (2007) suggests that the same space can be used for lectures and for practical work. In the case of rural locations, where services such as water, electricity and source of heat are not readily available, they can improvised by bringing water in buckets, electricity can be supplied from batteries or portable generators, while heat can be obtained from spirit-lamps or small stoves. Apart from being cheap and cost saving, it helps the conceptual unification of theoretical explanations and practical works.

The propositions are more advantageous at the junior secondary school level in Nigeria for teaching integrated science. However, the suggestion raises a major problem in the teaching of science subjects in senior secondary school level. For example; how easy is it for a classroom to be arranged and re-arranged for theoretical lessons and practical work which are often two separate activities? The central problem raises many other difficulties connected with time-saving, convenience of staff and students, as well as the safety of human and material resources.

Setting up a laboratory that utilizes the maximum of students' participation in the inquiry process holds the greatest impact of modern science teaching (Adesoji & Ibrahim, 2009). Science is accumulating a vast quantity of knowledge that grows at an alarming rate. All of science cannot be taught in a year. The inquiry approach necessitates less diversification of subject matter and more depth in investigation of specific scientific problems (Adesoji, 2008). The investigatory laboratory provides the modern science teacher with an opportunity to stimulate and guide the students into patterns that a scientist might employ in making a similar investigation. While some of the planning, organization, techniques and equipment may differ from the methods followed by a working scientist, the teacher can find in the investigatory laboratory a dynamic setting for teaching science as inquiry (Green, Elliot & Cummins, 2004).

The various dimensions of science laboratory environment as perceived by the students and the actual laboratory environment include student cohesiveness, open-endedness, integration, rule clarity and material environment (Fisher & Fraser, 1983). Student cohesiveness is the extent to which students know, help and are supportive of one another. Open-endedness is the extent to which the laboratory activities emphasize an open-ended, divergent approach to experimentation. Integration is the extent to which the laboratory activities are integrated with non-laboratory and theory classes. Rule clarity is the extent to which behaviour in the laboratory is guided by formal rules while material environment is the

extent to which the laboratory equipment and materials are adequate (Fraser, Giddings & McRobbie, 1993).

Statement of the Problem

In spite of all the advantages and the recognition given to science subjects as the pivot for technological and economic development of a nation, the laboratory learning environment in which the science subjects suppose to be learnt seems not to be conducive for effective teaching and learning process. This has led to the perception of students that science is a difficult subject. This perception of students has affected learners' interest and led to declining rate of students' achievement in science subjects in Senior Secondary School Certificate Examinations (SSSCE) conducted by West African Examinations Council (WAEC) and National Examinations Council (NECO) in Nigeria (Akinbobola, 2011b). Hence, does the science laboratory learning environment affect students' achievement in science? What difference exists between the preferred and actual science laboratory environment as perceived by students? Do the perception of students and teachers about science laboratory environment similar? These are the questions that seek answers in this study.

Purpose of the Study

The purpose of the study is to evaluate science classroom learning environment in Osun State of Nigeria for national development. Specifically, the study is designed to achievement the following objectives:

1. To examine the effect of science laboratory environment on students' achievement in science.
2. To ascertain the difference between preferred and actual science laboratory environment as perceived by students.

3. To find out the perception of students and teachers in the same laboratory environment.

Hypotheses

- Ho1: Science laboratory environment has no significant effect on students' academic achievement in science subject.
- Ho2: There is no significant difference between students' perceived and actual science laboratory environment in terms of student cohesiveness, open-endedness, integration, rule clarity and material environment.
- Ho3: There is no significant difference between the perception of students and teachers about the same science laboratory environment.

Research Method

Ex-post facto design was adopted for the study. The population for the study comprised of all the 650 senior secondary two (SS2) science students in the selected schools in the eight (8) educational zones in Osun State of Nigeria. Stratified random sampling technique was used to select schools from educational zone. Twenty-five (25) students and three (3) teachers were randomly selected from each school. A total of 24 science teachers and 200 science students were used for the study. Science Achievement Test (SAT) and Science Laboratory environment Inventory (SLEI) were the instruments used to gather data for this study. The SLEI was adopted from Fraser, Giddings and McRobbie (1993) and consisted of 35 structured items with five (5) options namely very often, often, sometimes, seldom and never with a rating scale ranging from 5 to 1. The items measured five different dimensions of laboratory environment namely student cohesiveness, open-endedness, integration, rule clarity and material environment.

The three types of SLEI that were used in the study include SLEI-A, SLEI-P and SLEI-T. SLEI-A is designed to measure the actual environment. SLEI-P is designed to measure preferred environment while SLEI-T is designed to measure the teachers' assessment of the laboratory environment. Although, the wording of the item is similar for the three types, but the statement clearly instruct students what the laboratory is actually like or what they would like it to be. For example, an item such as "I interact very well with other students during practical activities in the laboratory" in the actual form is changed to "I would interact very well with other students during practical activities in the laboratory" in the preferred form.

The SAT consisted of 45 multiple-choice items. Fifteen (15) questions were drawn from each of physics, chemistry and biology by the researchers using the curriculum meant for the current term. Each item had four options with only one correct answer and the correct answer was scored 2 marks. The validation of the instruments were ascertained by six science educators, two from each subject and the instruments were trial tested with 40 students in a school that was not used for the main study. The data obtained from SAT were subjected to Kuder Richardson formula-21 and the result showed a reliability coefficient of 0.84. The data collected from SLEI were subjected to Cronbach alpha and the result showed reliability coefficient of 0.87. The SAT and SLEI were administered to all the subjects. The data collected were analyzed using Pearson Product Moment Correlation (PPMC) and t-test. All the hypotheses were tested at .05 level of significance.

Results

Hypothesis One

Science laboratory environment has no significant effect on students' academic achievement in science subjects.

The analysis is as shown in Table 1.

Table 1: Analysis of the effect of laboratory environment in student' Academic achievement.

Variable	N	$\Sigma X, \Sigma Y$	$\Sigma X^2, \Sigma Y^2$	ΣXY	r	DF	t-cal.	t-crit.	Decision
Laboratory Environment(x)	200	13986	1009492	1039861	0.96	198	48.25	1.96	*
Academic Achievement (Y)	200	14424	1073960						

* = Significant at $p < .05$

The analysis in Table 1 shows that the calculated t-value of 48.25 is greater than the critical t-value of 1.96 at $p < .05$ alpha level. Therefore, the null hypothesis which stated that science laboratory environment has no significant effect on students' academic achievement in science subject is rejected. This implies that science laboratory environment has significant effect on students' academic achievement in science subjects.

Hypothesis Two

There is no significant difference between students' preferred and actual science laboratory environment in terms of student cohesiveness, open-endedness, integration, rule clarity and material environment.

The analysis is as shown in Table 2.

Table 2: T-test analysis of students' preferred and actual science laboratory environment

Laboratory Environment	N	X	SD	DF	t-cal	t-critical	Decision
Student Cohesiveness							
Actual							
Preferred	200	26.52	6.84	398	8.11	1.96	*
	200	32.20	7.24				
Open-endedness							
Actual							
Preferred	200	25.17	6.25	398	8.91	1.96	*
	200	30.98	6.78				
Integration							
Actual	200	24.25	7.59	398	7.39	1.96	
Preferred	200	29.72	7.14				*
Rule Clarity							
Actual	200	23.88	8.20	398	6.23	1.96	
Preferred	200	29.24	8.96				*
Material Environment							
Actual	200	25.92	7.42	398	7.43	1.96	*
Preferred	200	31.64	7.93				

* = Significant at $p < .05$

The analysis in Table 2 shows that the calculated t-value of 8.91, 8.11, 7.43, 7.39 and 6.23 for open-endedness, student cohesiveness material environment, integration and rule clarity respectively in order to magnitude is greater than the critical t-value of 1.96. Thus, the hypothesis which stated that

there is no significant difference between students' preferred and actual science laboratory environment in terms of student cohesiveness, open-endedness, integration, rule clarity and materials environment is rejected. This implies that student preferred science laboratory environment is different from the actual science laboratory environment.

Hypothesis Three

There is no significant difference between the perception of students and teachers about the same science laboratory environment. The analysis is as shown in Table 3.

Table 3: t-test analysis of the perception of students and teachers about the same science laboratory environment.

Perception	N	X	SD	DF	t-cal.	t-critical	Decision
Teachers	24	32.71	8.35	222	0.54	1.96	NS
Students	200	31.65	8.92				

NS= Not significant at P<.05 alpha level.

The analysis in Table 3 shows that the calculated t- value of 0.54 is less than the critical t-value of 1.96. Therefore, the null hypothesis which stated that there is no significant different between the perception of students and teachers about the same science laboratory environment is retained. This implies that both the teachers and students perceived the status of science laboratory environment in the same way.

Discussion of Results

The results of hypothesis one showed that science laboratory environment has significant effect on students' academic achievement in science subjects. This might be due to the fact that the most

effective vehicle by which the process of inquiry can be learned appears to be a laboratory setting which the students experience first hand process. Laboratory settings have also been demonstrated to be effective means for comprehension, understanding and application of scientific knowledge. Inquiry method and varieties of activities in a good science laboratory environment provide students which opportunities to observe, sample, experience and explain with scientific phenomena in their quest for knowledge of nature. This is in line with the findings of McRobbie and Fraser (1993), Wong and Fraser (1997) and Akinbobola (2007) that there is a positive relationship between the nature of laboratory environment and students' achievement in science.

The result of hypothesis two showed that students' preferred science laboratory environment is different from the actual science laboratory environment in existence. The result also indicated that the significant difference exists between students' preferred and actual science laboratory environment in terms of open-endedness, student cohesiveness, material environment, integration and rule clarity respectively in order of magnitude in favour of preferred science laboratory environment.

The form of open-endedness that the students preferred is significantly different from the present status of science laboratories. The present situation in the laboratories is a stereotyped one which makes the teacher to decide the activities to be carried out by the students. However, the students prefer using activity curriculum in which students can pursue their own interest based on their needs and aspiration with the provision of variety of activities by the teachers. This will provide an open-ended divergent approach to experimentation. This is in agreement with the findings of Afolabi and Akinbobola (2009) that inquiry method through laboratory activities in open-ended form exposes the students to more realities of life and they tends to work as scientist and acquire knowledge by themselves in which the teacher serves as a guide and correct their misconceptions.

The form of student cohesiveness that the students preferred is significantly different from the present status in which students work alone. This might be due to the fact that, working together cooperatively enhances appropriate behaviour in organizing work, asking questions, encouraging social interaction, demonstrating self management and facilitating better study habit and retention of knowledge. This is in line with the findings of Dilworth (1996) that working in small group enhances performance, promote learning and skills, and improvement of self-development through collaborative learning.

The form of material environment that the students preferred is significantly different from the actual material environment available in terms of materials and equipment. Most of the materials available are in short supply and this makes the practical activities to be crowded. The students preferred form of material environment that makes teaching to be real, provide first-hand experiences, develop creative ability of learners, and promote innovation and learning by doing. This is in line with the findings of Teh and Fraser (1995) that good laboratory environment enhances hands-on activities and enable the students to acquire basic science process skills in order to solve problems.

The form of integration that the students preferred is the type that the practical activities are integrated with theory. The actual situation is that the theory and the practical activities take place at different time. Most often, the practical activities are delayed until the final external examination is near. Integration of practical activities with theory enhances the development of science process skills and the ability of students to arrive at generalizations or concepts. This is in line with the findings of Ikitde (2011) that integrating practical work with theory enable students to develop the habit of critical thinking, innovation and creativity.

The form of rule clarity that the students preferred is the type that student's safety and proper handling and care of equipment is ensured. The teacher should prepare the rules and regulations guiding laboratory activities and make it known to the students.

The results of hypothesis three showed that both the teachers and students perceived the status of science laboratory environment in the same way. The might be due to the fact that both the students and the teachers recognize the problems facing the laboratory environment which include shortage of tools, materials and equipment and lack of maintenance culture. This in agreement with the findings of Akinbobola (2007) that the major problem facing laboratory environment is improper maintenance of materials and equipment.

Conclusion

From the findings of the study, there is clear indication that the science laboratory environment has significant effect on students' academic achievement in science subjects. There exists a significant difference between students' preferred and actual science laboratory environment in terms of open-endedness, student cohesiveness, material environment, integration and rule clarity respectively in order of magnitude in favour of preferred science laboratory environment. Also, both the teacher and students perceived the present status of science laboratory in the same way.

Recommendations

In view of the implication of the findings from this study, the following recommendations are made:

1. Laboratory activities should be integrated with theory during regular class period.

2. Students should work collaboratively in a small group in the laboratory in order to enhance appropriate behaviour in organizing work and social interaction, and facilitating better study habit and retention of knowledge.
3. Adequate materials and equipment should be provided in the laboratory by the government in order to promote creativity, innovation and learning by doing.
4. Safety rules and regulations guiding laboratory activities and procedures should be made known to the students.
5. Adequate storage facilities should be provided in order to secure the materials and equipment available in the laboratory.
6. Maintenance culture should be enhanced through organizing regular seminars, workshops and conferences for teachers.

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ASSESSING THE IMPACT OF USING PROBLEM POSING AS A STRATEGY FOR TEACHING MATHEMATICS ON THE PEDAGOGICAL KNOWLEDGE AND SKILLS OF PRE-SERVICE MATHEMATICS TEACHERS. (FLETCHER)

Introduction

Learners of all ages have limited experience posing their own mathematical problems. In most mathematics classrooms, mathematics problems come from textbooks while the teacher simply assigns them for learners to solve (Crespo & Sinclair, 2008). Yet problem posing, both as an act of mathematical inquiry and of mathematics teaching, is part of the mathematics education reform vision that seeks to promote mathematics as a worthy intellectual activity (e.g. Swan, 2005).

In problem posing, learners can create their own problems or different variants of given problems for other learners to solve. This offers the problem posers the opportunity to be creative and 'own' problems. While others attempt to solve the problems, the problem posers can take on the role of teacher and explainer. There are a number of studies which have highlighted the benefits of problem posing. These benefits include enabling learners to reflect on how much and how well they understand a topic in mathematics (Pirie, 2002); promoting an awareness of the variety of ways in which the understanding of a concept can be tested (Sinclair, 2006); focusing attention on the various features of a problem that makes it difficult to solve (Wu & Adams, 2006); encouraging learners to consider various applications of a concept (Stein, Smith, Henningsen, & Silver, 2000;); helping learners to become 'owners' of their own mathematical ideas they generate (Fletcher, 2005); and building learners' confidence as they explain the ideas behind problems to others (Swan, 2005). Furthermore, research on problem posing (e.g. Sinclair, 2004) suggests that when posing problems, learners try to create problems that are both challenging and that they know they can solve correctly. They first solve their own problems and then challenge other learners to solve them. During this process, they offer support and act as 'teachers' when the problem solver becomes stuck. In spite of the apparent benefits that result from exposing learners to problem posing in mathematics, no study that has explored the benefits of problem posing in pre-service teacher education has come to my notice. It is this 'void' that the present study was meant to help to fill.

The present study was therefore designed to explore the effectiveness of problem posing (and solving) as a pedagogical strategy on pre-service numeracy teachers' pedagogical content knowledge and skills.

The pre-service teachers (also referred to as 'trainees' in this paper) were on the Post-graduate Certificate in Mathematics Education programme in a university environment. The programme was developed especially for those who wanted to become professional teachers in the field of mathematics/ numeracy but did not yet have a teaching qualification.

The programme comprises 4 modules; two of these take place in the first year and two in the second year. The taught components of the programme are delivered in lecture, seminar and workshop formats. Tutor observation of practical teaching and one-to-one tutorials are, in addition, an essential part of the programme. The first year of the programme is taught in partnership colleges and the second year is held at the university's premises (Numeracy DTLS Handbook, 2010, p.21).

The purpose of the intervention study was to explore the effect of using problem posing as a strategy for teaching mathematics on the ability of the trainees to analyze mathematics teaching. The study focused on the pedagogical difficulties that arose during the trainees' teaching of topics in which they lacked pedagogical content knowledge and skills. Schulman (1986) identifies three important areas of a mathematics teacher's 'content' knowledge of the subject. These are subject matter knowledge, pedagogical content knowledge and curricular knowledge. For Shulman, pedagogical content knowledge consists of "the ways of representing the subject which makes it comprehensible to others...[it] also includes an understanding of what makes the learning of specific topics easy or difficult ... (Shulman, op. cit., p. 9). It was proposed in the present study that improving teachers' pedagogical content knowledge and skills would help them to better analyze mathematics lessons and learn better from the latter.

The main research question was: "What is the effect of using problem posing as a pedagogical strategy on trainees' teachers' ability to analyze mathematics lessons. A research hypothesis that was formulated to guide the study, and which came from the research questions and the literature on problem posing, was that exposing pre-service teachers to problem posing (and solving) would lead to better analysis of mathematics lessons. Consequently, the null hypothesis that was tested in the study was: exposing pre-service teachers to problem posing as a pedagogic technique would not lead to better analysis of mathematics lessons.

Analyzing teaching

In this study, in order to measure the trainees' ability to analyze mathematics lessons, we adopted the *learning to notice* framework developed by van Es and Sherin (2002) and elaborated on in van Es and Sherin (2008). According to this framework, analyzing mathematics teaching has three dimensions: (a) identifying what is important in a teaching situation; (b) using what one knows about the context to reason about the situation; and (c) making connections between specific events and broader principles of teaching and learning (van Es & Sherin, 2008, p. 245).

The first dimension involves determining what is noteworthy in a certain situation. The ability to identify noteworthy events in a teaching situation depends on one's image of what is important in teaching. Below are some examples of what we consider noteworthy:

- (1) Incidents that indicate students' understanding of or confusion about a concept.
- (2) Questions posed by students' questions that reflect their understanding or lack of understanding of a concept.
- (3) Incidents of student–student interaction and opportunities for student input.
- (4) Indications of how students think and engage in the lesson.
- (5) How the teacher handles students' questions.
- (7) Types and frequency of teachers' feedback to students.

The second dimension of analyzing teaching involves interpreting what has been noticed. Teachers use their knowledge about subject, pedagogy, and student thinking to reason about what they notice (van Es & Sherin, 2008; Dreyfus & Dreyfus, 1987). Teachers' beliefs also play a role in this regard (Schoenfeld, 1998; van Es & Sherin, 2008). That is why different teachers might interpret the same situation in different ways. In order for teaching analysis to be useful for teachers, they should try to understand what they notice in terms of its effect on student learning.

The third dimension of analysis involves linking the noticed events with the broader principles of teaching and learning. In this study, these three dimensions were put into two categories – a) low level analysis and b/c) high level analysis.

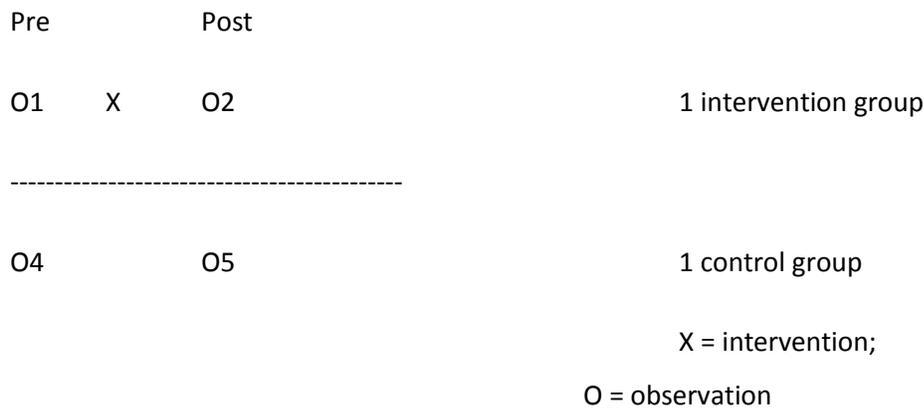
Thus, those pre-service teachers who were only able to identify what is important in a teaching situation were operating at a lower level than those who could demonstrate how to use what they know about a context to reason about the situation and/or link the event to general teaching and learning principles, as explained above. As van Es and Sherin (2008) point out, interpreting worthy events in teaching is a sign of professional vision for reform.

Method

Participants in the study were trainee teachers on the Post-graduate Certificate in Mathematics Education programme described above. The target population for the study consisted of all first year pre-service teachers on the programme at the time of the study. These numbered 48 in three different further education colleges. Two colleges were randomly selected and all the trainees on the programme in the colleges were sampled. There were 17 trainees in one of the selected college and 16 students in the other. Also, one of the selected colleges was randomly assigned the intervention group (referred to in the study as “EXP”) and the other was designated the control group (referred to as “CT”).

Thus, the design for the study was quasi-experimental with two intact groups in the two colleges. This design was deemed appropriate for the study not only because many critics of mathematics education research sometimes suggest that only rigorous controlled experimental, or quasi-experimental should be used especially in making policy or curriculum decisions (Carnine & Gersten, 2000), but because using that design is the main way of establishing a causal relationship between the intervention and performance without randomly assigning the individuals to the control and intervention groups (Thomas, et.al, 2007).

The design can be written as follows:



The instruments for the study were Standard Units materials, described below, and two videos on mathematics lessons, one (on the teaching of probability) used for establishing the baseline knowledge and skills of the participants and the other one (on the teaching of functions) was used to collect the participants' pedagogical content knowledge and skills after the intervention period. The use of videos was appropriate because it provided us with the opportunity to capture the trainees' pedagogical content knowledge and skills in mathematics.

Pre-intervention lesson analysis

In the first term weeks of the trimester, the participants were introduced to the Standard Units materials and resources. The Standards Unit was set up in January 2003 to drum up excellence in teaching, training and learning. The Unit's work is based on two themes: putting learning at the heart of what teachers do and developing the leaders, teachers, training and support staff of the future. The Unit's work in mathematics is supported by expert practitioners and call off consultants in mathematics education. In order to achieve the goal of embedding excellence in the delivery of the UK mathematics curriculum, the Unit has adopted an approach in teaching and learning based on two principles: guiding teachers to move from 'transmission teaching' to challenging teaching'; and guiding learning to move from 'passive learning' to 'active learning' (Swan, 2005).

To support improvement in teaching and learning of mathematics, the Unit has produced a variety of resources including VHS videotapes, DVDs, folders of teaching and learning materials. Participants were engaged in discussions, brainstorming, and analyzing of case studies (on DVD) produced by the Unit. After the first term, all the participants were asked to watch a video lesson, which was about the teaching of probability in at the secondary level, write an analysis of that lesson and hand it in at the first week of the second term.

Each participant was required to write analysis of the lesson in 3 to 5 pages, highlighting and critiquing important events. The participants' analysis were marked and graded by two experts as low level or high level analysis. The inter-reliability of the markers was exceptionally high. There was only a single case where the two markers disagreed. The experts later agreed on the participant's grade after their attention was drawn to the disagreement. The grades represented the participants' pre-intervention 'scores'.

Intervention

The teaching of both groups took place from January, 2010 to April, 2010 in their respective colleges. In both colleges, the mathematics teaching rooms had computers for the trainees to use during a mathematics methodology lesson and also an interactive white board for the teacher's use. In addition to these facilities, each room had a white board and markers as well as a television/video recorder. Each of the rooms had posters of key facts in different areas of mathematics on the walls. Thus in both colleges, the mathematics teaching rooms were conducive to teaching and learning mathematics. Furthermore, the same topics were taught in both groups and each session lasted the same amount of time

The teaching of the EXP group was modelled on the use of problem posing as a pedagogical strategy. Participants worked mainly in small co-operative groups, posing and solving problems in real life situations. They discussed how the secondary students could be encouraged to pose and solve problems. The participants were helped to pose their own problems by giving them the opportunity to explore the relationship between problems and their solutions. They were guided to work from the solutions of problems they had solved to the solutions. For example, if the problem was 'find the product of six and eight' and learners arrived at 48 as their answer, this process can be reversed as "what two numbers will multiply to give 48?"

Participants could work in pairs or small groups and assumed the role of a poser in turns. The poser created a problem using one process ('doing') and the solver attempted to reverse that process ('undoing') using a solution to the poser's problem. In some cases, the solution was not the one expected, and this created some useful discussion.

The participants also found it helpful to create variants of existing questions in stages. One of the main advantages of creating variant questions is that instead of just working on one question, the learner becomes aware that the original question is just one example of a class of questions that might have been asked. Throughout the process, the teacher's role is to explain and support the process of problem creation; encourage learners to support each other in solving the questions; and challenge learners to explain why some problems appear to have several alternative solutions. In addition to posing and solving problems, the participants compared different methods for doing a problem, organise solutions

and/or diagnose the causes of errors in solutions. They began to recognise that there were alternative pathways through a problem, and “developed their own chains of reasoning” (Swan, 2005, p.16).

Control Group.

The methods used in the teaching of the control groups were mainly lecture, demonstration, 'hands on' and question-and-answer. The teacher centredness that was encouraged by this method provided limited opportunities for the students to pose and solve problems. However, as it was in the case of the intervention group, all the participants in the control group had the opportunity to discuss ways in which students could be helped to learn the concepts needed to solve the problems they worked on.

Post-intervention lesson analysis

In the video, the teacher taught a lesson on functions. As was done in the case of the pre-intervention lesson analysis, each participant was required to write analysis of the lesson in 3 to 5 pages, highlighting and critiquing important events. Here too, the participants' post- intervention analyses were marked and graded by same two experts as low level or high level analysis. The experts disagreed on the grading of only two essays and interestingly, these were both essays from the intervention group. In spite of the disagreement, both experts graded 12 out of 17 essays written by the intervention group as "high level" essays and 5 as "low level" essays. After a short deliberation, the expert came to an agreement and maintained the number of "high level" essays as 12 and that of "low level" essays as 5. As shown below, the experts agreed that only 5 of the essays from the control group were "high level" essays.

Results

In order to investigate how the post intervention scores translated into examination success or failure, the grades obtained by the trainees were examined. The results are presented in the table below:

Table 1: Number of students in each group under each level of performance /pre intervention

Group	Control	Intervention
Number in group	16	17
High level essays	5	5
Low level essays	11	12

It can be inferred from the table that only 5 out of the 16 trainees in the control groups (i.e. 31.3%) produced high level essays. Similarly, only 5 out of the 17 trainees in the intervention group (i.e. 29.4%) produced high level essays. The difference between the two proportions (i.e. 31.3% and 29.4%) was not statistically significant. The Chi-square value calculated and subjected to Yates' correction was 0.07. Thus, the two groups were similar in terms of their 'entry behaviour'.

The table below shows the distribution of post-intervention 'grades'.

Table 2: Number of students in each group under each level of performance /post intervention

Group	Control	Intervention
Number in group	16	17
High level essays	5	11
Low level essays	11	5

From Table 2, whereas that only 5 out of the 16 trainees in the control groups (i.e. 31.3%) produced high level essays, as many as 11 out the 17 essays produced by the intervention group (i.e. 70.6%). On the face of it, the difference between the two proportions (i.e. 31.3% and 70.6%) is significant. To test this statistically, chi square analysis was done The Chi-square value was 5.1067 ($p < 0.05$). However, subjecting this to Yates' correction of continuity reduced this value to 3.91531 ($p < 0.05$). As Howell

(2002) rightly points out Yates' correction tends to over-correct the likelihood of a Type I error and lowers the value of the chi-square statistic, making it less significant.

To verify the effect of the Yates' correction in the present study, the 'high level' proportions of 70.6% and 31.3% were subjected to the Z-test for the equality of two proportions. The assumption (null hypothesis) here was that the 'high level' frequencies were of equal proportions and that the apparent difference in the above proportions was not significant. However, using the above test, a Z-score of 2.2586 was obtained. Using this value against a critical value of $Z_{0.05} = 1.96$ (two tail), the above null hypothesis was rejected as before. This indicates that the difference between above 'high level' and 'lower level' rates was significant at the 0.05 level.

By way of further analysis, the above results (regarding the grades obtained by the trainees) were investigated using Fisher's exact test (using "outcome of the post-intervention analysis" and "teaching method" as two nominal variables). As was expected, the test confirmed that the difference between the performance of the intervention and control groups was significant at the 5% level (P-value = 0.027). Thus, the intervention was successful. Indeed, the difference between the two groups in terms of the 'grades' they obtained after the intervention was significant and the direction of the difference was consistent with findings from problem solving studies (e.g. Wu & Adams, 2006). Exposing the trainees to problem posing (and solving) as a pedagogic strategy improved their pedagogical content knowledge and skills and as a result, such trainees did better than their counterpart who were not so exposed.

Discussion

The findings of the present study are not surprising, for many studies in different contexts have confirmed the superiority of problem posing (and solving) as a pedagogical strategy over passive teaching or transmission approaches (Askew, Brown, & Millett, 2003; Swan, 2005). Indeed, the transmission approaches used in the control group sessions did not develop in the trainees deep learning which would lead to sustained pedagogical content knowledge and skills in mathematics.

Transmission approaches can appear superficially effective when short-term recall is required, but they are less effective for longer-term learning, because they:

Such traditional methods of teaching view the role of the teacher as that of imparting knowledge in one way communication sessions often in the form of lectures. Although the present study involved question and answer sessions within the control groups, the approach was mainly teacher centred and this put the students in a passive role. On the other hand, the problem posing strategy used in the intervention groups created a culture of sharing experiences in which everyone in the intervention groups expressed their ideas and opinions. Indeed, when learners have the opportunity to share problems or issues, it can generate holistic thinking around areas of good or bad practice which can be shared and acted upon (Mujis & Reynolds, 2001).

Conclusion

The teaching strategies used in the intervention sessions were superior because the post-intervention analysis grades of the intervention group were significantly higher than those of the control group. It can be said in conclusion that the combination problem solving and problem posing approaches used in the study challenged the trainees in the intervention group to think more and this resulted in their superior performance. It is therefore recommended that teacher trainees should be encouraged to pose and solve problems as this can enhance their pedagogical content knowledge in mathematics. Finally, a study exploring the effect of problem posing and solving on the quality of pre-service teachers' teaching can throw more light on the link between pedagogical; content knowledge and practical teaching

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CORRELATION OF TUTOR CHARACTERISTICS WITH STUDENTS PERFORMANCE IN HOME ECONOMICS AT COLLEGES OF EDUCATION IN GHANA (EDJAH, AMU & EDDISON)

INTRODUCTION

Ghana, as a developing country acknowledges the vital role education plays in its development and as such the Ministry of Education has as its mission, using quality education delivery to accelerate the nation's socio economic development. The Ministry has among many others established 20 vocational institutions throughout the country and is running teacher training and development programmes as well as providing incentives to teachers. In recent years however, the performance of teacher trainees in Home Economics related subjects has become a major concern for many people in the field.

The chief examiner's report on catering and sewing at the Colleges of Education points to the poor performance of the students. Studies in some fields have shown that learning and for that matter, students performance, depends largely on teachers. For instance, Onwuakpa and Nweka, (2000), Opolot-Okurut, Nakabugo, Ssebbunga, Ngobi, Maani, Gumisiriza, and Bbosa (2008), Schmidt, Houang and Cogan (2002) and Baikie (2000) have all found that students' learning outcome in mathematics largely depends on the teacher. If teacher factors have significant influence on performance of students in other fields, then it becomes imperative to investigate to determine whether the same can be said in the field of Home Economics at the Colleges of Education in Ghana.

Related Literature

Tutors' Competency and Academic Performance

Keteku (2001) posits that rewards should be positive in all circumstances and situations in handling students who lack interest and confidence in their ability to perform because a negative reward would kill their interest and desire to study. Mercer and Mercer (1998) maintain that one of the crucial instructional variables related to learning is a positive and supportive learning environment. The teacher is thus required to encourage the strengths of the student and de-emphasize the weakness

though the teacher has to try to correct the mistakes of the student. They conclude that teachers' enthusiasm is an important aspect of teacher effort and is positively correlated with students' achievement.

Calhoun, Light and Keller (1994) on their view of factors influencing academic performance, maintain that students usually perform better when they have at their disposal books or learning aids to enhance learning. Tamakloe, Amedahe and Atta (2005) also maintain that teaching resources involve the materials the teacher prepares and uses to make learning easier than it would have been without them. In other words, for enhanced learning and thus better academic performance, all materials that aid learning, understanding, acquisition of knowledge, principles, concepts or skills, need to be provided by teachers in the classroom, laboratory or any place under the auspices of the school.

Tutors' Academic and Professional Qualification and Academic Performance

UNESCO (as cited by Eshun 1997) states that initial teacher education and training must be regarded as an investment which will pay in the long run. Also, that the success and development of any educational reform is bound up with the teacher and student. Subsequently, the characteristics possessed by these persons are of great essence in determining good or poor performance of students. Huberman (1989) is of the view that the influence exerted on the future teacher by their programme of preparation is not simply a matter of the course they take. He believes that this is due to:

1. the degree to which their programme of studies has been individualised. That is, the programme of studies for the teacher trainee should emphasize those aspects that could make the future leaders knowledgeable in the subjects they are to teach as well as the methodology they will use.
2. the intensity of contact with individuals whom they perceive as professional models.

He points out that the teacher trainee ought to be sufficiently exposed to a succession of practical teaching lessons conducted by experts or trainers. He is also of the view that in order to perform well, the teacher is to be research-oriented, creative and confident having less fear for failure. Goldhaber and Brewer (2000) also found a positive relationship between teacher academic achievement and students' performance. Professional qualification and teacher knowledge has also been linked to students' performance, (Rowan and Ball, 2005; Ball, Hill, and Bass, 2005).

Tutor Motivation

Spear, M., Gould, K. and Lee, B. (2000) carried out a review of research works and concluded that, in order to experience high job satisfaction, teachers need an intellectual challenge, a high level of professional autonomy, to enjoy good relations with their colleagues, to feel that they are benefiting society and to spend a sufficient amount of their time working with children. Sergiovanni (as quoted in Eshun, 1997) contends that the basic principles of motivation is based on the claim that individuals invest their time, energy, skill, knowledge and effort into work in order to obtain desired outcomes which satisfy their needs. Eshun (1997) also suggests that incentives such as recognition, advancement and inter-personal relationship on the job contribute to teacher effectiveness. Policy and administrative factors, low salary, the nature of work and the social status of teachers do not contribute to teacher effectiveness.

Objectives

Basically, this paper sought to investigate the relationship between students' academic performance in Catering and Sewing at the Colleges of Education in Ghana and tutor's characteristics such as

1. professional and academic backgrounds,
2. perceived level of comprehension of content and motivational level.

METHODOLOGY

Research Design and Population

The study relied on quantitative descriptive survey design to offer researchers the opportunity to seek the opinion of the population concerning some issues of interest and relevance to the study. The target group for the study was 35 training colleges that offer catering and/or sewing. All second year sewing and catering students and all sewing and catering tutors of the 35 T.T.Cs constituted the accessible population.

Sample and Sampling Technique

The purposive and simple random samplings, specifically the lottery method, are the sampling techniques that were employed for the study. In all, 25 out of the 34 colleges were used for the study.

Four colleges that offered both Catering and Sewing were purposively selected. The lottery method (basket) was then used to select 21 more colleges that offered only Catering to add to the four purposefully chosen resulting in a total of 25 colleges.

Two Home Economics tutors each were selected from the 25 colleges to participating in the study. This yielded a sample size of 50. An already established statistics of second year students' academic performance in second semester examinations for 2009 was correlated with tutor characteristics.

Validity and Reliability of Instrument

Questionnaire was used in collecting data for the study. Content validity was established with the assistance of colleague researchers. To establish the extent of reliability of the instrument, Cronbach alpha co-efficient was used as a measure of internal consistency. It yielded reliability co-efficient of .752 tutor's questionnaire.

RESULTS

Academic and Professional background of respondents

Tutors' highest academic qualification in Sewing and/or Catering subjects is depicted in Table 1. Some respondents studied both subjects and others studied only one subject hence the total number of respondents for this item was not equivalent to the tutor sample size of 50.

Table 1

Tutors' highest academic qualification in Sewing and/or Catering subjects

Level	Course			
	Sewing		Catering	
	No	%	No	%
Master's	2	7	6	13
Bachelor's	23	86	41	87
Specialist/Diploma	2	7	0	0
Total	27	100	47	100

It is evident from Table 1 that majority of tutors, that is 86% of sewing tutors and 87% of catering tutors have as their highest academic qualification, the Bachelors degree. A few tutors, 7% of sewing and 13% of catering have been able to acquire the master's degree.

Professional background of tutors exclusively entails general teaching experience, highest professional qualification, teaching experience in sewing and or catering and number of in-service training tutor attended in the last 5 years of service. These are depicted in Tables 2 – 4 and Figures 1 and 2.

Table 2: Percentage distribution of tutors' general teaching experience

Number of years of teaching in general	Tutor Category	Number of Years of teaching Catering/Sewing at TTC				
		<2	2-4	5 – 7	8 – 10	10<
<6	Catering	0	45	0	10	10
	Sewing	0	25	0	0	0
6 – 10	Catering	20	0	8	17	0
	Sewing	0	0	13	0	0
11 – 15	Catering	80	33	8	0	0
	Sewing	33	0	0	0	0
16 – 20	Catering	0	0	42	67	29
	Sewing	67	75	25	0	20
21 – 25	Catering	0	0	33	0	29
	Sewing	0	0	38	0	40
26 – 30	Catering	0	22	8	17	36
	Sewing	0	0	38	100	40

Table 2 shows that out of the catering and sewing tutors who have been in the teaching field for less than 6 years, 45% of catering tutors have taught catering at the TTC for 2 – 4 years and 25% of sewing tutors have taught sewing for that same amount of years. It is also evident that of the catering tutors who have been in the teaching field for 11 – 15 years, 80% of them have been teaching catering at the TTC only recently that is less than two years.

On the professional qualification of tutors, the findings show that majority (75%) of tutors have studied education as a profession up to the first degree level while the remaining 25% have gone beyond the Bachelor’s level to the Master’s level.

Table 3: Percentage distribution of tutors’ years of teaching catering at college of education

Subject Tutor	Years of teaching catering at TTC n=45				
	<2	2 – 4	5 – 7	8 – 10	10<
Catering	80	100	54	50	71
Both	20	0	46	50	21
Sewing	0	0	0	0	8
Total	100	100	100	100	100

Data from Table 3 suggests that 50% and 71% of tutors who had been teaching catering for 8–10years and over 10years respectively were still teaching catering. A majority of 80% tutors with little teaching experience in catering at the training college level had still remained at the catering area and a good percentage that is 50% of tutors teaching both catering and sewing then had 8 – 10years of teaching experience in catering at the training college level. Table 3 also shows that 8% of tutors who had been teaching catering for over 10years at the training college level were teaching sewing. These suggest that very few tutors with less than 5years of experience in teaching catering at the training college level were found to be teaching sewing together with catering while no tutor teaching only sewing at that time had teaching experience in catering below 10years.

Table 4: Percentage distribution of tutors' years of teaching sewing at college of education

Subject tutor	Years of teaching Sewing at TTC in percentage n=21				
	<2	2 – 4	5 – 7	8 – 10	10<
Both	67	0	63	100	60
Catering	0	75	37	0	40
Sewing	33	25	0	0	0
Total	100	100	100	100	100

As indicated in Table 4, all tutors with teaching experience in sewing at TTC between 8 and 10years were teaching catering in addition to sewing just as 60% of those with over 9years of experience were. A total of 67% and 63% of tutors with below 3years and 5 to 7years of teaching sewing respectively, were found to be teaching both sewing and catering. Contrary to the case in Table 3, 75% of tutors with less than 5years of teaching experience in sewing were teaching catering. Also, 58% of tutors who were teaching only sewing had below 5years of teaching experience at the training college. The findings depicted in Table 3 and 4 agree with the popular perception that persons in the sewing area are easily able to diversify to catering than those in the catering area diversifying to sewing.

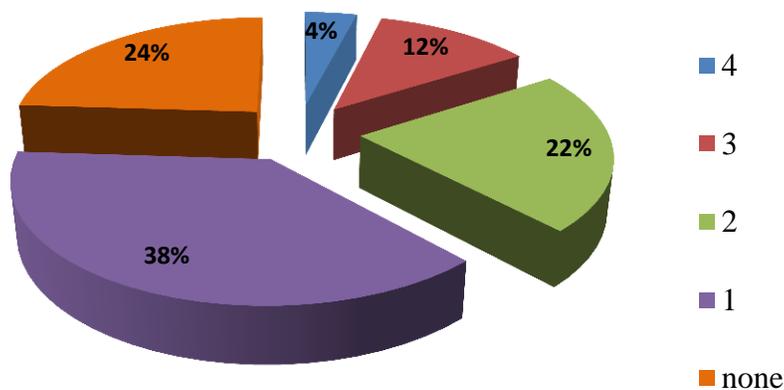


Figure 2. Number of in-service training

From Figure 2, it can be deduced that tutors rarely up-grade their skills and knowledge through in-service programmes as 38% of tutors had attended only one in-service training programme in the last five years. Only 16% of tutors had attended 3 to 4 in-service programmes and 24% had attended none in the last 5 years.

Tutors' perceived level of comprehension of content

The data on tutors' perceived level of understanding various aspects of the sewing and catering syllabus is captured in Figure 3 and 4.

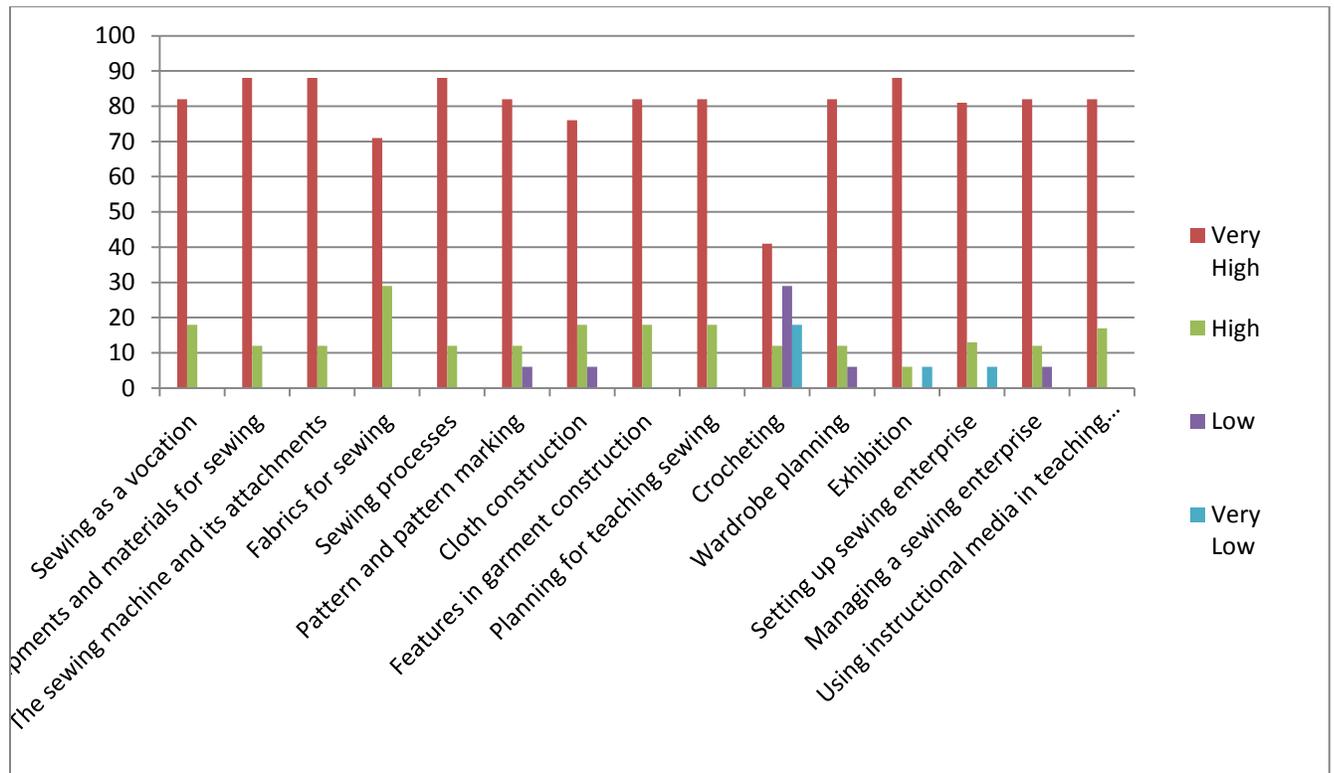


Figure 3: Tutors' perceived level of understanding of catering content

Figure 3 depicts that majority of the tutors were of the view that they had very high levels of understanding of approximately 93% of the various aspects of the catering syllabus. It is only the JHS curriculum material that almost half (47%) of the tutors rated themselves as having high levels of understanding. Also between 10% and 20% of tutors judged themselves as having low levels of understanding of 'assessment and education in catering' and 'pre-service diploma curriculum'.

The general picture painted in Figure 4 below is that majority of the tutors had either high or very high levels of understanding of all the content but ‘crocheting’ and ‘JHS curriculum’. A percentage of 41 of tutors had very high levels of understanding of crocheting, 12%, 29% and 18% had high, low and very low levels of understanding of the concept respectively. The pre-service diploma curriculum was understood very highly by 64% of the tutors and the same percentages of 18 tutors had either high or low levels of understanding the pre-service curriculum.

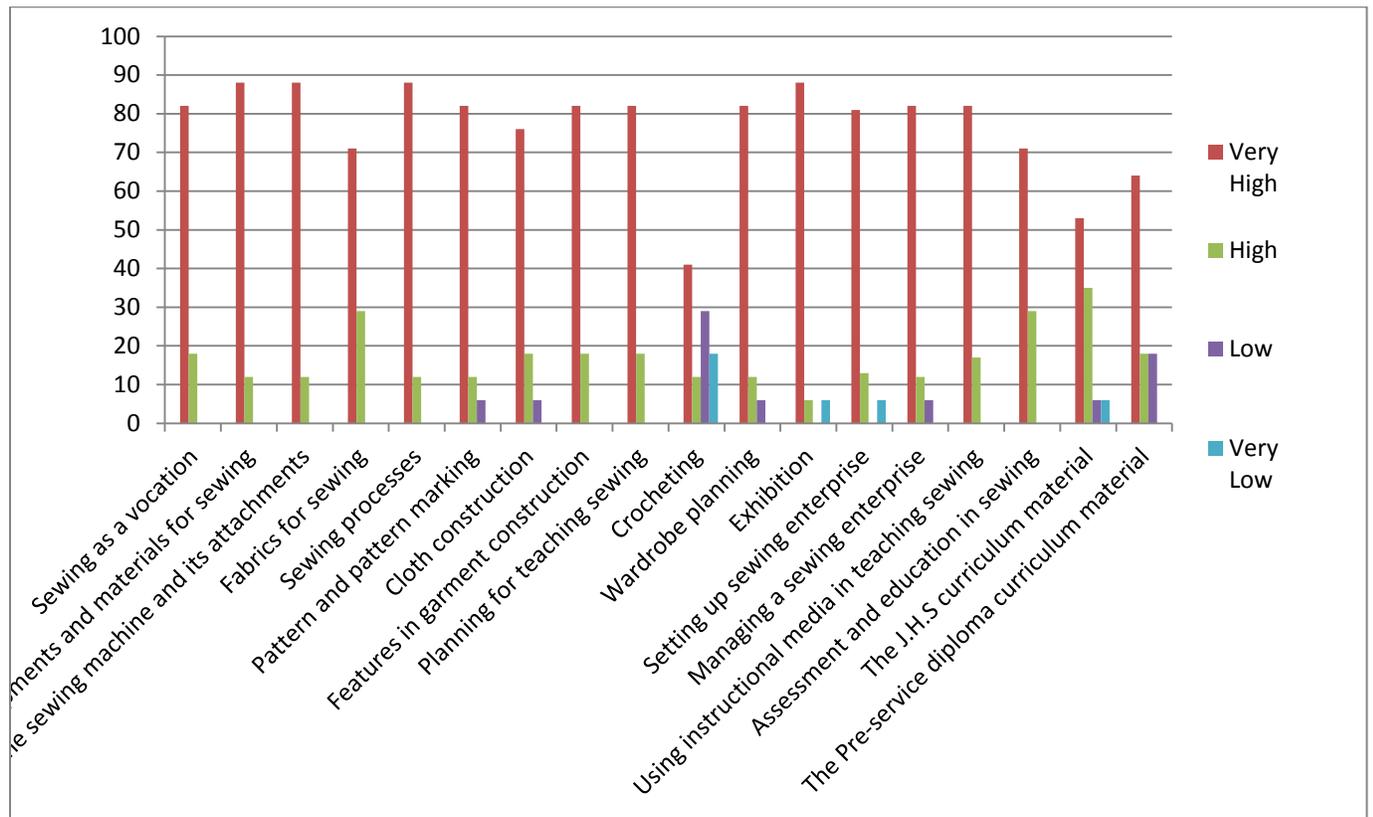


Figure 4: Tutors’ perceived level of understanding of sewing content

Tutor’s level of motivation

The questionnaire items sought information on tutor’s perceived level of motivation for tutoring. The finding is depicted in Table 5.

Table 5: Tutors' perceived level of motivation derived from service conditions

Motivational Factor	No of respondents	Very High	High	Low	Very Low	Mean	Standard Deviation
Salary	48	4%	10%	74%	8%	2.8958	0.5921
Study Leave with pay	45	8%	30%	38%	14%	2.6444	0.8569
Official Accommodation	48	18%	34%	28%	16%	2.4375	0.9873
Access to Loan	43	0%	14%	54%	18%	3.0465	0.6154
Transportation	43	0%	10%	46%	30%	3.2326	0.6487
Marking allowance	47	4%	14%	48%	28%	3.0638	0.7914
Acceptance by student	48	28%	62%	0%	6%	1.8333	0.7245
Parents' support of programme	43	14%	26%	28%	18%	2.5814	1.0055
Classroom environment	50	0%	62%	25%	10%	2.48	0.6773
Flexibility of working hours	50	4%	56.0	22%	18%	2.54	0.8381
Awards	46	0%	18%	38%	36%	3.1957	0.7489
Social status	49	4%	64%	26%	4%	2.3061	0.6193
Overall perceived Level of Motivation	49	4%	34%	48%	12%	2.6939	0.7417

Table 5 indicates that majority of the tutors were of the view that they derived low levels of motivation from their salary, study leave with pay, access to loan, transportation, marking allowance,

support from parents and awards given to them. Official accommodation provided for tutors, students acceptance of tutors, classroom environment, flexibility in working hours and social status of tutors highly motivated tutors to give out their best. Consequently, tutors overall motivation to work hard was judged by the majority of 48% tutor to be low.

To answer the research question on how professional and academic backgrounds and comprehension and motivational levels of Home Economics tutors in TTC affect performance of students, Pearson's correlation was used to determine the strength of the relationship between tutor variables and students' academic performance. This is presented in Table 6.

Table 6: Correlation of students' performance with tutors' characteristics

Tutor Characteristics	Performance
Academic qualification	.295*
Professional qualification	.453**
General teaching experience	.508**
Teaching experience in Catering/Sewing	.274
Current subject teaching	.349*
Number of In-service Programmes attended	.263
Subject Matter Knowledge	.375*
Teacher Motivation	.435**

Key: * – 0.05 level of significance, ** – 0.01 level of significance.

The results indicate that professional qualification, tutors general teaching experience, comprehension of content and motivational level have positive and moderately significant relationship with student performance while tutors academic qualification and the subject they were teaching have weak relationship with students' performance. The remaining variables, namely teaching experience in subject area and the number of in-service programmes attended in the last 5years do not have any statistically significant relationship with students' performance.

DISCUSSION

From Table 6, it may be said that tutors with higher professional qualification therefore tend to better influence students to perform well than tutors with low professional qualification. Tutors with more than 10years of general teaching experience tend to better influence students to perform well than tutors with less years of experience in the teaching field. This is in accordance with what usually happens, that is, the more years a person spends in engaging in the same activity or profession, the more experience, skill, knowledge and strategies they are expected to acquire to better handle affairs in that activity or profession. Thus all things being equal, a tutor who has taught for several years should be able to positively affect students' performance.

Tutors teaching both catering and sewing tend to influence students to perform well than tutors teaching either catering or sewing. Tutors who highly understand the course they were assigned to teach were able to influence students to perform well. Thus it may be suggested that tutors with higher levels of understanding are able to transmit their knowledge in a way that will yield good students' grades. The last tutor characteristic which is statistically significant is their motivational level. The table reveals that highly motivated tutors are better able to influence their students to perform well than lowly motivated tutors.

The findings support UNESCO's (as cited in Eshun 1997) view that initial teacher education and training must be regarded as an investment which will pay in the long run as tutors' academic and professional qualification tend to influence students' performance. Another assertion that the results corroborate is that made by Stanley that a teacher's knowledge of content determines to a great extent, their competence and effectiveness. The results are also in consonance with the assertion made by Abroampa (2008) that a teacher's knowledge of content determines to a great extent, their competence and effectiveness. The time, energy, skill, knowledge and effort tutors again invest in their work do indeed yield desired outcomes just as Sergiovann (as cited in Eshun, 1997) suggests is the principle of motivation.

SUMMARY AND CONCLUSION

Tutors who had studied H/E as an academic and professional field to the Master's level, tend to influence students' academic performance positively than tutors with lower academic and professional qualifications. It may therefore be said that with only 12.8% and 24.5% of tutors having academically and professionally pursued H/E to the Master's degree, students' academic performance will thus be influenced to be good but to a small extent. It was also found that tutors who were well motivated were better able to influence students' performance positively but to a small extent as majority of tutors' level of motivation was on the whole low. Thus, tutors' level of motivation, academic qualification and professional qualification were factors found to explain students' academic performance in H/E at the colleges of education.

The findings also revealed that tutors who had been in the teaching profession for over 16 years tend to influence students to perform well. Consequently, if 68% of tutors had been in the teaching profession for over 16 years, students' performance should be positively influenced to a large extent but the study revealed that the positive influence was to a small extent. Tutors teaching both catering and sewing, just like tutors' knowledge of subject matter, tend to influence students to perform well, thus with 57.8% of tutors teaching both catering and sewing and majority of tutors having very high levels of subject knowledge, it is not out of place that students' performance was generally good. It may therefore be said that teaching experience, specialization in two areas of study and perceived level of subject knowledge on their own cannot explain the academic performance in H/E by students in colleges of education.

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TEACHER AND INSTITUTIONAL FACTORS THAT AFFECT ICT USE FOR SUSTAINABLE EDUCATION: PRINCIPALS AND TEACHERS' PERCEPTIONS (BELLO OLISAEMEKA & OSHIONEBO)

Introduction

Sustainability of teacher education and education at large is the heart beat of any visionary nation of the world. Sustainable education connotes a kind of education that can be continued for a very long time i.e. lasting for generation after generation. This type of education obviously may ordinarily not be very easy to attain but research findings and practical technological evidences shows that sustainable education for teachers and others are very practicable and in attainable with information and communication technology (ICT).

In this era of information and communication extravaganza, companies, businesses, government, ministries, parastatals and institutions adopt and adapt ICT to maximize efficiency and sustain development. The ICT revolution has given birth to terms such as e-commerce, e-medicine, e-banking, e-government and e-education. In the education sector in Nigeria, the integration of ICT is not found yet fully achieved. For instance, Olisaemka (2012) found that only a few lecturers (about 24%) were experienced in using computer technology. The puzzle is why? Could there be hindering factors? If there are, what are they and how can they be combated such that the educational institutions will efficiently utilize ICT. According to Olisaemeka, the hindering factors include; poor technical support, epileptic power supply, lack of computer facilities, lack of commensurate computer technology training constant computer breakdown, lack of computer skills/literacy, lack of interest, lack of time, poor remuneration and much workload. In a related survey, Khalid (2009) found the major barriers of ICT use in science education to include: lack of confidence, lack of competence and lack of access to resources.

Barriers to teachers' ICT use

One thing is to know what is right and plan towards it but another thing is the implementation or execution of the plan. ICT integration is not an exception since its processes of diffusion, adoption and adaptation takes a while, to actualize. In the course of these, several problems and bottle necks had been reported. Sequel to this, Balanskat, Blamire and Kafala (2006) argued that although educators

seem to acknowledge the importance of ICT in schools, difficulties continues to be encountered during the processes of adopting ICT. Further researchers have shown that there are several problems militating against the effective use of ICT in teaching-learning processes in schools. They include: teachers lack of ICT skills (Oyebanji, 2003; Kwache, 2007); reluctance to change (Selwyn,1997; Confetell, 2004); epileptic power supply (Ofodu, 2007); lack of fund (Nwite, 2007; Mudasiru & Ayotunde, 2005); logistic problems such as lack of time, technical support, appropriate software/hardware (Baillie & Percoco, 2000).

Across most developing countries and in Africa, there had existed several challenges in fully integrating ICTs into education process. Lack of reliable access to electricity, limited technology infrastructure (internet access), bandwidth, hardware and software), geographical factors (country size, terrain and communications), language of instruction and available software, demographic factors (population size, density and dispersion) extreme poverty, poor political will for good planning and even the HIV/AIDS prevalence are all inhibiting factors of ICT usage (Anderson, 1997).

Some researchers had called it educational factors. These include levels of teachers' own education, and literacy rates and access to professional development. Other studies opined that it is teachers' attitudes, expertise, lack of autonomy, lack of knowledge to evaluate the use and role of ICT in teaching technophobia in teachers that are the prominent factors hindering teachers' readiness and confidence in using ICT support. Hennessy, Harrison and Wamakote, (2010).

In a 1998-1999 survey assessing the World Links Schools Programme, teachers who participated noted that the biggest barriers to use of computers were the lack of time available in classes and in their own schedules for planning; and lack of a national policy on the use of ICT in schools (Kozma, McGhee, Quellmalz & Zalles, 2004).

The barriers of ICT use in teaching learning is seen to be multifaceted hence many authors had attempted grouping them. Pollard (1989) grouped them into hardware, software, time, people and miscellaneous. Pelgrum (2001) classified the ICT hindering factors into two, namely; material and non-material while Balanskat et al (2006) classified them into micro level (concerned with teachers attitude/approach), Meso level (related to institutional context) and Macro level (related to wider education system). Another classification was done by Becta (2004) as relating to teacher-level and school-level barriers. Nevertheless, this study categorized the ICT barriers into two namely teacher factors (cyber phobia, academic background, gender, resistance to change, ICT skills, experience) and institutional factors (staff training, curriculum, time, power, availability, accessibility, school policies technical help, motivation).

This study focused on finding the teacher and institutional factors affecting ICT usage. It examined both the principals and teachers perceptions of the teacher and institutional factors of ICT use for sustainable education. The analysis aimed at unraveling the obstacles of ICT use in schools. The knowledge of the hindering factors could profer better directions on the ways to enhance ICT usage. In agreement, Al-Alwani, (2005) said that identifying the fundamental barriers to ICT use may assist teachers and educators in overcoming them to become successful technology adopters and users.

Research Questions

1. What is the level of availability of ICT gadgets?
2. To what extent do teacher factors hinder ICT use?
3. To what extent do institutional factors hinder ICT use?
4. Are there variations between the perceptions of the principals & teachers on teacher factors and institutional factors of ICT use?

Methodology

The descriptive survey design was adopted for the study. The study's population comprised all the principals and teachers in the secondary schools in Anambra, Kwara and Edo states of Nigeria. The sample consists of 90 principals (30 per state) and 450 teachers (150 per state). A total of 540 participants (180 principals and teachers per state) responded to the research instrument. These 540 participants were randomly selected.

A self-made questionnaire titled "Teacher and Institutional factors of ICT use Questionnaire (TIFIUQ)" consisting of many items, were used to generate data. The TIFIUQ was made valid by some experts in data analysis and educational management. The reliability of the instrument was determined using Cronbach Alpha. The reliability Coefficient was 0.82; hence the instrument is quite reliable. Three research assistants located in the three states administered the questionnaire and the return rate was 100%. This was possible because the instrument was administered to principals and teachers at their state meetings and conferences. The research assistants administered and collected back the instruments almost immediately. The data collected were analysed using frequencies and percentages. They were presented using component bar charts.

Tale 1: The distribution of the study samples

States	Principals	Teachers	Total
Anambra	30	150	180
Kwara	30	150	180
Edo	30	150	180
Totals	90	450	540

Results and Discussions

The results of the survey are presented as follows. The research questions 1-4 are all answered.

Research question 1: what is the level of availability of ICT gadgets?

Research question 1: what is the level of availability of ICT gadgets?

Table 2: Availability of Adequate of ICT gadgets

	ICT gadgets are Adequate (%)	ICT gadget are Moderate (%)	ICT gadgets are inadequate (%)	Totals
Principals	5 (5.5)	22 (24.4)	63 (70)	90
Teachers	35 (7.7)	53 (11.7)	362 (80.4)	450
Totals	40	75	435	

Table 2: Availability of Adequate of ICT gadgets

	ICT gadgets are Adequate (%)	ICT gadget are Moderate (%)	ICT gadgets are inadequate (%)	Totals
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Teachers	35 (7.7)	53 (11.7)	362 (80.4)	450
Totals	40	75	435	

Seventy percent of the principals and 80.4% of the teachers perceived that ICT gadgets are inadequate for teaching-learning processes in schools. This state of unavailability can not ensure sustainable education in any nation.

Research Question 2: To what extent do teacher factors hinder ICT use?

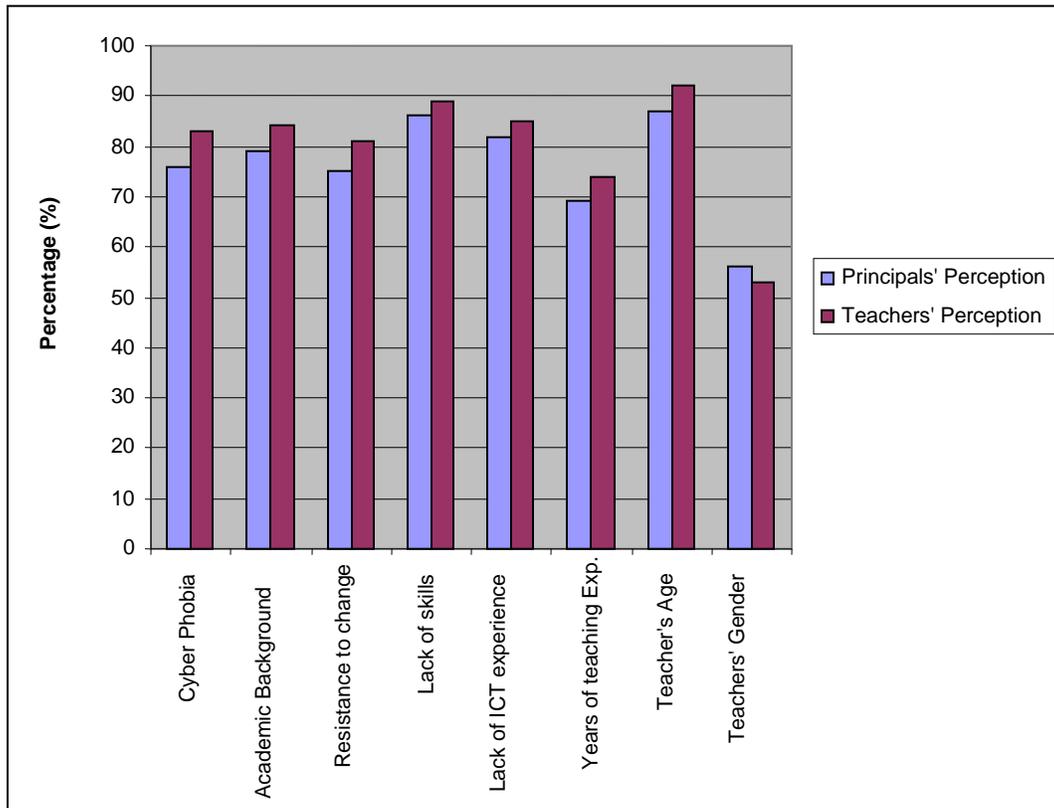


Figure 1: Principals and teachers perceptions of teacher factors hindering ICT use.

Figure 1 shows that teacher factors hindered ICT use to a very large extent. Most principals and teacher factors hindered them from using ICT. Between 69% and 92% of both the principals and teachers believed that teacher related factors hindered ICT usage in secondary schools. Though only 53% and 56% of principals and teachers respectively, believe that gender of the teacher affect the ICT usage.

Research Question 3: To what extent do institutional factors hinder ICT use?

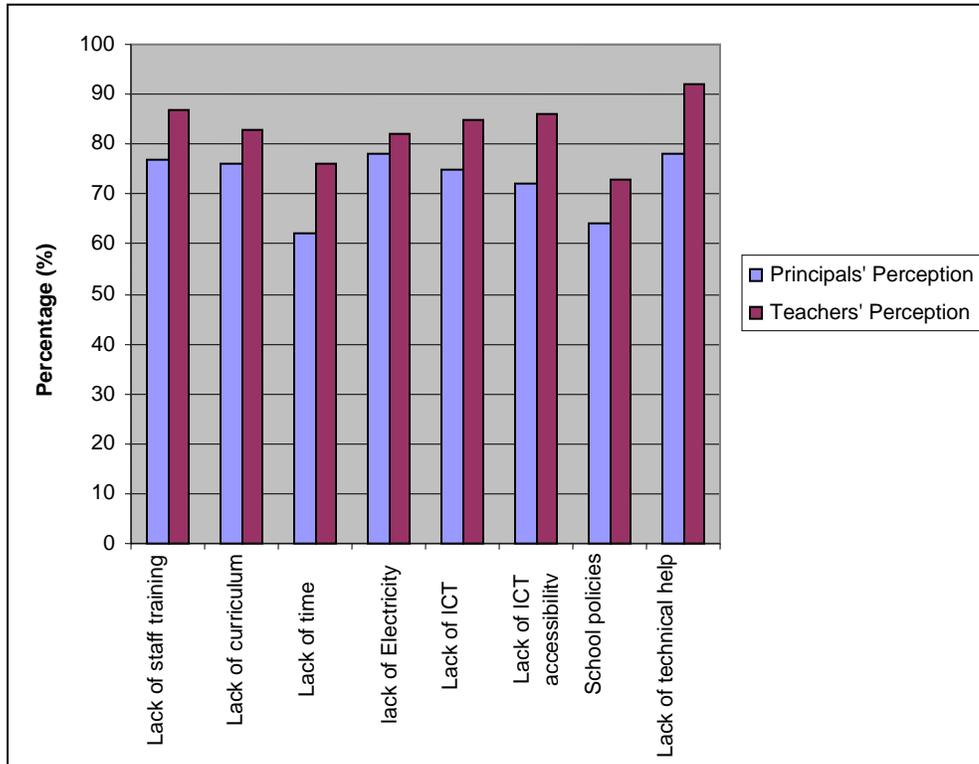


Figure 2: Principals' and teachers' perceptions on the institutional factors hindering ICT use.

Figure 2 shows that institutional factors hindered ICT use to a large extent. This is obvious since between 62% and 92% of both principals and teachers respectively opine that these factors hindered ICT usage.

Research Question 4: Are there variations between the perceptions of principals and teachers on the teacher and institutional factors of ICT use?

Considering figures 1 and 2, there are no serious variations between the perceptions of the principals and teachers on teacher and institutional factors hindering ICT Use. The component bar charts depict very negligible variations.

Discussions

On the availability of ICT gadgets and facilities, the study found that ICT gadgets are very inadequate. About 96.7% of the participants perceived the inadequacy of ICT facilities in Nigerian schools. This finding corroborates that of Ajayi, Ekundayo & Haastrup (2009) who posited that ICT facilities such as computers, projectors, electronic notice boards and internal filmstrips were not available in Nigerian secondary schools. A similar study of ICT availability and accessibility in Delta State, Nigeria found a very low availability/accessibility (Monday and Esoswo, 2008).

Teacher factors were all perceived to seriously hinder ICT usage. It was only gender of a teacher that seems to moderately influence ICT use while cyber-phobia (fear of computers), academic background, resistance to change, lack of skills, lack of ICT experience, years of teaching experience and the chronological age hindered ICT usage. This study corroborates the findings of Olisaemeka (2012) and Zar, Sharifah and Than (2010) that younger lecturers use ICT more often than their older counter parts. Olisaemeka also found that lack of ICT skills and experience hindered ICT usage. Another study, in agreement also found that inadequate facilities and reluctance to adapt to the use of ICT in teaching-learning affects ICT use (Akubuilu, 2007). Several surveys found that computer usage may show differences according to individuals' personal characteristics, demographic features (age, gender, experience) and fields of study (Palmer, 2000; Hawkins and Paris, 1997). In contrast, the study by Teo (2008) reveal no significant relationship for age, gender and computer attitudes/usage.

On the institutional factors, staff training, curriculum, time poverty, epileptic power, ICT unavailability/inaccessibility, school policies and lack of technical help were found to affect ICT use in schools. When teachers are not trained in ICT, they naturally will not use it, when it is difficult to integrate ICT into the school curriculum, ICT usage become a mirage. If there is time poverty, obviously the teachers will not have the time to practice ICT. Considering the epileptic power supply in Nigeria,

how many schools can afford alternative power to ensure ICT usage in the face of low education funding in Nigeria?

When the ICT gadgets are unavailable and inaccessible, there will be zero usage. Accessibility connotes 24 hours access and 'beyond office' provision of computers. School policies either provides friendly or unfriendly, motivatory or discouraging work environment. Technical supports is off course very essential for teachers to properly use ICT in schools. This is in agreement with the findings of Olisaemeka 2012; Kwache, 2007; Oyebanji, 2003; and Dabesaki, 2005), that lack of skilled manpower to manage available system and facilities for ICT hinders its use in schools.

Conclusion and Recommendations

The findings of this study show that Nigerian secondary schools lack ICT facilities and gadgets. It also found that several factors are hindering the ICT usage. These factors are either teacher based on school-based. In this era of globalization and technological extravaganza, it should not be tolerated that Nigerian schools are not yet fully integrating ICT due to several factors that could be controlled.

It is recommended that individual teachers make effort to overcome their personal challenges and embrace ICT. This is because in the next few years, only the ICT literate teachers will remain relevant. The principals should endeavor to liaise with the government on how to tackle the institutional factors. Teachers must be motivated, ICT training must be continuous and curriculum based, some harsh policies must be revisited, ICT availability and 24-hours accessibility should be ensured. Technical supports must be provided to all schools immediately and friendly environment should be created within schools.

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TEACHER PREPARATION FOR EFFECTIVE IMPLEMENTATION OF E-LEARNING IN TERTIARY INSTITUTIONS
(OMENYI & NWANKO)

INTRODUCTION

Background to the Study

There are many studies that support the maxim that no educational system can rise above the quality of its teachers. Authors (Mkpa 2002; Ipaye 2002 and James 2003) have described teachers as the pivot on which every educational development hinges. In fact, the teacher is the heart and soul of the educational enterprise (Mkpa 2002). What he or she does not know or cannot do or fail to do can be an irreparable loss to the learner. This is true because, in the final analysis, it is the teacher who translates policies into practice and programmes into action. Accordingly, the effective implementation of the e-learning programme in Nigeria, to a large extent, depends on the quality of the nation's teaching force.

UNICEF (2001) declared that of all the inputs that go into education provision, none is probably more important than the teacher. In the same vein, Obara (2001) viewed teaching as the most vital and strategic profession for national development. The reason is very clear. Without good teachers, there can be no good doctors, engineers, lawyers, priests among others. Nobody can give what he or she does not have. Quality teachers will produce quality students and the low quality ones will produce their kind, all things being equal.

The need for quality teachers for the effective implementation of the e-learning programme cannot be over-emphasised. Aguokogbuo (2003) rightly observed that the teaching profession nationally requires people with the best brain and aptitude so as to improve productivity, quality and functional education. According to him, under the missionary-controlled schools, we had the best brains teaching in both primary and secondary schools. Lassa (1996) had also declared that the teachers hold the key to sound education.

The quality of teachers is enhanced by the quality of preparation given to the teachers in training. If we are to effectively implement the e-learning programme in Nigeria and Anambra State in particular, the need for teachers of high quality in the system cannot be over emphasized. The nation must produce quality teachers so as to attain the laudable aims and objectives of the programme. Ekaeba (2008:164) observed that “every year and time, teachers are churned out of training institutions either as full time or part time, through outreach or sandwich programme, but they are deficient in content and methodology”. This can be a serious set back to the full implementation of the e-learning programme not only in Anambra state but Nigeria in general.

E-learning is here defined as interactive learning in which the learning content is available online and provides automatic feedback to the student’s learning activities (Tavangarian, Leypold, Nolting & Roser, 2004). Online communication with real people may or not be included, but the focus of e-learning is usually more on the learning content than on communication between learners and tutors (Means, Toyama, Murphy, Bakia & Jones 2009). E-learning could also be viewed as an online descendant of computer-based training (CBT) and computer-aided instrument (CAI) (Tavangarian, Leypold, Nothing & Roser, 2004).

E-learning comprises all forms of electronically supported learning and teaching, which are procedural in character and aims to effect the construction of knowledge with reference to individual experience, practice and knowledge of the learner (Tavangarian, Leypold, Nolting & Roser, 2004). Information and communication systems, whether networked or not, serve as specific media to implement the learning process.

E-learning is essentially the computer and network enabled transfer of skills and knowledge (Tavangarian, Leypold, Nolting & Roser, 2004). E-learning applications and process include Web-based learning, computer-based learning, virtual classrooms and digital collaboration. Content is delivered via the internet, intranet/extranet, audio or video tape, led and includes media in the form of text, image,

animation, streaming video and audio (Tavangarian, Leypold, Nolting & Roser, 2004). E-learning cannot therefore be fully implemented at any level of education in the absence of quality teachers.

The implication of this is that quality teachers are needed to carry the Nigeria education system to the next level. There is therefore urgent need for quality teacher preparation not only for the state but for the over all implementation of the e-learning programme in Nigeria.

Statement of Problem

The implementation of the e-learning programme is faced with numerous problems. Apart from statistical deficiencies, teaching manpower requirement, provision of physical facilities, administrative bottlenecks, financing, educational wastages and apathy which were identified by Salau (2005) in Nwankwo and Onuselogu (2008) as factors affecting effective programme, implementation (including e-learning), poor quality teachers is a major setback. Though most of them are not qualified to teach, most of those that have the qualifying certificates are deficient in contents and methodology (Ekaeba 2008). The problem of the study is to ascertain ways of preparing quality teachers for the effective implementation of the e-learning programme in Anambra State.

Research Questions

The following research questions guided the study:

1. What are the factors responsible for poor quality teacher preparation for effective implementation of e-learning?
2. In which ways can quality teacher preparation be enhanced in teacher training institutions for effective implementation of e-learning?
3. What perceived impacts does quality teacher preparation have on effective implementation of the e-learning programme?

METHODOLOGY

The study is a descriptive survey carried out in the two tertiary institutions in Anambra State. The institutions include: Anambra State University, Uli and Nwafor Orizu College of Education, Nsugbe. The population of the study comprised of all the lecturers in tertiary institutions in Anambra State. One hundred respondents were purposively selected, thus, a sample of fifty lecturers was studied in each school.

The instrument for data collection has two parts-‘A’ and ‘B’. Part “A” is on the background information of the respondents. Part “B” is structured into three sections. Section one is on factors responsible for poor quality teacher preparation for effective implementation of e-learning; section two is on ways of enhancing quality teacher preparation for effective implementation of e-learning and section three is on the perceived impacts of quality teacher preparation on effective implementation of the e-learning programme. The instrument was validated by experts. The Pearson Product Moment statistic was used to calculate the coefficient reliability indices of 0.52; 0.50 and 0.54 for sections one, two and three respectively. The mean statistic was used to answer the research questions.

RESULTS

The results of data analysis are presented below in accordance with the research questions.

Research Question 1: What are the factors responsible for poor quality teacher preparation for effective implementation of e-learning?

Table 1: Responses on the Factors Responsible for Poor Quality Teacher

Preparation.

S/N	Item Statement	\bar{x}	Decision
1	Integration of so many subject areas	1.89	Disagree
2	Poor funding of teacher preparation institutions	2.56	Agree
3	Unavailability of instructional materials and current textbooks	2.02	Disagree
4	Nonchalant attitude of government towards teacher preparations institutions	3.31	Agree
5	Lack of enthusiasm on the part of lecturers	3.20	Agree
6	Lack of commitment by the students	3.07	Agree
7	Examination malpractices	2.90	Agree
8	Accreditation malpractices in which cases institutions hire or borrow facilities just to secure accreditation	3.06	Agree

The results in table 1 show that poor funding, nonchalant attitude of the government, lack of enthusiasm by the lecturers, lack of commitment by the student-teachers, examination and accreditation malpractices are the major factors responsible for poor teacher preparation in schools for effective implementation of e-learning.

Research Questions 2

In which ways can quality teacher preparation be enhanced in teacher training institutions for effective implementation of e-learning?

Table 2: Responses on Ways for Enhancing Quality Teacher Preparation.

S/N	Item Statement	\bar{x}	Decision
9	Adequate provision of instructional materials	3.61	Disagree
10	Provision of adequate facilities in schools	3.40	Agree
11	Periodic examination and recertification of the lecturers	1.84	Disagree
12	Expositing lecturers in teacher training schools to regular workshops and seminars.	3.42	Agree
13	Encouraging the lecturers in teacher training schools to attend conferences	3.41	Agree
14	Close monitoring of the lecturers to ensure that they put in their best	2.56	Agree
15	Dismissing any lecturer in teacher training schools found to be not serious with his or her job.	1.53	Disagree
16	Fighting against examination malpractice in teacher training institutions.	3.04	Agree
17	Expelling any student teacher found to be uncommitted to his or her studies.	2.01	Disagree

The results in table 2 show that adequate provision of teaching materials and facilities, participation in workshops, seminars, conferences and fighting the scourge of examination malpractices are the best ways of enhancing quality in teacher preparation for effective implementation of e-learning.

Research Question 3:

1. What perceived impacts does quality teacher preparation have on effective implementation of the e-learning programme?

Table 3: Perceived Impacts of Quality Teacher Preparation on Implementation E-learning

S/N	Item Statement	\bar{x}	Decision
18	Poor teacher preparation can adversely affect e-learning implementation	2.00	Agree
19	Teachers who were not exposed properly to educational theory and practice cannot help in implementing e-learning	2.62	Agree
20	Only teachers who are qualitatively prepared can implement the e-learning programme.	3.02	Agree
21	Quacks can as well help in effective implementation of the e-learning programme	1.88	Disagree
22	Only quality lecturers can turn out quality students	3.45	Agree
23	Teachers who were creatively prepared in training institutions can effectively implement the e-learning programme.	3.26	Agree

The result in table three show that only those teachers who received qualitative training in the teacher preparation institutions can effectively contribute in the implementation of the e-learning programme. Thus, quality teacher preparation has impacts on the effective e-learning programme implementation.

Findings:

The following findings were made from the data analysis presented above:

1. Poor funding and the nonchalant attitude of the government towards teacher preparation institutions affect quality teacher preparation for effective implementation of e-learning.
2. Lack of enthusiasm by the lecturers' and students' lack of commitment including examinations and accreditation malpractices are the major factors affecting quality teacher preparation for effective implementation of e-learning.
3. Adequate provision of institutional materials and facilities; close monitoring of the lecturers, participating in workshops; seminars and conferences including fighting the spread of examination and accreditation malpractices are some of the ways to enhance quality teacher preparation in the teacher training institutions for effective implementation of e-learning.
4. The e-learning programme cannot be effectively implemented without quality teachers.

Discussion of Findings

Poor funding has been identified as a major factor contributing to the poor state of education in Nigeria (Adedipe 2007; Osuji 2004; and Nwangwu 1978). This has resulted in lack of instructional materials and facilities, lack of interest or enthusiasm in the education sector for effective implementation of e-learning. Since the system is in lack of almost everything, nobody including the government cares much about what happens in the sector. In some occasions, the government introduced some laudable educational programmes just to achieve political popularity.

Some of the programmes failed simply because of the teacher factor. Until quality teachers are produced and posted to the schools, no educational programme, including the current e-learning will be effectively implemented.

Conclusion/Recommendations

The e-learning programme requires quality teachers to be effectively implemented. It is on this note that this study examined factors responsible for poor quality teacher preparation in the training institutions. It also examined ways for enhancing quality teacher preparation in training institutions. It also examined ways for enhancing quality in teacher training institutions and as well investigated the impact of quality teacher preparation on the effective implementation of the e-learning programme.

In view of the findings and for effective implementation of the e-learning programme, the following recommendations are made:

1. Government should adequately fund the teacher training institutions;
2. Heads of department and deans of faculties should explore alternative ways of supplementing government funding of schools;
3. Cases of examination malpractices especially in teacher training schools should be properly investigated and any person or persons found guilty should be punished accordingly.
4. Accreditation of programmes should be more regular and accreditation visits should be unannounced so that no institution secures accreditation fraudulently.
5. There is need to have experienced hands in training colleges so as to assist in turning out quality teachers.

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EDUCATING LEARNERS WITH SPECIAL NEEDS: NEW TRENDS

Introduction

The goal of education is full participation for everyone, regardless of background, socio-economic status, physical disability or mental limitation. Unfortunately, it wasn't until 1975 that this value was translated into actual practice for all students with disabilities in the United States.

According to Adelowo (2006), education is an enterprise which sets out to instill values, attitudes and skills in members of the society. It is a process of personal development, a veritable means of developing human resources. Learning is not effective unless it makes the individual effective within the society (that is, law abiding, adaptable to situations without undue stress, able to contribute to growth efforts, etc). These conditions pre suppose that quality education should be accessible to all. However, in developing countries like Nigeria, educational services for children with special needs are far from adequate and are in conflict with the educational philosophy behind the education for all programme. It seems that children with special needs are from a third world within the third world (Hammerman, 1981). As a result, these children are only superficially mentioned in development plans.

Over the years, there have been various forms of educational provision for children with special needs, but it was believed that since the population of special children is always negligible, the best way to carry them along with others was to attend to them separately. This practice was detrimental to the children. In addition, in the special schools, most of the learning inputs were inadequate and inappropriate. Special needs learners were often considered unteachable so the learning content was watered down. According to Adelowo (2006) since the children were already classified as being unable to learn, it was believed that any teacher would do, even if they were inexperienced and untrained. This unfortunate perspective has come under review in many countries. In the west, for example, the last 25

years have witnessed very vigorous pursuit of integrated educational services. Legislation to support the thinking and wishes of government has been enacted. The question now, is to what extent has Cross River State integrated these new trends to her special need learner curriculum? This is the basis for this research.

The right to education for children with disabilities came to the public forum as a part of larger social issue in the United States: The civil rights of the people from differing ethnic and racial background. Education was reaffirmed as a right and not a privilege. These days, it is doubtful that any child may reasonably be expected to succeed in life if he is denied the opportunity of an education. Such an opportunity, where the state has undertaken to provide it, is a right which must be made available to all on equal terms (Hardman, Drew & Egan, 2008).

Thus, this research intends to review the extent to which primary schools in Cross River State has integrated learners with special needs into their curriculum that is “a characteristics evidence-based special education practice in terms of: (i) individuation (ii) intensive instruction (iii) the explicit teaching of academic adaptive and/or functional life skill (iv) providing reasonable accommodations

Literature review

The Individuals with Disabilities Education Act (IDEA) was signed into law in 1990. The purpose was to reflect “people’s first language (that is putting the person before the disability”) and to promote the use of the term disability rather than handicapped. IDEA established what is called zero-exclusion principle, that is, it requires that public schools provide special education and related services to meet the individual needs of all eligible students, regardless of the extent or type of their disability.

The five major provisions of IDEA are as follows:

- (1) All student with disabilities are entitled to a free and appropriate public education (FAPE) designed to meet their unique needs and prepare them for employment and independent living.

- (2) Schools must use nondiscriminatory and multidisciplinary assessment in determining a students' educational needs.
- (3) Parents have the right to be involved in decisions regarding their sons or daughters' special education programme.
- (4) Every student must have an individualized education programme (IEP).
- (5) Every student has the right to receive her or his education with peers who are not disabled to the maximum extent appropriate.

According to Huefner (2006), developing the individualized education programme (IEP) is the corner stone of a free and appropriate public education (National Information Centre for Children and Youth with Disabilities, 2003).

Current trends in education of students with disabilities

The education of students with disabilities has gone through many changes during the past three decades. The rallying cry in today's school is "higher expectation for all students". This calls for more accountability for students progress. According to Hardman et al (2008), four principles characterize school accountability.

- (i) A focus on student achievement as primary measure of school success.
- (ii) Emphasis on challenging academic standards that specify the knowledge and skills students should acquire and the levels at which they should demonstrate mastery of the knowledge.
- (iii) A desire to extend the standards to all students, including those for whom expectations have traditionally been low.
- (iv) Heavy reliance on achievement testing to spur the reforms and to monitor their impact (U.S. Department of Education, 2003).

NCLB's push for standard-driven educational system was a strong influence on reform in the education of students with disabilities. Advocates for standard-based reforms have strongly emphasized

the importance of acknowledging the inclusion of students with disabilities in the state and school district accountability system. They contend that in spite of the call to include all students in school reforms initiatives, students with disabilities and other disadvantaged students were being left out. Research suggested that the participation of students with disability in the general curriculum and statewide assessment of student performance varied considerably from state to state and district to district (Thurlow, 2000). Hehir (2002) suggests that “one of the reasons students with disabilities are not performing better is that they have not had sufficient access to the general curriculum” (p.6).

In response to these concerns IDEA (2004) stipulates that a student’s individualized education programme (IEP) must describe how the disability affects child’s involvement and progress in the general curriculum. According to NCLB and IDEA (2004), all students can and will learn more than they are currently learning, and all students will succeed if schools set the highest academic standard. Thus, the definition of success is determined by student proficiency on content specified by state and as measured by state performance standards. Therefore, students with disabilities must be (1) assured access to a “highly qualified” teacher who is knowledgeable in the subject matter area(s) being taught; (2) a curriculum on which standards are based; (3) assessments that measure performance on the standard; (4) inclusion in the report results that determine how well a school is meeting the established performance criteria. The promise that every student will learn and succeed has been translated into public policy. Although public policy provides the impetus for every student to learn and succeed, the critical issue is whether the promise becomes a reality.

Many questions are yet to be answered. Among them:

- Are the characteristic of evidence-based special education practice compatible with a standards-based approach to education?
- Will participation of students with disabilities in a standard-based curriculum in higher academic achievement, or failure an inevitable outcome?

- Are general and special education teachers being adequately prepared to work in a standards-based system?

Characteristics of evidence-based special education practice

Ensuring an appropriate educational experience for students with disabilities means providing evidence-based (scientifically based) special education services and supports. The characteristics of evidence-based special education that enhance learning opportunities for students of all ages and across multiple settings include:

- Individuation: A student-centred approach to instructional decision making
- Intensive instruction: Frequent instructional experiences of significant duration.
- The explicit teaching, academic, adaptive and or functional life skills (Hardman & Mulder, 2004; McLanghlin, 2002; McLanghlin, Fuchs & Hardman, 1999).

Individualization

According to Hardman et al (2008), the hallmark of special education is individualization – developing and implementing an appropriate educational experience based on individual needs of each student. Research indicates that fundamental differences characterized the ways in which special educators approach instruction, distinguishing them from their general education colleagues. Hocutt (1996) suggested that instruction in general education is most often oriented to the masses and centred on the curriculum.

Undifferentiated large-group instruction appears to be the norm in general education. Individual assignment small group work and student pairing occur, but much less frequently than whole – class instruction. Teachers typically follow the sequence of lessons outlined in the teacher’s manuals and focus on content coverage. When surveyed, teachers do not perceive themselves as having the skills for adapting instruction in ways that facilitate individual or small-group instruction.

Special education, on the other hand, is designed to meet the unique needs of every student, regardless of educational need or ability using an individually referenced approach to decision making, special education teachers must continually plan and adjust curriculum and instruction in response to the students. Teachers must have at their disposal multiple ways to adapt curriculum, modify their instructional approaches, and motivate their students to learn (Peterson & Hittie, 2005; Vaughn, Bos & Schumm, 2005). Hardman and McDonnell (in press) suggested that the vast majority of teachers, whether in general or special education, do not have expertise both in subject matter being taught and in adapting curriculum and instruction. Thus, special educators need (1) to acquire a core knowledge and skills that facilitates their ability to teach the special learners and (2) to work collaboratively in meeting the instructional needs of students with disabilities.

Intensive instruction

Intensive instruction involves (1) actively engaging students in their learning by requiring high rates of appropriate response to the material presented (2) carefully matching instruction to students ability and skill level, (3) providing instructional cues and prompts to support learning and then fading them when appropriate, and (4) providing detailed feedback that is directly focused on the task the student is expected to complete (McLanghlin et al, 1999). Intensive instruction may involve both group and one-to-one learning. Research suggests that intensive instruction can significantly improve the academic achievement and functional skill levels of the students with disabilities (Elbaum, Vaughn, Hughes & Moody, 2000; Mastropieri & Scruggs, 2007; O'Connor, 2000). For students with disabilities, intensive instruction provided consistently overtime and qualified teachers can result in significant gains in academic achievement and functional skill learning (Mercer & Mercer, 2001; Rosenberg, Sindelar & Hardman, 2004).

The explicit teaching of academic, adaptive and/or functional life skills

In addition to needing individualized and intensive instruction, students with disabilities require more structured and teacher-directed approaches to learning than students who are not disabled (Friend & Bursuck, 2006; Peterson & Hittie, 2005). Learning is a continual process of adaptation for students with (disabilities) as they attempt to meet the demands of school. These students do not learn as quickly or as efficiently as their classmates and are constantly fighting a battle against time and failure. Students with disability must also adapt to a teaching process that may be oriented towards the majority of students within the general classroom and is not based on individualized assessment of needs or personalized instructions. Despite these obstacles, however, students with disabilities can learn social and academic skills that will orient them towards striving for success rather than fighting against failure. Hence, success can be achieved when educators remain flexible constantly adjusting to meet the needs of these students.

The teaching of explicit skills to students with disabilities includes instruction in core academic areas, adaptive skills and functional life skills. Instruction in core academic area (such as reading, mathematics and science) requires that the students learn a specified set of sequenced skills each a prerequisite to the next. Teaching core academic skills, whether in reading or in any other content areas, lays the ground work for further development and higher levels of functioning. Vanglin et al (2005) suggested that reading instruction is appropriate and intensive when

- Students have a clear understanding of teacher expectation and the goals of instruction.
- The reader's instructional reading level and needs match the instruction provided.
- Students are grouped appropriately, which includes ability-level grouping.
- Instruction is explicit and direct in the skills and strategies the reader needs to become more proficient and more independent.

- Instruction includes frequent opportunities for responding with feedback and ongoing progress monitoring.
- Teachers and peers support the students when necessary.

However, not all children are able to learn core academic skill within the timeframe dictated by schools. The degree to which a student is able to cope with the requirements of the school setting and the extent to which the school recognizes and accommodates individual diversity are known as adaptive fit. Hardman (2008) indicated that, there is need to seek ways of creating a better adaptive fit between the student and the learning environment through a process known as adaptive instruction. This approach uses a variety of instructional procedures, materials, and alternative learning sequences in the classroom setting to help students with disability master content consistent with their needs, abilities and interests (Nolet & McLaughlin, 2000; Peterson, 2000; Wood, 2002). For example a student who is unable to memorize multiplication tables may be taught to use calculator.

Providing reasonable accommodation

Hardman et al (2008) indicated that schools must provide supports and services to the students with disability. Providing reasonable accommodation simply means comprehensively addressing issues of nondiscrimination and equal opportunity for students with disabilities. Students eligible are entitled to have a written plan that assures them access to an education comparable to that of students who are not disabled. For example, a student who uses a wheel chair but does not require special education may need a written plan covering access to adapted transportation or physical therapy (Huefner, 2006). Thus, numerous accommodations or modifications can be made for students, depending on identified need. Examples include untimed text, extra time to complete assignment, changes in seating arrangements to accommodate vision or hearing loss or distractibility, opportunity to orally complete assignments, texts, taped text-books, access to peer tutoring, access to study carrel for independent work, and use of supplementary materials such as visual or auditory aids.

Research questions

Four research questions were used to guide the study thus:

1. To what extent is their curriculum evidence based in terms of individuation?
2. To what extent do they practice intensive instruction as regards their curriculum?
3. To what extent do they apply explicit teaching of academic adaptive and functional skill in their curriculum?
4. To what extent is their curriculum evidence based in terms of providing reasonable accommodation?

Methodology

The research design adopted for this study is the survey design. This was chosen because the study was intended to evaluate the effect of current trends in educating learners with special needs in Cross River State.

Area of the study

The study was conducted in Cross River State of Nigeria. Cross River State occupies a landmass of 23,074,425 sqkm and a population of 2,888,996 people (2006 census figure). Cross River State lies between latitude 5⁰32' and 4⁰27' north of the equator, and longitude 7⁰50' and 9⁰28' east of the Greenwich Meridian. The state shares a common boundary with Benue State to the north, Akwa Ibom State to the south, Cameroun to the east and Ebonyi State to the west. The inhabitants are mainly civil servants, fishermen and petty traders.

Population

The population of the study consisted of all teachers in all the public primary schools in the 3 educational zones totaling about 1082 (males 585 and females 497).

Sampling procedure

The study adopted both the stratified and simple random sampling technique to select the sample. The schools and subjects were first stratified into three educational zones and in each zone the numbers of teachers on the employment list were selected for the study. This gave six local government areas per educational zone. 168 teachers were randomly selected through the heart and draw technique to select the subjects from each of the selected zone, giving a total of 501. One teacher was sick and therefore could not make up the total. On the whole 500 teachers were used as the sample.

Instrumentation

A survey research design was used with questionnaire as the instrument for data collection. The questions were worded in a way that the respondents felt comfortable answering. The questionnaire had 2 sections. Section A elicited background information of respondents, while Section B elicited information on how primary school teachers has integrated learner's with special needs into their curriculum. It also elicited the information of the extent teachers practice intensive instruction, the extent they apply explicit teaching of academic adaptive and functional skill in their curriculum; the extent their curriculum is evidenced based in terms of providing reasonable accommodation. The face validity of the instrument was ascertained by test construction experts and reliability test result using the Cronbach coefficient alpha yielded a reliability estimate of 0.72 to 0.97.

The questionnaire were personally administered by the researchers, with the help of some field assistants and retrieved back after some days. Simple percentages were used for the analysis of the data because most of the questions required either 'yes' 'no' and 'true' or 'false' responses.

Analysis of data and results

The presentation of data was done based on the research questions. Data were presented in Tables using simple percentages.

Research question 1

To what extent is the curriculum evidenced-based in terms of individualization?

To answer this research question items 1-8 of the questionnaire were analyzed. The result of the analysis is as presented in Table 1.

Table 1

Responses of the respondents on the curriculum evidence-based in terms of individualization

S/N	Items	Yes	%	No	%	Total	%
1	Special attention is given to children in difficulties during teaching	100	20	400	80	500	100
2	I teach to the individual needs of children	360	72	140	20	500	100
3	Most assignments are carried out in groups	112	22.4	388	77.6	500	100
4	Peer teaching is used to help the special needs learners	75	15	425	85	500	100
5	It doesn't matter if all pupils are exposed to the same curriculum	305	61	195	39	500	100
6	It's a waste of time creating a special curriculum to cater for needs of children	300	60	200	40	500	100
7	I teach my lessons based on the laid down curriculum without the special need	325	60	175	35	500	100
8	I am aware of the learner individualized special needs curriculum should look like	285	57	215	43	500	100

As presented in Table 1, it can be observed that 100 respondents representing 20% of the total respondent agreed that special attention is given to children in difficulties during teaching. While 400 (80%) disagreed. 360 (72%) said they teach to the individual needs of children, 140 (20%) teachers disagreed. 112 (22.4) respondents agreed that most assignments were children carried out in groups based in same ability irrespective of children with special needs. 388 (77.6) disagreed on the grounds that most assignments given are done individually regardless their ability level. 75 (15%) of teachers claimed that they used peer teaching to help special needs learners, while 425 (85%) disagreed on the grounds that no real interactions go on among the learner with respect to their special needs. 305 (61%)

teachers argued that it did not matter if all pupils were exposed to the same curriculum, 195 (39%) were of the view that separating the curriculum for special needs children was very important. 325 (60%) of respondents agreed that they taught their lesson based on the laid down curricula without the special needs of the learner in mind. 285 (57%) respondents agreed that they were aware of what the special needs learners curriculum should look like. While 215 (43%) disagreed that they were not aware of what a special needs learner curriculum should look like.

The result of the analysis reveals that the percentage of agreement with all the items 1-8 implies that the primary school curriculum is not evidenced-based in terms of individualization.

Research question 2

To what extent do teacher practice intensive instruction as regards their curriculum?

To answer this research question items 9-18 of the questionnaire were analyzed. The result of the analysis is as presented in Table 2.

Table 2
Responses of teachers on how they practice intensive instruction

S/N	Items	Yes	%	No	%	Total	%
9	I allow some level of interaction among learner during lesson	190	38	310	62	500	100
10	I give a lot of room for sustaining due to special need learners.	331	66.2	169	33.8	500	100
11	I actively engage students in their learning.	410	82	90	18	500	100
12	I deliberately slow down in the course of teaching to give room for slow learners to catch up	119	23.8	391	76.2	500	100
13	I overemphasize difficult concepts to help pupils understanding as a feedback procedure	38	7.6	462	92.4	500	100
14	I make efforts to keep my lessons at the ability and skill level of the pupils	450	90	50	10	500	100

15	I use a lot of instructional materials as a cue to making lessons very easy to follow	481	96.2	19	3.8	500	100
16	Most times I repeat my lessons due to special need	285	57	215	43	500	100
17	I present my lesson activities to provoke thinking and support learning	447	89.4	53	10.6	500	100
18	In my lesson presentations I go beyond the recommended curriculum	82	16.4	418	83.6	500	100

As presented in Table 2, it can be observed that 190 respondents representing 38% of the total respondent agreed that they allow some level of interactions among learners during lesson presentation, while 310 (62%) disagreed.

331 (66.2%) of teachers give a lot of room for questioning to accommodate special need learners, while 169 (33.8%) said they don't.

410 teachers representing 82% said they go over their lessons a number of times while 90 (18%) of the respondents said no they don't.

119 (23.8%) teachers said they deliberately slow down in the course of teaching to give room for slow learners to catch up, 391 (76.2%) said they do not.

38 (7.6%) of the total respondents said they overemphasize difficult concepts to help special need learners understand as a feedback procedure, 462 (92.4%) said they do not. While 450 representing 90% the total respondents make effort to keep their lessons at the ability level of the learners, 50 (10%) do not. 481 (96.2%) said they use a lot of institutional materials as a cue to making lessons easy to follow, 19 (3.8%) said they do not.

285 respondents representing 57% if the total respondents most time used repetition in lesson delivery, 215 (43%) said they do not.

447 (89.4%) of teachers claimed they present their lesson to promote thinking and support learning, 53 (10.6%) said they do not. While 82 (16.4%) representing the opinion of teachers who teach on present lessons beyond the recommended curriculum, 418 representing 83.6% of the total respondents said

they presented their lesson beyond the schools curriculum thereby making provision to cater for special needs learners.

Research question 3

To what extent do teachers apply explicit teaching of academic, adaptive and functional skill in terms of the curriculum.

To answer this research question item 19-25 of the questionnaire were analyzed. The result is as presented in Table 3.

Table 3
To what extent do teachers apply explicit teaching of academic adaptive and functional skill in their curriculum

S/N	Items	Yes	%	No	%	Total	%
19	I use a lot of adaptive skills like Braille, auditory aids, use of calculators in my teaching to help special needs learners.	180	36	320	64	500	100
20	I utilize a lot of life skills in teaching simple arithmetic e.g. calculator.	239	47.8	261	52.2	500	100
21	I use tape recorder to aid special needs learners	190	38	310	62	500	100
22	I use peer teaching to the pupils develop functional skills	220	44	280	56	500	100
23	I use a lot of role models in my lesson presentation	152	30.4	348	69.6	500	100
24	I use a lot of audio-visual aids in my lesson presentation	221	44.2	279	55.8	500	100
25	I present lesson in such a way to create in the learners a positive attitude to enable them deal with new experiences in their learning environment.	213	42.6	287	57.4	500	100

The result in Table 3 indicates that 180 representing (36%) of the total respondents said they use assistive technology in teaching, while 320 (64%) disagreed. 239 (47.5%) maintained that they use a lot of life skills in their lesson presentations, 261 (52.2%) do not use life skills in teaching. 190 (38%) agreed

that they use technology skills to help special needs children to adapt to the lesson, 310 (62%) disagreed.

220 (44%) of the total respondents said they use a lot of peer teaching to help the special needs children development functional skills, 280 (56%) said they do not see the need for peer teaching.

152 (30.4) of the respondents agreed that lessons are better presented for adaptive learning when using role models 348 (69.6%) do not see this as the best way to help special needs children acquire skills for adaptation in the learning environment. 221 (44.2%) respondents maintained that they use a lot of audio-visuals in their lesson presentation, while 279 representing 55.8% said they do not use audio visuals in their lesson presentation.

213 respondents representing about (42.6%) agreed that they teach in such a way that special needs children acquire skills to deal with new experiences in their learning environment, while 287 (57.4%) disagreed.

Research question 4

To what extent is the curriculum evidenced based in terms of providing reasonable accommodation. To answer this research question items 26-31 of the questionnaire were analyzed. The result is as presented in Table 4.

Table 4
To what extent is the curriculum evidenced based in terms of providing reasonable accommodation.

S/N	Items	Yes	%	No	%	Total	%
26	Lessons are presented considering the difficulty nature of topics by progressing from simple to complex	100	20	400	80	500	100
27	Most instructional materials are presented in concrete terms i.e. using lots of concrete materials	80	16	420	84	500	100
28	I use a lot of gestures and demonstration in teaching	109	21.8	391	78.2	500	100
29	I provide detail description of concrete on the chalkboard	90	18	410	82	500	100
30	I give extra time for the special need learner in their areas of weakness	169	33.8	331	66.2	500	100

The result in Table 4 indicates that the 100 (20%) of the respondents said that they teach difficult lesson from simple to complex, while 391 (78.2%) said lessons are taught without due recaps to difficult topics and areas.

80 out of the 500 respondents representing 16% maintained that they use a lot of concrete instructional materials to prevent their lesson, while 420 (84%) said they don't use concrete materials to teach.

109 (21.8%) agreed to be using a lot of gestures and demonstration while presenting their lessons, 391 (78.2%) said they don't.

90 (18%) indicated that they provide detail description to concepts on the chalkboard, 410 (82%) said they do not.

100 (20%) maintained that they often use real life examples to explain very difficult concepts of topics, 400 (80%) said they don't use real life examples in their lesson presentation to address difficult areas.

169 agreed that they use a lot of personal ingenuity to teach very difficult areas, 331 representing 66.2% of the total respondent said they do not bother themselves.

Summary of findings and discussions

The study shows that primary school curriculum is not evidenced-based in terms of individuation, the level of instruction was very low that is the instruction was not matched to students ability and skill level. The study also revealed that explicit teaching of academic, adaptive and functional life skills was low. In other words, the instructional procedures, use of materials and alternative learning sequences in the classroom to help students with disability master content was very poor. This contradicts the findings of Elbaum et al (2000); Mastropireri & Scruggs (2007) and O'Connor (2000).

The study also shows that schools did not provide reasonable accommodation and equal opportunity for students with disability. Teachers did not give extra time for pupils with disability to complete assignment. Changes in seating arrangements to accommodate vision or hearing impairment

of even the use of supplementary materials such as visual or auditory aids was not there at all. Access to taped textbook, access to peer tutoring was not available. The reason for this could be as a result of the notions that most Nigerians have concerning special need learners. Special need learners were often considered as unteachable so the learning content was watered down. According to Adelowo (2006) since the children were already classified as being unable to learn, it was believed that any teacher will do, even if they were inexperienced and untrained. Thus, Cross River State, Nigeria is far from these new trends for educating learner's with special needs.

Recommendations

Based on the findings, the following recommendations have been made: The government should enforce that several teaching approaches must be emphasized and used for special need learners. In a broad term, these approaches must hinge on flexibility which describes the ability of the teacher to develop and adopt different forms of curricula, and to present them in various ways to meet the widely differing needs of the pupils.

Seminars, workshops should be made available to teachers, and public with a view of creating public awareness on the new trends for educating special needs learners. Teachers should employ the clinical teaching approach which identifies the specific problem and zero in on it. Teachers have to give the LD children extra time to complete their assignment in their area of weakness, be it reading, writing, spelling or arithmetic, and offer extra help and guidance.

The government should provide schools with visual and auditory aids and other instructional materials to enhance the effective teaching and learning of the special needs learners.

Conclusion

Ensuring an appropriate educational experience for students with disabilities means providing evidence-based (scientifically based) special education services and supports. With respect to special education teachers, services provided to a highly qualified general education teacher. There is need for

the state ministry of education in collaboration with federal ministry of education to introduce more intensive interactive behavioural and clinical approach to teaching and learning. This includes development of individualized educational programmes, clinical teaching or diagnostic prescriptive teaching, collaborative team teaching and collaborative team learning.

The principle of parsimony should be put into full practice. This requires that knowledge and information be dispensed carefully in small doses and in a sequentially ordered manner.

Over learning which involves the use of multiple approaches, many rehearsals and repetitions, use of examples, media and sensory modalities must be emphasized in the curriculum. Adequate law that emphasize the integration of reasonable accommodations for special need learners must be put in place. This must ensure that a person with disability has equal chance of participation that adjust the learning environment, modify instructional methods, adapt curricula, use positive behaviour, supports and interventions and select and implement appropriate accommodations to meet the individual needs of the children is highly important.

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**THE LANGUAGE DIMENSION OF THE TEACHER EDUCATION PROGRAMME IN
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THE LANGUAGE DIMENSION OF THE TEACHER EDUCATION PROGRAMME IN

NIGERIA COLLEGES OF EDUCATION

Abstract

The teacher occupies a vital position in the teaching and learning process and the level of development attained by any nation anywhere in the world is measured by the degree of educational development of that nation because education is considered to be the most important instrument of development. Teacher education depicts and quantifies those conscious and unconscious efforts made by government, communities and individuals towards providing comprehensive professional training and/or retraining to those whose duty it is to steer educational activities towards achieving its set goals. Global economic development which has witnessed unprecedented changes in service delivery has placed great demand on the structure of global education with regards to content, materials and classroom practices that are functionally relevant to beneficiaries. The Nigerian government is gradually taking cognizance of the importance of effective teacher training programme as a prerequisite to sustainable development. Colleges of education in Nigeria established to provide professionally qualified teachers for the sustenance of the basic education programme has not received much of government attention. It is plagued with inadequacies in terms of the curriculum content (theory and practice), methodology, resource materials and teacher motivation. This paper examines the structure of the teacher education program in Nigerian colleges of education with particular reference to the language aspect of the programme using the inadequacies identified above as focal point of discussion. The paper also discusses how teacher education could be restructured and reformed at that level to meet the challenges and demands of the 21ST century.

Introduction

Education is undeniably the most potent tool for the intellectual development of the citizenry, for social reengineering and transformation anywhere in the world. In this regard, no meaningful development can be achieved without the provision of an efficient and functional education system. This is why policy makers and stakeholders in education have begun to show much concern over the quality of educational performance in terms of the programmes and end products. Besides, efficient educational system depends largely on the quality of teachers who are the key players in the provision of qualitative education promoted through changes in classroom practices in any society. (Donoghue and Austin (1995). In recognition of the importance of the teacher in the provision of qualitative education, developing countries of the world are currently giving greater priority to teacher education and Nigeria is not an exception. The major problem confronting most teacher trainees in colleges of education in Nigeria is poor language proficiency. It is obvious that at the point of entry (i.e. at the admission stage), most of the students who get admitted into the Colleges of Education to pursue a course of study in the colleges have poor language competency. The problem is equally not effectively and adequately tackled even at the point of exit (i.e. graduation). The present concern in Africa and Nigeria particularly, is the dwindling quality and status of teachers. No meaningful development can be achieved in the educational system without effective and adequate preparation of the teachers who are the key drivers towards achieving qualitative education. It is also obvious that there can be no meaningful national development without achievement in the provision of good educational programmes and opportunities by the various educational institutions. Achieving qualitative education requires that greater attention be paid to the teacher education programmes of the various institutions and agencies established to prepare teachers for effective implementation of the basic education programme. This reflects government's submission in the National Policy on Education (NPE) 'that no nation can rise above the quality of its teachers'.

Besides, Nkwocha and Nzeahurukwe (2012) observe that education is very essential in the development of the human potentials and in nourishing the social and economic progress of the nation.

Teacher Education Programme in Colleges of Education

Teacher education has begun to receive the attention it deserves contrary to earlier status of teachers especially during the military regime when teachers were hardly recognized and poorly remunerated. Educational agencies through government policies are now making efforts to reposition teacher education within global perspectives through improved teacher preparation and enhanced welfare packages. However, a lot is yet to be done because a large number of in-service teachers are poorly trained with regards to content and methodology in relation to global best practices; many still see teaching as a gateway to greener pastures. Teacher education in the words of Oyekan (2000) is the provision of professional education and specialized training within a specified period for the preparation of individuals who intend to nurture the young ones into responsible and productive citizens. The focus on teacher education at this period of global transformation and rejuvenation, which result from changes in information and technological innovations and development, is essential in order to acquaint Nigerian teachers of these changes and equip them with the necessary skills, techniques, attitudes, innovative and creative ideas and knowledge in both content and methodology of their chosen field of specialization. This will also empower them to compete favourably well with teachers in other parts of the world. Therefore, teachers, whether pre-service or in-service require the most comprehensive education and pedagogical training, the most effective and communication skills, the most balanced temperaments, the largest variety of useful instructional materials and equipment and the most conducive work or training environment to make the most important task of education effective (Umar 2008: 321-322). This would set the pace and prepare the ground for achieving the major goal and objectives of the teacher education programmes in Nigeria as stated in section 7:1 of the National Teacher Education Policy (2009), which is to:

Produce quality, highly skilled, knowledgeable, and creative teachers based on explicit performance standards through pre-service and in-service programmes who are able to raise a generation of students who can compete globally.

Similar to this are the objectives of Teacher Education programme contained in section 7.3 of

the same document. These are among others to:

- i. Ensure rigorous admission and graduation requirement and apply them consistently.
- ii. Ensure that teacher education institutions are well equipped both in human and material resources.
- iii. Ensure that teachers have sufficient mastery of content and varied methods of teaching

that are subject specific, including teachers for special Needs Learners.

Despite the richness of these objectives, experience shows that theory is usually not in tandem with practice. When policies are formulated they are generally not implemented with the same zeal with which they were formulated. This is why this study focuses on Colleges of Education as important teacher education providers in Nigeria; examines the teacher education foreign language (English/French) programme to ascertain its relevance or otherwise in providing the language needs of trainee teachers in terms of content and methodology.

The National Certificate in Education (NCE) is recognized by the National Policy on Education (NPE) as the minimum qualification for entry into the teaching profession. This is a three year teacher education programme offered by the following institutions and agencies in Nigeria:

- i. Colleges of Education
- ii. Polytechnics
- iii. National Teachers' Institutes (NTI)

The major objective of the NCE programme is to produce teachers for pre-primary, primary and junior secondary school levels. Invariably, the NCE programme is expected to train teachers and provide manpower for the Universal Basic Education programme in Nigeria. It is in line with this that the National Commission for Colleges of Education (NCCE) was set up. The functions of this commission are among others to:

- a. Approve guidelines setting out criteria for all Colleges of Education in Nigeria.
- b. Lay down minimum standards for all programmes of teacher education and accredit their certificates and other academic awards after obtaining thereof prior approval of the minister.
- c. Lay down standards to be attained and continually review such standards;
- d. Review methods of assessment of students and trainees and develop a scheme of national

certification for various products of colleges of education.

The NCCE therefore is officially mandated to produce, distribute and implement the minimum standards as well as accredit all NCE programmes, including those of the foreign languages such as English and French. However, studies have shown that the NCE teacher training programme produce teachers who have fallen short of the NCCE expectations (Akale 2006), and that the NCCE minimum standard has undeniable inadequacies that have negatively impacted on the effective implementation of the NCE teacher education programme (Junaid 2010, Ndukwe 2012). This study examines the foreign language (English and French) component of the NCE teacher education programme to ascertain the areas of inadequacies and how to tackle such and enrich the teacher education programme.

Foreign Language Component of the NCE Teacher Education Programme

In the present century, paradigms in global economy, communication and developmental demands have continued to make the use of foreign languages very relevant. Increase in global communication and interdependence has projected the English language in Nigeria into greater prominence because man in modern society can hardly contemplate and enjoy communal living without the instrument of language with which he communicates (Olaoye 2000: 229). In recognition of the importance of foreign languages in global communication and competitiveness, the Federal government is giving attention to the English/French bilingual education. Both languages form part of the teacher education language programmes in Nigeria Colleges of Education. The question then is: What is the state of foreign language (English/French) education in Colleges of Education in Nigeria? To answer this question, the paper subsequently examines the English and French curricula in terms of the objectives, content (theory and practice), methodology and resource materials for the effective training of the NCE English/French language education pre-service teachers.

i. Objectives of Teaching English and French in COE

Teaching English language in Nigeria is to promote inter and intra communication within and outside the country. Meanwhile, the objectives of the NCE English language programme goes beyond acquiring the language just to solve the problem communication but also to improve the effectiveness of the language that has become a part of the cultural, economic and social life of the people. Therefore, the objectives of teaching English at the Colleges of Education include:

- i. To help students develop the four language skills – listening, speaking, reading and

- writing,
- ii. To promote students' confidence and competence in both the spoken and written form of the language
 - iii. To enable students develop interest in and acquire skills for the appreciation of literary skills.
 - iv. To equip students to successfully teach English at the primary and lower secondary school levels and
 - v. To prepare students for further education.

These are laudable objectives expected to be achieved at the end of the three year programme. How much these objectives are being achieved at the expiration of the three years is another issue to contend with. This is further expatiated through the subsequent examination of the content of the NCE English language programme as laid down in the NCCE minimum standard for colleges of Education.

The over-riding aim of Teaching and Learning French in Nigeria is to facilitate communication and mutual understanding between Nigeria and other West African French speaking neighbours. It is believed that such a facilitation of communication and mutual understanding would no doubt promote socio-economic and political relation between Nigeria and these neighbours. Teaching French in Colleges of education (COE) aims at producing qualified and competent teachers of this language for the basic education level and to prepare students for further education. Besides, French in COE is to help the Federal Governments in realization of its vision of a bilingual and multicultural education in Nigeria. Therefore student teachers in COE are not only to learn the French language but also to acquire the necessary skills required to enable them transfer such knowledge to their would be pupils in primary and junior secondary schools. Hence not only the content but the methodology courses are expected to be taught to these teacher trainees

ii. **Content of the NCE English/French Curriculum**

The content of the NCCE minimum standard has variously been examined and evaluated by researchers at different times with regards to adequacy and inadequacy; while some found nothing wrong with the content (Akale 2006), others Ndukwe 2012; Okebukola 2005; Bankure and Peni 2012) have observed that the content is not balanced, implying that some subjects are not adequately provide for while others are over-emphasized. This discourse is to assess the

adequacy or otherwise of the minimum standard used to train the English and French language students in terms of equipping them with the necessary skills required to perform effectively in their respective language areas at graduation.

There are two separate curricula for the NCE English programme: the single curriculum and the double curriculum. Students in the single curriculum combine English with another teaching subject while in the double curriculum, students study English as single honors. This means that the single major students have fewer courses and fewer units in English than their double major counterparts. However, all students, irrespective of the mode of curricular, offer courses in General Education and General Studies Education. Table 1 presents the credit load analysis of the single and double major English courses.

Table 1: Credit load analysis of the single and double major English courses

Programme	COURSE UNITS									TOTAL UNITS		
	LANGUAGE			LITERATURE			METHODOLOGY			ENG	LIT	MTHD
Levels	100	200	300	100	200	300	100	200	300	100	200	300
Single curriculum	10	10	6	4	4	6	2	2	-	26	14	4
Double curriculum	14	12	12	16	8	14	2	4	-	38	38	6

Table I indicates that the NCE teacher education English curriculum is lopsided with more emphasis on the language aspects with a total credit load of 26 units for the single majors students contrary to the 14 credit units in literature and 4 credit units in specific subject methods. The double major students are more at an advantage with equal credit units (38) in both language and literature, though the methodology courses seem to fare no better. A breakdown of these units into their specific language skills is necessary to better understand the dynamics of the entire English language content of the NCE programme

Table 2: Credit load analysis of the specific NCE English language skills

Skills	Single Curriculum			Total units	Double Curriculum			Total units
	100	200	300		100	200	300	
Listening	1(2E)	-	-	2E	1(2E)	-	-	2E

Oral/Speaking	1 (2C)	-	-	2C	2 (4C)	-	-	4C
Reading	1 (2C)	-	-	2C	2(4C)	-	1(2C)	6C
Writing	-	1 (2C)	1 (2C)	4C	1(2C)	1(2C)	1(2C)	6C

Table 2 shows that only 12 units out of the 26 units of the language courses are skill based while the 13 units are allocated to core English language courses. Students running the double major curriculum are also limited in their exposure to the basic language skills required for the effective teaching of the literacy skills at the basic education levels (Primary to lower secondary) for which Colleges of Education teacher trainees are being prepared for. One major function of literature besides moral and character development is the promotion of the basic language skills at the primary and lower secondary school levels. On the contrary, the minimum standard did not make sufficient provision for the study of literature required to inculcate these values in the young learners. The examination of the minimum standard reveals that there is a mismatch between the content of the English language curriculum and the educational needs of both teacher trainees and the children they are being prepared to teach. Thus, it has failed to achieve its basic objective of preparing teachers for the successful teaching of English at the primary and lower secondary school levels; instead it focuses more on the lesser objective of preparing teacher trainees for higher education.

The examination of the minimum standard also reveals that the English language teacher trainees in Nigerian Colleges of Education are saddled with many courses in General Education and General Studies Education (GSE), that do not contribute much to their professional development and effectiveness. Teacher trainees are constantly overloaded; attending lectures from 7 am to 7pm, with less time for personal study. Trainees expend much energy studying to pass examination than to acquire lifelong skills necessary for the actualization of the NCCE objectives for effective teacher education. Hence, Akale (2006) noted that the NCE teacher training programme produce teachers who do not measure up to expectation. This may therefore explain the poor quality of primary school teachers and the prevailing poor performance of students in National Examinations (Ndukwe 2012)

The NCE French curriculum was also taken through the same assessment criteria as shown in table 3. The table presents an overview of the NCE French curriculum showing the number of units students are exposed to in each of the three major components (Language, Literature and

Methodology) during the two semesters of each level for the duration of the three year period.

Table 3: Credit load analysis of the French language courses

COURSES	COURSE UNITS									GRAND TOTAL
	100L			200L			300L			
	1 ST	2 ND	TOTAL	1 ST	2 ND	TOTAL	1 ST	2 ND	TOTAL	
Language	5	6	11	5	7	12	-	5	5	28
Lit/Civilization	1	1	2	1	1	2	-	1	1	5
Methodology	0	0	0	1	2	3	-	0	0	3
Total	6	7	13	7	10	17	-	6	6	36

The table shows that attention is paid more to language courses to the neglect of methodology and other aspects of French studies (Literature, culture and civilization). For instance, out of the 36 units required for graduation in French, only 3 units are allotted to methodology while 28 and 5 units are respectively allotted to language and literature courses. Secondly, a further break down of the language courses into specific skills indicate that no provision is made for listening and reading skills, instead a total of 11 units are meant for grammar courses and only 5 units are for writing skill. The French language Immersion programme (FLIP) which would have provided opportunity for teacher trainees of French to listen to and hear the language from the native/near-native environment is not implemented in a French-speaking environment as recommended by the NCCE minimum standard. This confirms earlier observations Adeyanju (2006); Ndukwe (2012); and Bankure and Peni (2012) that NCE teacher trainees lack sufficient knowledge of content, pedagogical and language skills which they require for optimal performance as teachers upon graduation.

iii. Methodology

Obanya (2008:4) listed four areas of focus in the professional preparation of pre-service teachers at the first degree level. One of such areas of focus is:

Specialized subject matter, with due emphasis on the methods of knowing peculiar to specific subject areas, since teachers, in the course of their careers should be able to follow developments and new trends in the subjects they may be teaching

The above appears not to be the case with the NCCE (2008) minimum standard. The document indicates that the following methods of teaching may be adopted: Lecture, tutorial, project and discussion methods while tutorials are mandatory for all language teacher educators. Observation has shown that the prevailing method of teaching in Colleges of Education has consistently been the lecture method and this has negative implication on the teacher trainees. This gives credence to Obanya (2004) that academics in the field of education should practice what they preach by de-emphasising the lecture method and be more resourceful and more creative in their teaching by really preparing their lessons, engaging students in practical activities, observations, reporting and case studies. The NCE teacher education programme is not designed to make teaching and learning interactive and participatory because most of the teacher educators lack knowledge of innovative approaches, methods and strategies that enhance creativity in teaching. Therefore, it is not sufficient to have one or two courses in methodology as is the case with the NCCE English and French curricular. Tables 1 and 3 show that there is no balance between content knowledge and methodology; attention is not paid to specific subject methods with regards to English and French.

Most teachers of French in Colleges of Education specialize in African literature and a few specialize in language to the neglect of methodology. For English, there are more teachers specializing in language more than in literature and methodology. Umar (2008) confirms that teacher education training are provided on an uneven basis, in most cases it is professional enrichment skills that are usually stunted while in other times it is the subject academic skills that are overemphasized. The result is that some teachers are assigned courses they have not specialized in. For instance, some College Administrators believe that specific subject methodology courses located within the specific language departments can be taught by core language and literature teachers with first degree knowledge in education. This is contrary to

Olaoye (2000) that staffing in teacher education institutions with regards to language education should be subject specific. He identified language methodology as one of the special areas in language education that should be taught by specialists.

iv. Teaching Practice and Immersion Exercise

According to the 2008 edition of the NCCE minimum standard, students of French in colleges of education are expected to spend a minimum of twelve (12) weeks in a French speaking environment (LIP) as part of their French language, teacher training. This is with a view to giving them the opportunity of having first hand contact experience with the French language as used daily by the native/near nature speakers of the language and enhance their proficiency in the use of the language. This is in line with the general philosophy for the teaching of language contained in the NCCE (2008:17) minimum standard that;

Performance in language, especially spoken language defines personality. For the teacher, his credibility is almost anchored on his competence in communicating ideas and stimulating learning through his use of language. Articulate and fluent teachers almost invariably win the hearts and the respect of their students or pupils.

This implies that the teacher trainees must possess adequate content knowledge, appropriate pedagogical knowledge and practical experience in line with global best practices in teacher education to be able to perform their professional duties as expected. However, the French language immersion programme (FLIP) is not fully implemented because students are not sent to native/near native speaker environment, thus defeating the objective of the exercise which is to help enhance the spoken/oral skills of the French language teacher trainees.

In addition, the NCCE minimum standard also stipulates that students should undertake practical teaching exercises for a period six months in their school of practice. The exercise is designed in a manner that pre-service teachers begin the term with the host school in order to be fully immersed in the academic and social life of the practice school as well as have a

comprehensive experience of the teaching profession. However, the current practice in most colleges is short of the above expectations. The reality is such that student teachers not only resume late in their host schools but also spend a shorter period than recommended for the exercise.

Besides, the exercise lacks effective implementation. For instance, supervision is not subject specific, implying that students are not assessed by specialist teacher educators in their subject area. This brings to question the validity and reliability of the assessors' reports – when a teacher educator in agriculture is sent to supervise a student of English or French, then the assessment report stands to be contested because it is expected that supervision should cover both content knowledge and delivery skill(s) (methodology).

v. Resource Materials

The question of material is very important in the realization of effective language education programme. The N CCE minimum standard is specific about the provision of resource material and other relevant facilities and equipments for effective language teaching and learning. It recommends that adequate classroom and staff offices be provided, in addition to well equipped language laboratories and libraries in the ratio of ten books to one student. On the contrary, these materials and equipments are in very short supply for lack of adequate government funding. Teachers work under very poor environment due to lack of infrastructural facilities.

The language laboratories in most Colleges of Education are obsolete and the classroom spaces are grossly inadequate while students learn under very harsh conditions. It is surprising that in this era of global transformation and digitalization in teaching and learning, most Colleges of Education are still saddled with the problem of inadequate classrooms, lacking furniture and space; dilapidated analog language laboratories where they exist at all; robust provision of relevant and up to date books in both the specific subject areas and general education. In a world where e-learning is the borderline, classrooms and offices are empty of computers and other ICT facilities required for improvement in foreign language teaching. Under such condition, it would be very difficult to produce the ideal teacher who is expected to provide qualitative education at the basic education level and achieve the lofty objectives stated in the National Policy on Education. The teacher education programme in Colleges of Education is still a far cry from the

global expectations of the ideal teacher and best practices in teacher education.

Recommendations

If teaching is to receive full professionalism and be meaningful to the needs of the teachers, the students they are going to teach and the general society, it must cease to be an all corners affair. Those seeking entrance into the profession require professional training and comprehensive teacher preparation. Based on this the study makes the following recommendations:

- The NCCE minimum standard for Colleges of Education should be reviewed on the bases of best practices in global teacher education with a view to creating workable balance in content knowledge and professional skills required in the comprehensive training of would be teachers. In doing this, relevant personnel drawn from specific subject departments of the relevant agencies and institutions (Colleges of Education, NCCE etc) should constitute the review panel.
- Courses relevant to the professional development of student teachers should be emphasized. In this case courses in General Education and General Studies Education (GSE) should be de-emphasised, especially for foreign language learners. This is to reduce the overloaded workload and give students opportunity for personal study.
- Teaching should be made interactive, collaborative and participatory so that teacher trainees would be able to apply these student centred strategies in teaching at the basic levels. It is believed that students cannot impart knowledge they do not have.
- The teaching practice exercise should be broadened to make room for effective student/supervisor interaction during supervision. Meanwhile supervision should be subject specific, implying that students should be supervised by teachers in their specific subject areas. The current practice of assigning a teacher of Agriculture Education to supervise a student of English should no longer apply.

Conclusions

This discussion has focused on the adequacy or otherwise of the foreign language (English/French) teacher trainee programmes. Teachers are the custodian of knowledge;

therefore to achieve effective transformation of education at the basic education level requires that teachers who are to provide that transformation receive adequate training to enable them achieve the set goals of education. Most times the problem of any policy does not emanate from the level of formulation but that of poor implementation. Irrespective of the obstacles inhibiting the smooth implementation of the NCCE Minimum standard, it is expected that only good teachers can be recruited to teach at the primary/basic education level. This is why the examination of the NCCE minimum standard attempted in this discussion becomes relevant in the wake of changes in global education practices.

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EARLY GRADE PUPILS' INABILITY TO READ: AN OUTCOME OF THE INITIAL TEACHER EDUCATION PROGRAMME
IN GHANA? (ADU-YEBOAH)

Abstract

Many Ghanaian public basic schools seem unable to make early grade children literate, despite the introduction of various interventions. This paper uses lessons of Newly Qualified Teachers' (NQTs) as a lens to investigate this phenomenon. Through the mixed method approach, the paper examines NQTs' knowledge, understanding and practice of early grade reading lessons. Newly Qualified teachers from four purposively selected Colleges of Education (COEs) provided data for the study. Questionnaires were administered to 156 NQTs in 23 purposively sampled basic schools, after which lesson observations and forensic interviews were conducted with 36 of them. Among others, it found that the NQTs demonstrated some knowledge about early grade reading and how it should be taught, and although there were a few positive variances in their practices, majority of them demonstrated over-emphasis on procedural knowledge and how to get the sequence right even when the approach did not yield results. There was lack of reflection on why approaches did not yield results and lack of ability to adapt teaching to suit actual situations. The NQTs also showed simplistic understandings that underestimate the challenges and difficulties of teaching reading at the early grade level. Some of the reasons for these could be attributed to their Initial Teacher Education (ITE) experience. The paper points to the urgency of paying more attention to the ITE programme and restructuring it to embed the college training within the primary reading classroom, while developing trainees' ability to reflect and critically engage and analyse methods and procedures in the light of examples of real contexts.

(Key words: newly qualified teachers, knowledge, understanding, practice, early grade reading)

Introduction

The goal of *Education for All* and the Millennium Development Goal (2) make it mandatory for every nation state to ensure that by 2015, children everywhere will be able to complete a full course of primary schooling. This has impelled many countries in sub-Saharan Africa (SSA) to confront their historically low rates of enrolment. Consequently, there have been remarkable improvements in primary school enrolments. For example, in 1997, a UNESCO report indicated that some 10 million more children attended school each year, and the total number of primary school pupils was reported to have increased from an estimated 500 million in 1975 to more than 660 million in 1997 (UNESCO, 2001). In 2007, the administrative data from the UNESCO Institute of Statistics (UIS) reported that in 2004, the worldwide figure of out-of-school children

reduced from 115 million to 77 million, with that of sub-Saharan Africa changing from 43 million to 38 million (UNESCO, 2007b).

In Ghana, the most recent data from the Ghana Statistical Survey (GSS) shows that enrolment in primary school currently stands at around 90% (GSS, 2005). This has been achieved through instituted policies and strategies aimed at widening access to basic education, such as fee-free education, the capitation grant, free uniforms and exercise books in some cases and school feeding programme. However, it has become increasingly clear that it is not enough to simply make physical access to basic education available to the many children of school-going age. If *Education for All* is to have positive social and economic consequences, then the education system must ensure that children are equipped with the basic minimum competences of literacy that will enable them to benefit from and contribute to their society's future.

Unfortunately, studies show that many children in school are not learning very much. UNESCO (2008:2) reports a 'relatively low and unequal learning achievement in language and mathematics' in many countries especially in sub-Sahara Africa (SSA). These poor results are seen throughout basic schooling, although the first years of schooling are known to be especially important. Children's early experiences with learning shape their attitudes and commitment to education and so, more than at any other stage, what happens in the early grades, determines their educational future. Unless they make sufficient progress at this stage they are liable either to cease coming to school entirely, relapsing into illiteracy, or to become the 'silently excluded' who are not able to access the increasingly demanding work of the later grades (Liddell and Rae 2001; Lewin 2009; UNESCO 2010; Glick and Sahn 2010). This is particularly true in reading which underpins understanding across the school curriculum. Children who achieve early success in reading are more likely to stay in school realizing immediate rates of return, while those who do not grasp the skills and point of reading are in danger of early drop out and a relapse into illiteracy (Psacharopoulos & Woodhall, 1985; Chabbott, 2006).

Research shows that there is a relationship between poor quality of teachers' teaching and that of students' learning, and that, weaknesses in teachers' pedagogical content knowledge (PCK) and classroom practice hamper effective student learning and achievement (Pontefract & Hardman, 2005; Akyeampong, Pryor & Ampiah, 2006). Teacher education has been identified as both part of the problem and the solution to this situation. In the Ghanaian context, there appears to be more attention given to addressing the problem of teacher demand to meet the increasing pupil enrolment than on monitoring what actually goes on during the preparation of teachers. There also seems to be little articulation between what goes on during initial teacher preparation and in schools, and how the one should inform the practice of the other.

To fill the gap in knowledge about how the initial preparation of teachers impacts on their practice in the first three grades of primary school, the Teacher Preparation in Africa project (TPA), funded by the William and Flora Hewlett Foundation was set up through studies in six African countries: Ghana, Kenya, Mali, Senegal, Tanzania and Uganda. This paper reports on part of the research that was carried out in Ghana. It addresses one of the project's major questions: How do newly qualified teachers teach reading in their first few years of teaching? How does this practice relate to what has been taught and learnt in pre-service training? What are the gaps in their knowledge and practice?

The study used the ITE programme as a lens to understand why children are not able to read in the early grades, since early reading has been identified as extremely important for understanding the school curriculum and for future progress. It did this by finding out the knowledge, understanding and practice of Newly Qualified Teachers (NQTs) in early grade classrooms and to determine whether the process of learning to teach reading at lower primary level draws attention to, and emphasizes the kind of teaching competencies known to be important for developing lower primary school children's abilities to read.

The study employed the mixed methods approach by gathering evidence of the knowledge, understanding and classroom practice of teacher educators in colleges of education, teacher trainees and newly qualified teachers. It sought to identify factors that contribute to successful practice and that lead to increased children's learning outcomes, as well as specific barriers and constraints that impede teacher practice and children's progression in literacy. This paper describes the gaps, weaknesses and promising practices that were identified between the espoused ITE programme and the knowledge, understanding and practice of NQTs to understand the relationship between teacher preparation and low pupil attainment in reading. The findings are used to suggest feasible ways in which teacher preparation in Ghana might be improved.

The paper is organized as follows. It begins with the conceptual framework on which a review of the international literature on reading is based. The context follows, then the research design and methodology are described after which the data are discussed with recommendations drawn.

The Framework

The study was framed on the concept of competence in reference to knowledge and understanding of the subject matter to be taught and its practice, where practice is seen to be central to good teaching. The framework is based on the understanding that good practice is a complex process which requires a great deal of different knowledge other than un-reflected

application of techniques. This is derived from Shulman's (1987) conception that while content knowledge is important, teaching also requires pedagogic knowledge which concerns how to engage with learners and how to manage a classroom. However, in order for these two kinds of knowledge to guide actual practice, according to him, a third category is crucial, namely pedagogical content knowledge, which is, knowing how to represent and formulate the subject matter, in order to make it comprehensible to students. The study therefore investigated the different kinds of knowledge that NQTs have and their understandings of how this is applied to construct classroom practice. In this regard, the literature on what constitutes beginning reading and how to represent and formulate them to beginners was examined and used to guide the investigation.

What is reading?

Reading has been defined to include the expression of several behaviours such as reading real words in isolation or in context, reading pseudo words that can be pronounced but have no meaning, reading text aloud or silently, and demonstrating comprehension of text that is read silently or orally (National Institute of Child Health & Human Development (NICHD), 2000). Reading is done with the aim of generating meaning from a text. To achieve this, readers have to decode graphemes (lines and shapes which represent spoken sounds) into words, sentences and then continuous text and attach meaning to them. It is only when the reader achieves this aim that the cognitive work involved in the decoding exercise becomes worthwhile (Meek, 1994; Ehri, 2002).

The US-focused National Reading Panel lists five key reading skills that children need to be able to read:

1. Phonological awareness (discriminating different spoken sounds in words)
2. Phonics (sound to letter relationship)
3. Fluency (ability to read orally aloud or silently with speed, accuracy, and proper expression and contributing to comprehension)
4. Vocabulary (acquiring sight vocabulary, inferring new words)
5. Comprehension (meaning-making) (NICHD, 2000)

According to the report, while decoding is learnt first, these five reading elements are coordinated simultaneously, working together in a causal relationship or 'bootstrapping'. In this sense, the growth of one area supports the others (Stanovich, 1986). Therefore, each of these elements must be exposed to the beginning reader.

Phonological awareness, the first item in the list involves the introduction of phonics instruction, which stresses the acquisition of letter-sound correspondences and their use in reading and spelling. Phonics instruction aims at helping beginning readers to understand how letters are linked to sounds

(phonemes) to form letter-sound correspondences and spelling patterns, and to help them learn how to apply this knowledge in their reading (Trudell & Schroeder, 2007). Phonological awareness is developed in a print-rich environment, and also through oral proficiency. This then leads to letter/sound identification and a build-up to syllables and words/vocabulary – or vice versa.

The ability to read fluently and pronounce and infer new vocabulary in reading is as important as the ability to make sense of text. Text comprehension is the ability to interact cognitively with continuous text, a sentence or a short story to draw out meaning and create mental models of the text. It is believed that to achieve this, one requires a sight vocabulary of 95 percent of the words on the page, fluency in reading aloud or silently and knowledge of syntax learnt from the grammar of the spoken language (Ehri, 2002; Malatesha, 2005). Cain (2011) describes the process as text integration, local and global coherence; comprehension monitoring; and knowledge of text structure, which being essential, can be taught to very young children through oral storytelling and picture books as well as continuous text.

Text comprehension is also believed to be enhanced when readers are made to actively relate the ideas represented in print to their own knowledge and experiences, and construct mental representations in memory (NICHD, 2000). This is expected to be done through explicit instruction in the application of seven comprehension strategies, which have been shown to be highly effective (Center for Education, 2010), namely: (1) summarising what is read (2) generating questions of the text (3) using diagrams, maps or pictures to understand the text (4) predicting what will happen (5) clarifying what has happened (6) drawing inferences and (7) Self-regulatory or monitoring. Research suggests that the use of a multiple strategy provides the best instruction.

What do teachers need to know to teach reading?

To help children to demonstrate reading ability, research recommends that teachers should have a firm grasp of the content presented in text, and more importantly, have substantial knowledge of and use different strategies to make children read (NICHD, 2000). It is also recommended that teachers must know which of those strategies are most effective for different children. In addition, there is theoretical knowledge of reading development, how to create and manage a print and language rich classroom and to understand the different cultural contexts in which languages are used and to diagnose the proficiencies of learners (Commeyras & Inyega, 2005; Moats, 2009; CFE, 2010).

What this means is that, acquisition of subject matter and pedagogical content knowledge must be key components of any reading teacher preparation programme (Risko et al., 2008). All of this demands a substantial knowledge base for beginner teachers of reading, and this is not easily acquired just theoretically or practically. Learning to teach as with learning to talk and to read is situated learning. Therefore, training needs to be grounded in classroom practice (Shulman, 1987; Risko et al., 2008; CFE, 2010).

Pedagogies for teaching reading

From what is derived in the literature on reading, it can be seen that beginning readers need to learn the sounds and structure of spoken words i.e. phonics, and to learn to connect parts of the text through systematic, explicit instruction focused on actual text in tandem with word meaning – or comprehension. A focus on only one reading skill over and above another will weaken reading development (NICHHD, 2000). In the first two grades there is overlap with pre-reading skills such as oral language development, alphabetic knowledge, rapid automatic naming of letters and pictures and print concept, especially if some or most children have not been to pre-school or nursery (Chabbott, 2006; Lonigan & Shanahan, 2006). In a synthetic approach to phonics, children know how to build up to the word, syllable and sentence level. An analytic or global approach can also be used, starting from a complete text such as a short story or word broken down into its constituents. Each approach can use flash cards, interactive games, rhymes, and songs, although a mixed approach works best.

Comprehension needs to be taught via an interactive, dialogic approach through stories and rhymes - real texts visible to all students - read aloud many times by the teacher or student for fluency (Dombey, 2011). Strategies taught explicitly by the teacher's questioning and modelling include summarisation, using diagrams or drawing pictures of text meaning, prediction, clarification and drawing inferences, learnt best and early on through oral storytelling and pictures with word-attack skills (Cain & Oakhill, 1999; NICHHD, 2000; Bentolila & Germain, 2005; Trudell & Schroeder, 2007).

Thus, what we learn from the literature about what reading is, what pedagogies should be employed to teach it effectively, provides the frame for investigating what NQTs know, understand and apply in their reading lessons.

The Context

In Ghana, teachers for basic schools (from kindergarten to junior high school) are trained mainly in three-year post-secondary diploma-awarding Colleges of Education (CoEs). All the colleges run residential programmes in which trainees spend the first two years in college to study subject matter and methodology courses, and get attached to schools to have a year-long teaching practice. Some CoEs are mandated to train generalist teachers whilst others run specialist programmes in Mathematics/Science, Technical Skills, Early Childhood Education and French. Currently, there are 41 CoEs: 38 publicly-funded and three privately-run, with at least one located in each administrative/educational region of the country. Seven of the 38 public CoEs train female teachers only, one is an all-male technical-oriented college, and the remaining 30 are co-educational.

Research Methodology

A mixed method approach was followed, involving questionnaires, observation of lessons of both teacher educators and NQTs and forensic interviews. Trainees undergoing one year practicum after their two years residential course work in college were considered newly qualified. Out of the 38 public colleges, four (4) were sampled by using the geographical zones of the country: the northern, middle and southern zones. The southern and middle zones were used for the study, with one rural and one urban college from each zone. To facilitate the sampling process, criteria were set to define colleges as to whether they were rural or urban. Rural colleges were those located in villages or small towns where:

- the dominant occupation is small-scale farming or fishing
- there are few white-collar jobs or none at all
- there is poor road network
- there is lack of social amenities
- there are no vibrant commercial activities, etc.

Also, sampling was done as far as possible to include colleges with both generalist and specialist programmes. In each of the four sampled colleges, two English teacher educators (making a total of eight) were sampled for observation interview.

The school data was collected from two basic schools each in rural, urban and peri-urban areas totalling 23, which were purposively sampled from the four sampled colleges' districts, where the NQTs had been trained. All NQTs (totalling 156) who had ever taught reading in any of the lower primary classes (primary 1-3) were selected to respond to questionnaires. Of that number, 36 NQTs were sampled for lesson observation and forensic interviews.

Instruments

The quantitative data derived from a questionnaire developed from one that had been used successfully in other work (Akyeampong 2003b) with teacher-trainees towards the end of their course. It demanded relatively closed responses as well as straightforward questions. It also included a series of scenarios that are likely to be encountered in teaching in early grades. Respondents were required to select responses to the scenarios which describe the most appropriate approach to teaching a particular concept or skill in reading. These responses then gave access to NQTs' pedagogical content knowledge and likely pedagogical practice in reading.

Qualitative data was obtained from an observation instrument which looked for the use of the following, among others: (a) the method for teaching reading, (b) procedure of the lessons in terms of the sequence of learning of content and progression (c) teacher-led teaching/explanation (d) use of TLMs and (e) students' engagement in group/individual work. Finally, a semi-structured interview schedule was used to ask questions around details of

practice, sequencing of tasks, and use of resources, progression within the lesson and onwards towards the next. Again, this form of interview was calculated to give a greater understanding of what teacher educators and NQTs actually know and do rather than directly inferring from observation.

Procedure for Data Collection

This was a collaborative research project which involved Principal Investigators (PIs) from the University of Sussex in the United Kingdom and lead researchers in each of the six countries with their team of researchers. The lead researchers with the PIs designed the research instruments at Sussex and subsequently led their teams in discussion and agreement on the instruments, after which data collection, preparation and analysis were carried out. The Sussex PIs worked with the teams in-country on three occasions with joint data analysis and report drafting.

The instruments were piloted in one CoE and two schools with similar characteristics as the sampled sites, after which some modifications were made, mainly in respect of changes in terminologies to reflect the Ghanaian context. Afterwards, appointments were made with college and school heads, teacher educators and NQTs for visits and data collection. On the scheduled dates, questionnaires were administered first to the 156 NQTs at once by a team of researchers and retrieved before lesson observation sessions were scheduled.

In the colleges, eight English methodology lessons were observed and videoed after which the eight tutors were interviewed. In the schools, thirty-six lessons were observed and videoed with two lessons each day before the forensic interviews were conducted. It must be noted however that in the lesson observations, the lessons only served as a platform for interrogation of how the teacher educators taught, and how the NQTs had learnt to teach rather than seeing them as typical of their teaching. The piloting and data collection were completed between March and June 2010.

Data Analysis

Analysis involved building up a detailed description of the knowledge, understandings and practices of teacher educators and NQTs and using these to compare what is occurring in the field with what is intended. The qualitative data interviews were transcribed and imported into the Nvivo 8 qualitative data analysis software along with other appropriate texts such as summaries of observations. Data were coded and sorted using a system of hierarchical categories, most centrally those of knowledge, understanding and practice. This enabled patterns to be identified and queries to be run. The quantitative data were analyzed using

STATA software, which enabled the project to work with a large data set and to provide relevant tables and graphs. It was then possible to make relevant interpretations from descriptive statistical methods with some use of inferential statistics such as the calculation of Pearson's Chi² to test for independence.

Data presentation and analysis

Teacher educators' perspectives on training

All the eight teacher educators were male. Their teaching experiences ranged from 3 to 20 years. Six had received training in the methods of teaching English language but felt the training was generally inadequate as far as teaching in the college was concerned. For those who had specialised in English in their first degree, very little of the degree programme had focused on learning to teach English, or more generally, languages. These notwithstanding, they complained about difficulties in accessing relevant teaching and learning materials and poor library facilities as hampering their effectiveness as these two comments indicate:

“... Books are difficult to come by. When I was asked to go and teach these topics I was fumbling. I didn't know where to go and begin.

“You don't get the references and that makes teaching methodology very difficult”.

They had developed their knowledge and skills in training teachers to teach reading from three areas: (a) their own experience after years of practice, (b) reading other sources of information about teaching (mainly teaching pamphlets prepared by more experienced colleagues), and (c) from insights gained as a result of consultations with more experienced colleagues.

Generally, tutors felt that the Initial Teacher Education (ITE) programme was examination-oriented, and responsible for encouraging trainees' negative attitudes towards practical learning activities in the college and created demand for 'teaching pamphlets'. Furthermore, they pointed out that the poor supply of training materials had encouraged the production of un-refereed tutor notes which focused on providing definitions and descriptions of terms, listing and providing model answers to past examination questions. In addition they opined that because trainees are not exposed to typical examples of teaching and learning activities that teachers and pupils are expected to be engaged in to foster reading competence, much of their knowledge and understanding of reading was theoretical.

Personal data of NQTs

There were more males than females in all the schools where data were collected. Overall, 118 (76%) males and 38 (24%) females participated in the study. Majority of them (120: 76.92%) were between the ages of 21 and 25 with 21% between 26 and 30 years, which can be understood as most trainees enter the teacher training after senior high school. Few of them (28: 18%) had had experience in teaching

lower primary classes before entering teacher training. It must be noted that the NQTs claim they mostly (79%) developed their best understanding of teaching lower primary reading from the teacher training college.

Knowledge and understanding of reading

What reading means to teacher educators and NQTs

The NQTs expressed their understanding of reading in almost the same way as their tutors did. They both expressed their understanding of reading in three main ways. For the first group, reading meant the ability to decode print, with emphasis on word recognition. For the second group, reading meant the ability to demonstrate comprehension of print, especially through the explanation of key words or the main ideas in the passage (either in English or the local language). Thirdly, reading was described as the ability to answer questions on the passage.

In their explanation, the teacher educators appeared to place more emphasis on the alphabetic, vocabulary and phonological awareness/phonics elements of reading and not on the other two (i.e. fluency and text comprehension). The NQTs were however silent on this. Again, fluency was missing in their understanding of reading, although we observed that some of the NQTs' lessons had elements of fluency. Nevertheless, their emphasis on vocabulary and comprehension was similar to what their tutors expressed.

Generally, the NQTs knowledge and understanding of reading reflected two (vocabulary and comprehension) out of the five reading skills (phonological awareness, phonics and fluency included) espoused by the National Reading Panel (NICHHD, 2000).

Perspectives on how reading should be taught: methods for teaching reading

Information from the NQTs' questionnaire and forensic interviews from both the teacher educators and NQTs were used to describe their knowledge and understanding of how reading should be taught. In the questionnaire, when asked about the best way to help children in early grades to read, the NQTs rated two main methods for teaching reading: a variant of the look-and-say method and phonics. Interestingly, they placed more emphasis on the look-and-say, (also known as the 'rapid automatic naming of words') which involves pupils' repetition of words after the teacher (97%), followed by the phonic (or syllabic) method (94%). They explained that it was the most suitable for teaching reading at the lower primary. It must be noted that the variant of the look-and-say approach which was rated highly, has the tendency to encourage rote learning and drilling without particular focus on teaching the shape of whole words or individual sounds, though it is needed to enhance visual and phonological awareness.

In the interviews, rather surprisingly, only one of the NQTs (out of 36) could describe clearly all the methods for teaching reading which the teacher educators mentioned, which are also stated in the college syllabus. When asked, the methods they mentioned were the question and answer, discussion, activity method, picture method, role-play, pupil-centred method, etc. The approaches the syllabus and teacher educators mentioned were (i) the phonics, (ii) the 'look-and-say' (iii) the syllabic and (iv) a combination of the methods. Some of the NQTs admitted that though they were taught these methods at college, they had forgotten about them.

Stages of the reading lesson

Generally, all the NQTs demonstrated their knowledge of the procedure for teaching reading by describing three sequential steps, exactly what their tutors pointed out. These were (i) the preliminary, (ii) reading and (iii) the post-reading stages. They also described similar activities that should be used in each stage. Activities for the first stage were revision of Relevant Previous Knowledge (RPK), teaching and drilling of key words, prediction activities through picture description or the title of the text.

At the reading stage, the activities they listed included the teacher's model reading, model reading by a good reader, silent reading and reading aloud (chorus/recitation) by the whole class, in rows and individually, irrespective of the class. The purpose of the reading aloud and silent reading exercises was, according to them, to develop fluency. For reading aloud, both the teacher educators and NQTs explained that it was helpful for pupils with specific pronunciation difficulties to learn from their colleagues. This explanation seemed oblivious to whether the teacher heard them read correctly or not.

According to them, the last stage of the lesson was for checking comprehension. The only comprehension strategy they seemed to know and talked about, however was answering the teacher's questions based on the text. The teacher educators also mentioned oral or written questions or blank-filling exercises on vocabulary work as other post-reading activities, depending on the pupils' language/writing ability.

Teacher educators' and NQTs' teaching practices

Methods employed in reading lessons

Although the teacher educators appeared to have good knowledge about reading and teaching it, their practice tended to gravitate towards the 'look-and-say' approach and was transmission-based. For example, some simply explained to trainees the importance of showing pupils how to pronounce words without demonstrating and discussing the possible results and unintended consequences and how one might address them. Their lesson demonstrations did not address the possibility of difficulties that some children might have in learning to read and what actions/steps teachers would have to take to overcome difficulties.

Similarly, majority of the NQTs preferred the look-and-say method. Indeed, some teacher educators indicated that that is the method teachers are likely to use:

Most people (teachers) may use the look-and-say but even the look-and-say, if you are also a lazy teacher you may find it very difficult because they need to prepare a lot.

In the schools, some NQTs acknowledged that it was the most commonly used method:

It is more used than this phonic one; even I have not seen the use of this phonic method here.

When I was in the primary school, the only method the teacher used was look-and-say.

Those who used this approach mostly tended to spend a lot of time on vocabulary drills and reading aloud after the teacher. They also devoted much time to explaining key words, usually through pictures and in the local language, asking for pupils' explanation of the key words or passage (through the local language) and forming sentences with them. A few others used demonstration and word associations such as synonyms or antonyms. In such lessons, more time was devoted to the last stage of the lesson where pupils were made to answer comprehension questions. Very few NQTs (e.g. only one out of 9 observed in one college district) used the phonic method and combined the two methods.

In the NQTs' 'look-and-say' lessons, the teachers showed the word, sentence or reading passage either on the chalkboard or cardboard, pronounced or read them out and asked pupils to repeat several times, quite mindlessly. In effect, the teacher 'trains the pupil to look at the graphic representation (form) of print and then say the word' (GES, 204: 193) without breaking it into smaller bits. In actual fact, the Ghana Education Service (GES, 2004) textbook on Methods of Teaching English for the UTDBE programme suggests that pupils should first be introduced to formal reading through 'the Look-and-Say Method' (p. 203) because among other things, it makes reading easier for pupils with the teacher's model.

The GES textbook also acknowledges that with the 'look-and-say' method, pupils cannot read new lessons by themselves and as such, cannot become independent readers. It therefore recommends that the phonic method be used to complement and overcome the shortcomings of the 'look-and-say' method. Nevertheless, NQTs stuck to 'look-and-say, even when their pupils could not recognise words and read after a number of repeated drills. In one lesson in primary 3 for example, when pupils had difficulty reading, the teacher still continued with the chorus reading/recitation of the text throughout the period. At the end, only 3 (probably the best) of the 69 pupils in the class who were invited all the time to read could read. When asked why she thought the children could not read, she located the problem with the children and not with her method:

Not most of them can read. I think you observed it. They cannot read so unless I use the reading aloud. I read and they read after me. I allow someone to read and they read after the person. They are very slow learners and if you don't take care, you wouldn't mind them. Look at the way they were reading. If it wasn't you here, I will use the cane.

Her reference to the cane as a way to motivate progress in reading is revealing, but it also showed a lack of knowledge about the complexities of teaching and learning a foreign language, which is a qualitatively more challenging learning experience than learning to read in one's first language (Alidou et al., 2006; Opoku-Amankwa 2009). It also showed a lack of deep reflection on why her approach was not working and what alternatives would provide a solution. According to this teacher, the 'look-and-say' method was the most familiar and one used by long-serving teachers in her school, and although she claimed knowledge of phonics she had never used it in practice.

In many examples, sometimes pupils were unable to read fluently and confidently which teachers interpreted not as a failure of their methods, but a 'problem' with the child. There were several instances where pupils were unable to identify words on flash cards after the teacher had drilled and asked them to match word cards with words on the board and read through all the key words in the passage fluently.

Only one teacher used the phonic method in combination with the look-and-say to teach vocabulary to class 2, where after introducing the word-attack strategy, many pupils used the phonological awareness to attempt reading the text. Few lessons employed word-attack strategies.

In the interviews, the NQTs singled out the phonics approach to teaching as the most challenging and explained that this was because colleges did not give this as much attention, as they did with other methods.

The pronunciation of the sounds and the letters is very difficult. You can see some letters having different sounds but when you are pronouncing them it will be also different. So that confuses you the teacher. Even in college it was difficult and yet they did not have enough lessons on it.

The importance of both the phonological and word identification approach in early reading has been highlighted in the literature (Bentolila & Germain, 2005; Trudell & Schroeder, 2007), especially as a remediation strategy for struggling readers of a second language (Slavin et al., 2009). In his comprehensive review of studies that investigate how children learn to read in grade 1 (in the US), Stanovich (1986) found that phonemic awareness (and phonics blending) is the most important predictor of early reading ability, more than vocabulary and oral comprehension. Indeed, Slavin et al. (2009) reveal that in the UK and US, phonics instruction constitutes an important component of the

early reading programme, apparently because of the evidence in the literature that explicit, systematic phonics instruction has been used widely over a long period of time with positive results, and has proven effective with children of different ages, abilities, and socio-economic backgrounds (NICHH, 2000).

Also, in multilingual African classrooms, phonics instruction is recommended in the early stages of literacy acquisition, especially when the regularity of phoneme-grapheme correspondence helps the reader to recognise or decode new words (Trudell & Schroeder, 2007). It is rather worrying that although the Ghanaian teacher educators and teachers in this study knew about the role of phonics and phonemes, in practice, they did not consider it even as a remediation strategy. It seems it is not given the focused attention it deserves in training, leading to difficulties in actually applying the method especially in distinguishing certain sounds (e.g. /k/ and /c/) and linking them to pronunciation.

Strategies used to teach reading

In practice, all the teacher educators and NQTs adhered rigidly to the three stages of lesson delivery they talked about: the preliminary reading stage, the reading and post-reading stages with their activities. Most of the NQTs tried to get this sequence right: using pictures and/or simple explanation to teach vocabulary and asking children to predict the meaning of the text using pictures.

Very few prepared pictures on cardboards and used sentence cards together with word cards; some used none at all. The word cards were however, ineffectively used, without allowing the pupils to interact with them. They simply flashed them whilst they pronounced the words, and put them aside without going back to them throughout the rest of the lesson. Also in a few cases (five out of thirty-six), teachers engaged the children in activities by demonstrating how to join cut-out word cards to form sentences, after which the pupils took turns to do the same and to read them aloud to the class after the teacher's model.

Overall, most lessons adopted the whole-class chorus reading approach where there was much emphasis on rote reading, even though it is known to prevent vocabulary recognition, producing what Malatesha (2005) calls the 'Matthew' effect, whereby students with better vocabulary knowledge read more often and in the process improve their comprehension while those with poor vocabulary knowledge read less. Although they believed that group reading enabled good readers to help the weak and shy ones to read, few teachers applied this in their lessons, claiming it was time-consuming.

At the last stage of reading lessons, the teacher educators and the NQTs used two (questions and in a few instances, summary/explanation of the text) out of the seven strategies which are known to help pupils make sense of a text (comprehension strategies). This is contrary to what research suggests about

the use of multiple strategies (e.g. summarising, generating questions of the text, using diagrams, maps and pictures, etc.) to enhance text comprehension (NICHHD, 2000).

On the whole, NQTs over-relied on fixed teaching procedures as their main concern was to get the procedures right and seemed less aware or concerned about whether it actually helped pupils develop skills in reading. In the process, they employed knowledge transmission (e.g. teaching new words, reading to the hearing of the pupils, explaining the passage to them, etc.), similar to what the teacher educators were observed doing, and failed to help pupils who were clearly having difficulties with reading. They could not also use a range of techniques in their lessons. It fits Ehri's (2002) description of teachers who often follow procedures set down in manuals rather than having a wide knowledge of varying processes and skills that readers need to acquire in both theory and practice.

Figure 1: Example of good practice

Teacher KWATe1 taught 'Matching word-cards with words on a sentence card' to 22 primary 1 pupils with the objective that they would be able to read sentences aloud and match words on flash cards with words on sentence cards. After taking the children through a picture description, she used the 'look-and-say' method to teach vocabulary. Then she used them in sentences on the board and on sentence cards which she read for the pupils to repeat and then read aloud individually.

What was peculiar about her lesson was that while the reading aloud was going on, she identified pupils with pronunciation and word-recognition difficulties and provided a remedial activity for them in the course of the lesson. She did this by guiding them through an incidental instruction in phonological awareness. That is, she taught the initial sound /p/ in pin; the end-sound in 'pin' and 'pig', the sounds /i/ and /n/. She then blended them to read 'in', pin, etc. After this, she drilled them repeatedly by pointing randomly at words which were easy and difficult for the pupils and asked the pupils to read them individually, in groups and as a whole class. At the end of the reading, the teacher stuck sentence cards on the board and asked pupils to pick word cards to match them to words in the sentences.

The data obtained from the interviews emphasize the fact that once they

emphasizes the fact that once they

practice of teaching reading. For example, their knowledge of the methods of teaching reading was mostly the 'look-and-say'; few could describe the phonic method, a combination of the approaches or how to use them in real lessons, and none demonstrated any knowledge about the global approach to teaching reading.

It was evident that the NQTs lacked understanding about the fact that phonics instruction plays a more important role in helping children from poorer backgrounds to develop early reading ability than reliance on the whole word (i.e. look-and-say) approach, which Abadzi (2006) points out 'may be effective for middle-class English speaking children, or children from rich urban backgrounds, whose parents can support their efforts' (p 45). Similarly, it is highly recommended that teachers must have substantial knowledge of and use different strategies such as flash cards, interactive games, rhymes and

songs to make children read (NICHD, 2000), and know which of those strategies are most effective for different children.

For failing to employ a mix of different methods and strategies, the NQTs demonstrated a lack of knowledge and understanding of how to apply a variety of teaching strategies to meet the needs of pupils from different socio-economic backgrounds, and about the fact that a single approach does not yield results for all children and indeed, all contexts. The teachers therefore, presented a simplistic understanding that (superficial) knowledge of some methods, a laid down set of teaching procedures, teaching and learning materials and a convenient selection of certain strategies was all they needed to teach reading effectively. Such simplistic understandings underestimate the challenges and difficulties of teaching reading.

It was also noted that their knowledge and understanding of teaching early grade reading rarely reflected what they actually did in the classrooms, and none of what they exhibited knowledge about was applied to any great effect. In seeking to get the teaching sequence right, they over-emphasised procedural knowledge, and although they knew for example that TLMs are central to developing conceptual understanding, in practice, they presented them ritualistically and un-problematically. There was very little attempt to explore how TLMs contribute to substantive understanding of the concepts they are meant to represent.

The transmission method which puts the teacher at the centre of the lesson, and which was commonly employed by the teacher educators was the NQTs' main mode of lesson delivery: teaching new words, using the TLMs, reading to the hearing of the pupils, explaining the passage to them, etc. Teaching of reading was mostly from the perspective of the teacher (how to 'deliver' well) and not the child, such that the pupils' challenges with reading (probably as a result of the transmission and recitation methods) were interpreted as general problems with children and not about the teaching methods. Obviously, the NQTs lacked the practice of reflection, a critical analysis of why approaches did not yield results, and the ability to adapt teaching to suit actual situations.

It is understandable that fluency can be developed through real texts visible to all students, read aloud many times by the teacher or student (Dombey, 2011). Nevertheless, that is just one of the five reading elements that should be coordinated simultaneously, so that the growth of one area supports the others (Stanovich, 1986). Therefore, a focus on only one reading skill over and above another will weaken reading development (NICHD, 2000). Given this understanding, there is the tendency that the NQTs' over emphasis on reading aloud which ended up being a recitation without word recognition, and their use of only one comprehension strategy (asking questions on the text) will with time, weaken the reading development of their early graders.

Evidently, possessing theoretical and/or practical knowledge about language teaching is in itself, no guarantee that one will necessarily be able to make children read. Getting children to read an unfamiliar language is a complex task, and its complexities are well articulated in the literature (Alidou *et al.*, 2006; Trudell & Schroeder, 2007; Opoku-Amankwa, 2009). In this study, it is observable that the ITE programme bears the biggest responsibility for producing teachers who are capable of translating knowledge into effective practice well enough to make children literate.

Recommendations

The gaps in NQTs' knowledge, understanding and teaching of reading have implications for the ITE programme. It is evident that certain aspects of early grade reading lessons need to be given more attention in the ITE programme. For example it should make trainees understand better how reading for meaning is as important as decoding in early grade teaching. They should also know and use a range of methods for teaching decoding such as analytical and synthetic phonics, syllabic, syntactic, whole word, text or visual approaches. The ITE programme should expose trainees to a range of approaches to comprehension like oral storytelling, getting pupils to ask questions about the text or produce summaries, drawing pictures or diagrams and relating a text to pupils' own experience (NICHHD, 2000). It is also important to increase trainees' awareness of expectations in the primary school curriculum for young children's reading in the early grades, for instance, that pupils should be able to read a short story or paragraph fluently and with understanding by the end of grade three.

It is suggested that the implementation of all the components of the ITE programme should be monitored to ensure that it places more emphasis on effective study of practice. In such a practice-based curriculum, college lessons would be linked to the practical requirements of primary school teaching, thus, exposing trainees to the actual primary school curriculum and school context. This should ensure the critical study of the practices of teachers as experienced during practicum, visits to schools or through videos of lessons. Also, reading behaviours of pupils in real schools and examples of their work would help to identify their conceptions and misconceptions. These can then be brought into the college methodology classrooms for analysis. This way, trainees' existing knowledge and beliefs about reading can be challenged and altered through explicit examples, tutor modelling the pedagogic strategies and opportunities for extensive and guided practice to develop pedagogical content knowledge.

The practicum as a component of the ITE programme presents a big challenge. In many schools, the practicum period is the time the experienced teachers give themselves a break, leaving the trainees without mentors. This practice must be checked. Trainees should be supported and mentored by experienced teachers to enable them to observe and use good practices. Experienced teachers and mentors should therefore be trained supported by college tutors to provide instructional support to meet this need and to demonstrate good examples to trainee teachers.

Mentors should support trainees in specific ways that will promote children's reading: (a) how to monitor children's reading to find out about their fluency in reading, (b) how to identify those who need

assistance and how to use a variety of strategies or differentiated tasks to suit different learners and contexts (c) introduce new methodologies that move away from rote learning/reading and teacher-centred procedures to activity, discovery and child-centred procedures, (d) demonstrate how to use phonics instruction and other word-attack strategies to develop children's skill of independent reading.

The findings of the study also point to the knowledge deficit of college tutors. This is partly based on the fact that in the Ghanaian context, many teacher educators have been trained to teach in secondary schools and consequently, lack knowledge of primary school teaching methodology. Thus, there is need to retrain them on specific areas of reading identified in this study, and on current teaching methodologies. This should enable them to understand the school context well enough to facilitate trainees' experience of this, and to be able to support mentors to play their roles effectively. The ITE programme is part of the problem of early grade pupils' reading difficulty, and the search for its solution must begin from there.

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MAXIMIZING MINORITIES IN TEACHER EDUCATION: ROOM FOR THE SPECIAL EDUCATIONAL NEEDS LEARNER THROUGH INCLUSIVE EDUCATION

Introductory:

There is no gainsaying the fact that in initial teacher training, there is the need to encourage people from marginalized groups or *minorities* to gain admission and be retained in the teaching profession. This has many advantages, one of which is that it provides many a learning community/group with role models to look up to in attempts at climbing the education ladder. This is in no wise quite an important feat for minorities to surmount; be they marginalized with respect to they coming from particular ethnic groups, being children living in poverty, being people with disabilities, children from remote areas or they being marginalized because they are either men and/or women (depending on the socio-cultural definitions of gender in a given community). Our main target in this discussion is the exceptional or disabled child. In current academic discourse exceptional and disabled children are both referred to as Special Needs Children. Special Needs Children are thus “children with developmental disabilities as well as those who are exceptionally able. Such children differ from the average child, for instance, in (a) mental characteristics (b) behavior and emotional development (c) physical characteristics (d) sensory abilities and communication abilities to the extent that they require a *modification* of school practices and resources in order to develop to their fullest capabilities.” (Kirk, Gallagher, Anastasiow, & Coleman, 2006,). When *disabled* students are educated along their *abled-bodied* peers, the practice connotes what is primarily termed Inclusive Education. The underlying principle that informs Inclusive Education is that:

...schools should accommodate all children regardless of their physical, intellectual, social, emotional, linguistic, or other conditions. This should include disabled and gifted children, street and working

children from nomadic populations, children from linguistic, ethnic, or cultural minorities and children from other disadvantaged or marginalized areas or groups.

- 1994 UNESCO Framework for Action on Special Needs.

Inclusion is concerned with providing appropriate responses to the broad spectrum of learning needs in formal and non-formal educational settings. Rather than being a marginal issue on how some learners can be integrated in mainstream education, inclusive education is an approach that looks into how to transform education systems and other learning environments in order to respond to the diversity of learners. It aims towards enabling teachers and learners both to feel comfortable with diversity and to see it as a challenge and enrichment of the learning environment, rather than a problem. Inclusion emphasizes providing opportunities for equal participation of persons with disabilities (physical, social and/or emotional) whenever possible into general education, but leaves open the possibility of personal choice and options for special assistance and facilities for those who need it.

[Source: UNESCO, 2005, p. 15].

Consequently, this submission is a report on an investigation into possibilities of promoting the *thinking* and *practice* associated with Inclusive Education at the initial teacher training level in Ghana, with a focus on how that could possibly help in the provision of trainee teachers with practical implications of student/pupil diversity for teaching and learning in 'ordinary classrooms'.

The Method:

This is an exploratory exercise in which educational resources were borrowed from the UNESCO Cluster Office in Accra over a period of two weeks between April and May, 2007. By way of elaboration, an exploratory research allows a researcher to basically familiarize him/herself with an issue at hand. Here the object was to find gather educational materials/resources from the UNESCO Cluster Office at Accra (#32 Nortei Ababio Street) that could lend themselves to creating further awareness on how to teach/handle Special Educational Needs pupils. The materials gathered were:

Literature:

- (1) Open File for Inclusive Education.
- (2) Educating Students with High Ability.
- (3) Deafness-A Guide for Parents, Teachers and Community Workers.
- (4) Understanding and Responding to Special Needs Children.
- (5) Welcoming Schools pamphlet.
- (6) Special Needs in the Classroom: Teacher Education Guide.

Motion Picture:

- a. Welcoming Schools Video.
- b. Information Video.
- c. Training Video.
- d. Inclusive Video.

The task of reviewing the above mentioned thus provided the researcher with further insights into Inclusive Education programmes and activities that could be adopted the teacher training level in Ghana which could hopefully help--all and sundry--to tide over many a marginalization fever that exists in teaching –learning endeavours in varying circumstances in Ghana as a result of the disability question.

In addition, the researcher had an opportunity of prying into the Curriculum for the 3-Year Diploma in Basic Education programme currently run by the Teacher Training Colleges (now Colleges of Education) in Ghana. The said curriculum is often drafted by the Institute of Education, University of Cape Coast in close collaboration with the Teacher Education Division of the Ghana Education Service (GES). In the

main, this aim of this student exploration is an attempt of trying to figure out the place and space for Special Needs Education--and for that matter Inclusive Education--in the education of professional teachers across the country.

Results:

The findings I gathered from various authorities in the resource materials mentioned above are discussed below:

Firstly, in the UNESCO Open File on Inclusive Education: Support Materials for Managers and Administrators, three justifications were given for Inclusive Education, viz:

(i) There is an educational justification. The requirement for inclusive schools to educate all children together means that schools have to develop ways of teaching which respond to individual differences which can therefore be of benefit to all children.

(ii) There is a social justification. Meaning, inclusive schools have to change attitudes to difference by educating all children together; thereby forming the basis for a just and a non-discriminatory society which consequently encourages people to live together in peace.

(iii) There is an economic justification. Inclusive schooling has proved to be less costly to establish and maintain as compared to a system of a complex school system of different types of schools specializing in the education of specific groups of Children with Special Needs.

Furthermore, (Fianu, n.d.) discusses the Components of Inclusive Education as a heterogeneous grouping, sharing a sense of belongingness, shared activities, unbounded learning environments and a balanced educational experience. This I would call a holistic education justification.

In sum, the following carryover effects were observed as having a greater tendency of accruing to student-teachers in general when they are roped into Inclusive Education pedagogy.

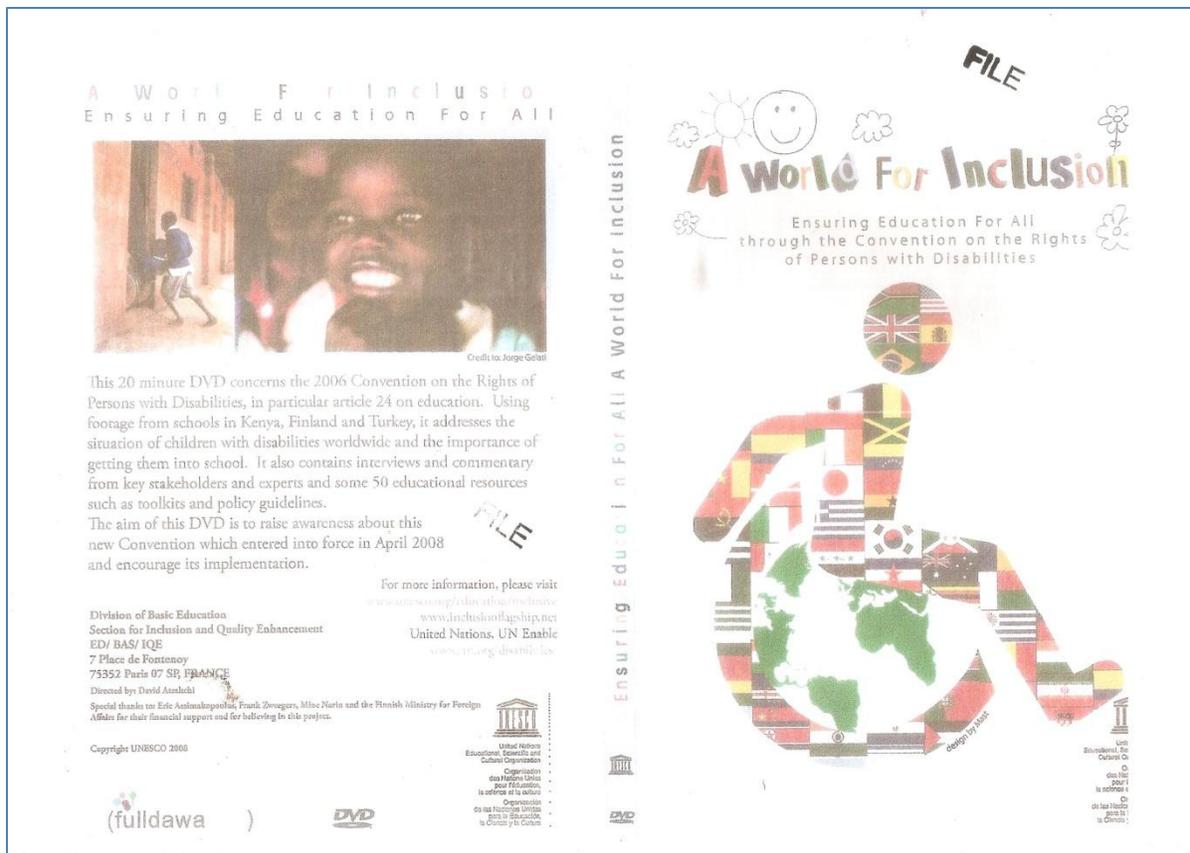
The Hopeful Implications of the Inclusive Model Experiment to Teacher-Trainees after their Training

- Teachers will ensure the physical *access* of all pupils.
- Teachers will ensure the development of inclusive school policies.
- Supportive environments will be developed.
- Teachers will work together in teams and perhaps see themselves as learners, too.
- Teachers may become very flexible and innovative.
- Advance preparations for lessons will undoubtedly become key.
- Teachers would sharpen their skills on the use of available technologies in teaching.
- Partnerships would be developed between teachers and other key specialists involved in the education of the Special Needs Child; this could be very beneficial, indeed, for the entire teaching-learning process in the long-run.
- Hopefully, clear and open teaching objectives would be drafted for all teaching experiences.
- Curriculum *adjustment* to suit the individual needs of students at a given time would become key as the teacher plans for the whole class.
- Last, but in no wise the least, teachers will imbibe the practice of using alternative teaching methods in their teaching in the classroom.

The key ideas gathered from the above-mentioned points are *ADVANCE PREPARATION*, *CLEAR-CUT TEACHING OBJECTIVES* and *USE OF ALTERNATIVE TEACHING APPROACHES* (Alternative teaching approaches similar to the “Principle of Multiple-Embodiment” borrowed from the discipline of Mathematics). The multiple embodiment principle posits that by varying the contexts, situations and frames in which isomorphic structures occur, the learner is presented opportunities through which structural (conceptual) mathematical similarities can be abstracted.

[Source: <http://subs.emis.de/journals/ZDM/zdm053a18.pdf>]

Talking about embodiment, I am pleased to state that part of my results/findings are embodied in the 20-minute motion picture entitled: “A WORLD FOR INCLUSION: Ensuring Education for All through the Convention on the Rights of Persons with Disabilities” produced by UNESCO in 2008. I will at this juncture crave your indulgence for you to kindly watch this movie with me.



Thank you very much for going to ‘the movies’ with me, I hope some of the issues we might have gathered therein may come to bear when we get into the Discussion realms of this study. Meanwhile, I am happy to report that from the *curriculum* angle, it might interesting for this kind audience to hear that, the course “Educating the Individual with Special Needs” (EPS 221) have been a component of the curriculum of the Colleges of Education in Ghana since the 2006/2007 Academic Year (for 2nd Year Student-Teacher during the Second Semester of their training); with a whole *session* of the Course Outline thereof (drafted by the Institute of Education, University of Cape Coast) being devoted to the concept of Inclusive Education. Amazing isn’t it? Consequently, a full question (Q.3) in this regard was mounted on the Section B of the Educating the Individual with Special Needs (EPS 221) paper of the “Colleges of Education – Three-Year Diploma in Basic Education Second Year End-of-Second Semester Examinations, July 2012”. The said EPS 221 Exam Paper (administered by the Institute of Education,

University of Cape Coast) was written on Friday 6th July, 2012 and the Question Three (3) thereof went thus:

3. (a) *What do you understand by the concept 'inclusive education'?*

(b) *Explain **four** benefits of inclusive education in special needs education.*

Indeed this is an appreciable justification that the discussion surrounding Inclusive Education among student-teachers is--strategically--being pronounced in a gradual and committed manner as the years roll by. It might be interesting to see the responses the AY 2011/2012 cohort of students-teacher candidates gave to the above-mentioned question, if the opportunity offers.

Discussions:

CREATING INCLUSIVE SETTINGS AT TEACHER TRAINING INSTITUTIONS IN GHANA

Below are suggested ways by which inclusive settings could be created at teacher training institutions in Ghana:-

Firstly, there is the need for a form of positive discrimination in teacher recruitment, training and maintenance of Special Needs minorities. Any perceived or real barriers on the path of people with special needs as far as the *structure* of initial teacher training in Ghana is concerned must be reviewed. This can be done by encouraging the emergence of appropriate and captivating role models distinguishing themselves within the ranks of the teaching profession in Ghana, a reduction of non-essential entry qualifications, possibly setting up quota or preference systems in teacher education--among others--to be in favour of individuals with disabilities.

Secondly, teacher trainees have to be afforded more opportunity to learn more about inclusive strategies by spending some time alongside experienced teachers in the field of Special Needs Education

as far as teacher training is concerned in Ghana. Perhaps the Colleges of Education in Ghana could resort to having a Special Needs Education Coordinator (SENCO) to help in ensuring that the colleges of education are able to meet the learning needs of student-teachers who might be experiencing teaching difficulties. In order to make sure that the SENCO does not necessarily duplicate the functions of the Guidance and Counselling Co-ordinator, we can possibly cash-in on the example of SENCOs in the United Kingdom; where SENCOs are basically trained mainstream teachers who continue to work as such while carrying on their SENCO *role* as well. Quite often, SENCO officers take courses in special needs education as part of their initial or in-service training and nearly all of them attend intermittent short training courses or *special events* organized by local authorities which manage education in their areas of jurisdiction. It was observed that in some parts in the UK, the in-service training for SENCOs is provided for by higher education tutors and local authority specialists working in tandem. The higher education tutors are able to reliably inform SENCOs of current trends in inclusive education, for instance. The specialist personnel mentioned over here include educational psychologists, peripatetic specialist teachers and consultants who work with schools on school improvement affairs. The adoption of the role of SENCO at the Colleges of Education by the Teacher Education Division of the Ghana Education Service (GES) will inevitably be a venture by which quality and coherence associated with the training of teachers within the area of Special Needs Education could be consolidated and standardized on a nationally-agreed pattern at the colleges of education. One can hope that such a move would afford regular school teachers and special educational needs teachers--at the basic school--an opportunity of working collaboratively, sharing expertise and resources, in the long run.

Thirdly, there is the need for the Teacher Education and Special Education Divisions of the GES to sustain the dialogue from forums that they organize for their pre-service and in-service personnel on the inclusive education idea in special needs education needs, in order that any gaps between *theory*,

practice and *reflections* could be chipped away at. For it only when teaching and learning is really made active with due demonstration and support that reflexive evaluation is done concurrently by both many a learner and teacher. I hereby wish to submit that Trainee-Teachers who are posted to teach on the “OUT” segment of the “In-In-Out” should be tasked to experiment with the development of the thinking and practice associated with Inclusive Education on the field where they has been posted to teach. Consequently three (3) pre-service workshops on *Welcoming Schools* to form a firm basis for the teacher-trainees appreciation of the relevant concepts and issues related to inclusive education in Special Educational Needs (*SEN*) are postulated:

1st Workshop: “Developing Shared Values”

(*Object*: To provide an opportunity for student-teachers participants [the trainees] to gain an appreciable understanding of the broad range of attitudes that have been incorporated in overall purpose of inclusive education. Such attitudes include “a respect of difference”, provision of “support when and where needed” which when imbibed by the trainees would very much inform their sense of critical reflection and this will no doubt develop in them a nerve for “sustainable actions” in their teaching endeavours at the basic school).

2nd Workshop: “Developing a Welcoming Curriculum”

(*Object*: To equip the teacher-trainees with tools for constructing a “welcoming curriculum” by taking them through various sessions of activities that would be targeted at drawing a differentiated/modified curriculum for many a special educational needs child at the basic school).

3rd Workshop: “Reviewing School Policies and Plans”

(*Object*: This third workshop aims at eliciting feedback from the trainees on their recommendations about how school policies and plans (with vested interest from GES District Directorates of Education) could, perhaps, be modified to ensure conformity to the underpinnings of *inclusion* for all students).

As a suggestion, the first workshop could be organized for the trainee-teachers during the Second Semester of their Second Year in college; in order to serve as a consolidating ground for the EPS 221 Course (Educating the Individual with Special Needs) that they usually take during that semester. While second and third workshops could be organized for them during their Third Year in college when they do the teaching practicum on the “OUT” Programme.

Indeed the “welcoming classrooms” experiment provides for a very responsive environment for the teaching and learning of all children (be it ‘able’ or those with special needs). The hope is that by going through these proposed workshops, many a student-teacher would be duly motivated to make a positive difference in learning environment that ensures that *ALL* learners need fully participate in the teacher-learning process.

Concluding remarks:

Inclusive Education promotes student/pupil diversity. This helps in a great deal in combating discriminatory attitudes since it helps learners to accept themselves and also to be accepted by their peers and other participants in many a teacher-learner interaction, to a very large extent. Thus promoting and practising the ideals of inclusive education helps in creating a welcoming community thereby helping to build a healthy inclusive society. Excerpts from the White Paper underlying most recent Educational Reforms in Ghana (September, 2007) affirms that:

(1) *Government notes the concerns expressed by the Review Committee regarding the state of Special Education in Ghana and accepts the recommendations for its improvement. Institutions*

that deliver education to children with special education needs will receive additional attention through the improvement of existing infrastructure and the provision of facilities. (2) Parents and guardians will be encouraged to take advantage of special education facilities to send their children with special needs to school. The Ghana Education Service (GES) in collaboration with the Ghana Health Service will be resourced to undertake regular screening exercises to detect children with special needs at an early age for immediate attention. (3) In pursuit of the recommendation that schools and classroom blocks should be designed to make them user-friendly for children with special needs, district assemblies and Heads of institutions should make sure that design of new classrooms are drawn to meet this requirement.

There is no doubt that the object of government with regard to Special Educational Needs (SEN) is held in quite a bright light, I however recommend wish to recommend that--just as UNESCO stipulates--the issue disability should be treated as a cross-cutting phenomenon in educational discourse in Ghana; standing alongside such matters as: Information Communications Technology (ICT); Distance Education; Library and Information Services; Science and Technology for National Development; the Role of Guidance and Counselling; and, Private Participation in Education.

I very much appreciate your kind audience this morning. Thank you very much.

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LEARNING BEYOND BORDERS: WEB 2:0 AND ITS RELATION WITH DEVELOPMENT (PRATA-LINHARES & BUJOKAS DE SIQUEIRA)

This paper presents two research projects that are being developed in a university in Brazil: *Redeci – Engaging young people through Media Education* and *The Use of Web 2:0 in the Practices and Development of University Teachers*. The first research aims at investigating the repertoire of High School teachers and students concerning the media, and the way in which they learn contents and concepts related to this area. The other investigation focuses on university teachers and the purpose is to find out how web 2:0 is being used in the practices and development of Higher Education teachers. The projects are based mainly on the idea that relations between technology, education and knowledge are changing deeply with the development of the internet interface known as WEB 2:0. This interface made it easier for the production and publicizing of content, mainly by means of social webs. In this context, the position of who emits something and who receives the information, of who learns and who teaches, of who controls and is controlled, undergoes changes which are unimagined by traditional teaching. The initial results show that the use of ICTs and WEB 2.0 by the teachers of the universities under research is still molded by traditionalism and alien to the context of the students who are in a great majority, digital natives. This creates a distance between the students and the institution, at least at first sight, seen from the reality of the classroom. In the other hand the workshops carried out with the students, suggest that they are privileged opportunities to develop multimodal reading and writing abilities and promote freedom of expression.

Key words: Web 2:0. Teacher Education. Pedagogic Practices. Innovation. Digital Culture.

Fundings: The Research Foundation for Research and Learning of Uberaba- FUNEPU, the *Research Foundation of the State of Minas Gerais*- FAPEMIG, the Ministry of Education Brazilian Federal Agency of Support and Evaluation of Graduate Education - CAPES and the National Council of Technological and Scientific Development- CNPq.

Introduction

The Federal University of the Triângulo Mineiro (UFTM) in the state of Minas Gerais, Brazil, has been growing fast in the last six years. Created in 1953, it offered courses in the area of Health until 2006, when it started to offer a Undergraduate Course in Languages for teachers. As from 2008, it became part of the expansion project of the Brazilian federal universities and created six licensure courses.

The courses aimed at teacher education, function at night, planned to extend access to free and good quality public education and bring innovations for the development of the next generations of educators. The proposition in the curriculums of the licensure courses is focused on the application of teaching methodologies that have learning, interdisciplinarity and development of a critical-reflexive posture between the subject and society as their main purpose.

In this perspective, some research projects are being developed with the purpose of finding means by which education institutions, whether of Higher Education, or public primary schools in the region, may find a manner of appropriating the digital culture.

The projects are based mainly on the idea that relations between technology, education and knowledge are changing deeply with the development of the internet interface known as WEB 2:0. This interface made it easier for the production and publicizing of content, mainly by means of social webs. In this context, the position of who emits something and who receives the information, of who learns and who teaches, of who controls and is controlled, undergoes changes which are unimagined by traditional teaching. Such a scenario highlighted the need for educating people to make the most of the medias while consumers and citizens, and it is constraining teachers, content producers and students to review their roles and find new forms of organizing their studies and work.

The initiatives being taken by UFTM go back to the “World Declaration concerning Education for Everyone”, drawn up by UNESCO and approved during the world conference carried out in Jomtien, Thailand, in March 1990. (SIQUEIRA, A. B., 2005).

Among other aspects, the text elects as priority in basic education in the world, to provide an answer to the elementary learning needs. In practice this means teaching the abilities of reading, writing, calculating, abilities to express orally and solve problems, as well as the specific subjects that include “abilities, values and attitudes”, and which vary from period to period and according to the characteristics of local culture.

Despite regional diversities, the Jomtien document declares that, in every situation, education must ensure the acquisition of different kinds of knowledge “(...) necessary so that human beings may survive, develop their potentialities completely, live and work with dignity, take part in development fully, improve life quality, make well founded decisions and continue learning.” (UNESCO, 1990):

One of the specific aims of this declaration is particularly relevant for the reasoning we are developing here, and refers to the need to extend the concept of educational action to beyond the achievements of formal education, and consequently, extend the means of education, including new spaces and new technologies.

Specifically in the field of media culture, a relevant reference for the work at UFTM is the “International Programme for the Development of Communication (IPDC)”. One of the main projects of this programme is the promotion of the “Media Development Indicators” (UNESCO, 2010), which help to identify and assess the quality of the actions in the communication field in each country – and which may be interpreted as basic conditions also for the promotion of education in the future.

The text about the Indicators is a result of the work of a team made up by specialists from inter-government and non-government organizations, universities and professional associations from various regions in the world, and includes five great categories:

- ✓ Category 1: a regulatory system which is favourable to freedom of expression, pluralism and diversity of the media;
- ✓ Category 2: pluralism and diversity of the media, equality of conditions in the economic plan and transparency concerning authority;
- ✓ Category 3: media as a platform for democratic discourse;
- ✓ Category 4: professional education and institutions that will support freedom of expression, pluralism and diversity;
- ✓ Category 5: sufficient infrastructure to support an independent and pluralist media.

Each one of these categories is divided in constitutive issues that, in turn, are divided in a more specific set of general indicators. And many of them are directly related to the promotion of education for the media. According to the document, important specific indicators for the development of producers of contents, involve verifying if courses and education materials are made accessible, including to the marginalized groups. Thus, the systemic vision of the structure of communication by media of a country indicates ways by which we can develop education actions for the media. According

to this perspective, it is necessary to find ways of teaching issues of a technical, esthetic, cultural and political character, all at the same time.

Thus, the indicators are a tool for assessment of the media system of a country, which, among other aspects, assesses the opportunity that the citizens have to use the medias for self-development. In this sense, the indicators are also committed to the programme that UNESCO calls “Media and Information Literacy”. In the scope of this programme, four strategic actions were established:

1. Promote a better understanding concerning the functioning of the media, its potential and its limitations;
2. Promote critical thinking, autonomy and initiative for dealing with messages;
3. Strengthen capacities, rights and responsibilities of individuals in congruence with the capacities, rights and responsibilities of the means;
4. Facilitate access, creative and productive use of communication and information technologies.

In 2008, a group of experts met in Paris to discuss the basis of a curricular referential for teacher development. The result of this work was published in a report (UNESCO, 2008) which outlined themes and basic competences which characterize an educator who is able to use medias. The themes were divided into two groups: topics for the development of a teacher who is “media literate” and topics to teach the teacher to teach about media. Table 1 below, presents the topics selected by the group:

Table 1 Media-education themes to make up a curricular referential for teacher development

THEME	DESCRIPTION
1. THEMES TO DEVELOP THE TEACHER’S REPERTOIRE	
Media and democratic discourse	Freedom of expression, pluralism and diversity in media; transparency and authority; media as a platform for the democratic discourse; professionalism in the media (journalism, ethics); an infrastructure which is able to give support to pluralism and diversity.
Analysis of texts about media	Processes of construction of texts about media; codes and conventions that make up the “media grammar”; representation, identities and stereotypes; narrative structures, voices, inclusion and exclusion of information.
Understanding the social role of the media	Purposes which underlie communication by media, persuasion discourse; information, education, entertainment and advertising; assessing sources, authority and precision of the information conveyed.
Public	Concept of who the public is; active audiences (interpretation, negotiation, assessment, access and use).
Content production by the media corporations	How the media corporations work; rights and responsibilities, freedom of expression; cultural industry, authority and regulation.
Production of contents by the public	How to create and disclose its own messages; use of communication and information technologies; ethic values, personal autonomy and participation in the public sphere; promotion of intercultural dialogue
Technical Production	Using CIT in education

1. THEMES TO DEVELOP THE TEACHER TO TEACH ABOUT MEDIA	
Instructional Design	Development of curricular activities to teach education for information and communication; adapting and developing educational resources and media samples; creating and developing resources for cooperative work by means of communication and information technologies; using methods that involve queries and problem solving; developing adequate methods for assessment of the activities.
Changes in the educational field due to the media.	Changes in the teacher's role; implementation of the curriculum and changes in management; creating school environments which will give support to education for information and communication.

Source: UNESCO / International Expert Group. **Teacher Training Curricula for Media and information Literacy - Background Strategy Paper**. Paris: UNESCO, 2008.

In 2011, UNESCO published the final version of the document “Media and Information Literacy Curriculum for Teachers” (UNESCO, 2011). The curricular proposal is made up of two parts. The first part describes seven basic competencies to access, evaluate, use and produce contents using media and; how to integrate these competencies in the curriculums for teacher development; ten pedagogic techniques that facilitate teaching and learning of such competencies. The second part shows 11 modules which synthesize concepts which are relevant to be a guide to the study of media, such as freedom of expression, ethics and accountability of the media, public, and advertising, systems of production of news, language, and representation among others.

As a general rule, the curricular referential focuses on the development of consciousness concerning how we use the media for work, leisure and learning. In this context, media-education is considered an instrument to build knowledge societies, promote freedom of expression and universal access to information. (UNESCO, s/d, p. 13):

Learning in collaborative spaces may promote active citizenship, while allowing for self-expression and participation in public discourse. The curriculum should provide spaces which are consistent, so the teacher may evaluate communication and information resources and reflect about the influence of these resources in the classroom and identify opportunities for learning based on the use of an ample diversity of resources which are accessible to all the students.

The proposition is that Brazilian universities should implement pilot-projects which would integrate education for information and communication in the initial training of High School teachers, by means of a curricular referential which could be adapted in the whole world, according to the specific needs of each country.

Thus, in UNESCO's perspective, it comes down to drawing up a basic proposal which would not only include specific media issues, but would also facilitate integration of other areas of the curriculum into the proposition for reading, production and citizen participation, which emerges with the dissemination of the communication and information technologies.

In this perspective two research projects are being developed: *Redeci – Engaging young people through Media Education* and *The Use of Web 2.0 in the Practices and Development of University Teachers*. These research aims at investigating the repertoire of High School teachers and students concerning the media, and the way in which they learn contents and concepts related to this area. They also focus on how to empower young people to access, evaluate and use digital media do strengthen citizenship.

Methodology

In the research *The Use of Web 2.0 in the Practices and Development of University Teachers* we are verifying how information and communication technologies show up in the institution documents, such as the curriculums of the courses and the teachers' class plans. We are also ascertaining how the

university teachers are using information and communication technologies in their practice. In order to do this, a bibliographical research was carried out and a questionnaire containing closed and open questions was applied to the university teachers.

In the research *Redeci – Engaging young people through Media Education*, the methodology consisted of the production of metalinguistic tutorials concerning the production of digital contents. Thus, a radio programme teaches how to work in radio, a video teaches how to record and edit a video, an interactive album teaches how to take photos and a PDF file teaches how to make an agenda and write a news text. Table 2 describes the contents of each of the tutorials.

Table 2 – Contents of the tutorials in the Redeci project

RESOURCE	CONTENTS
TUTORIAL 1 – How to make an agenda	This is a file in the unblocked PDF format that teaches how to gather pre-information concerning the subject which will be the object of the production, criteria for selection of sources for interviews and research and the most important queries that the text, audio or video should answer
TUTORIAL 2 – Writing techniques	This is also a file in the unblocked PDF format that teaches how to write a text using journalism techniques: title, subtitle, lead and organization of the text, using the scheme “inverted pyramid”, which puts the most relevant information at the beginning and the complementary data at the end.
TUTORIAL 3 – Techniques and photographic language	Resource in Flash which explores the techniques for capturing images, the ways in which the resources of photographic language generate meaning and different forms of representing the same subject.
TUTORIAL 4 – Radio Production	Metalinguistic tutorial in MP3, in which a radio report teaches how to make a radio report, dealing with

	language and the information sources.
TUTORIAL 5 – Audio edition with Audacity	Tutorial in the format of a Real Video which focuses on the specific tools to record speech, insert sound, track and effects.
TUTORIAL 6 – Video Production	Metalinguistic tutorial in the format of a Real Video that teaches how to make a report while producing a report.
TUTORIAL 7 – Video edition with the MovieMaker	Tutorial in the format of a Real Video which focuses on the specific resources for recording the “headings” of the reports using a webcam and for inserting the external scenes and interviews.

Source: Made up by the authors

These materials are used in 40-hour workshops that teach the students how to produce contents in two steps. In the first step, they interview teachers in the university and produce reports concerning fundamentals of citizenship such as political parties, cultural identity, sexual and reproductive rights, prevention of violence, etc.. Using the tutorials, they transform the interviews into multimedia contents, which are published in their personal blogs. In the second step, they go out to gather information concerning public services offered to young people in the fields of education, health and culture in the municipality of Uberaba, state of MG, Brazil. In these visits they record in audio, video, take photos and make interviews. The material is then remixed into small reports which are posted in a site specially created for the project. This site shows a dynamic map of the city, in which the places that offer the services researched are pinpointed. The students then associate the media to the points on the map, sharing information about public services with other young people. Any user may comment on the contents, but only the students who are participating in the project may publish. Table 3 describes the workshop programme.

Table 3 – Redeci workshops Programme

WORKSHOP	CONTENTS
Use of Web 2.0 tools	Creation of the site account and conduction of tests using the various tools: Blogger, Flickr, Delicious, Stripgenerator, Picnik, Slideshare, 4share and Freesound
Working with the text	Organization of an agenda for research and production of an informative text, ascertainment of information, writing techniques for informative texts, production and publication of a text in the Blogger.
Writing with images	Notions of photographic techniques and language, photo remix of the site Flickr using Picnik, production and sharing of photos on the site Flickr.
Producing digital sound contents	Notions of radio language (locution, sound track, sound effects), notions of radio reports (agenda, interview, script) recording and audio remix using the programme Audacity.
Producing digital sound contents on video	Notions of video reports (agenda, script, interviews, image capturing), recording and video remix using the MovieMaker.
Mapping public services for the young people of Uberaba in the fields of Education, Health and Culture	Visits to previously chosen places where public services are offered to young people, such as schools, museums, health centres, libraries, etc.. These visits are accompanied by a monitor, but it is the students who have the initiative of doing the interviews, collecting documents, taking photos and making recordings in audio and video. The material which was collected is then remixed into multimedia contents to be posted in the map of the Redeci site.

Source: Made up by the authors

Initial Results:

The projects are still in the phase of execution. However, from what could be observed up to the current stage of the research, the results show that the use of ICTs and WEB 2.0 by the teachers of the universities under research is still molded by traditionalism and alien to the context of the students who are in a great majority, digital natives. This creates a distance between the students and the institution, at least at first sight, seen from the reality of the classroom. These results are due to different reasons, such as from lack of infrastructure of the institutions to the lack of development of the teachers.

The results which were gathered with the workshops carried out with the students, suggest that they are privileged opportunities to develop multimodal reading and writing abilities and promote freedom of expression. While making decisions on how to edit their contents, the students had the opportunity to evaluate how news and publicity is made and in what measure it is more related to representations than to faithful copies of reality. Manipulation of the various media languages showed to what extent meaning is a result of choices made using the elements of language. The activity also highlighted the lack of practice for written production and the difficulty that the students have in expressing themselves using the written language with a minimum of grammatical correction, coherence and cohesion. On the other hand, the exercises showed that the students gave great facility and creativity for manipulating the visual language, creating connotative and denotative images that answered to all the expectations concerning the exercises. The result which is appearing in this first phase is the need to find methodologies for the development of reading and writing abilities that will overcome the “copy and paste” of internet.

Final Considerations:

While developing the workshops with the students it was possible to see how they get involved in the projects and how they have facility and creativity to work when they are working in the digital means. One of our challenges is concerning how do we approximate the teachers, promote appropriation of the digital culture and its pedagogic practices and how do we find innovative forms of teaching and learning.

We think that media-education is an instrument to build societies of knowledge, promote freedom of expression and access to universal information. These research projects focus on development and go beyond propositions of learning how to use digital tools. They are propositions that

involve technology in the solution of problems, contributing to actions that lead to the accumulation of social capital in the education institutes.

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NOTHING NEW UNDER THE (AFRICAN) SUN: BRINGING TO MIND INDIGENOUS PEDAGOGIES IN THE CONTEXT OF CONTEMPORARY AFRICAN EDUCATION (DART & CHEYEKA)

Introduction

The premise of this paper is simple: African teachers and teacher educators would do well to bring to mind pedagogies that were used in indigenous education. If they did they would soon realise that many of them not only would prove useful in school but that they mirror, and indeed pre-date many of the pedagogical practices that supposedly derive from the modern Western educational tradition. The only aim of this paper is to draw to mind what we can glean from available sources about such practices and make some suggestions as to how they might reflect what is currently considered to be 'good practice' in a Western educational framework.

My interest in this issue stems from a long involvement in teacher education in Botswana (and more recently and to a lesser extent Zambia). I shall start from a personal anecdote and use that as a base from which to explore the literature that investigates teaching in African schools. One of the highlights of the educational year in Botswana was the term that encompassed teaching practice as it was an opportunity to visit schools to observe students and get a feel for school and classroom life. One of the first schools I ever visited had a notice in the foyer warning that 'Due to recent sightings of a leopard at the other end of the sports field all outdoor sporting events are currently suspended.' Most visits were a lot more prosaic, in fact it was this very 'prosaicness' that became a focus of interest. The following class session was not unusual; I observed a Design and Technology student give an 80 minute lesson on 'hinges and knobs' to a small class of 14 and 15 year olds. It was a 70 minute lecture with a 10 minute activity in which the pupils had to copy the drawing of two different hinges that the student teacher has done on a piece of Manila paper. This was rather an extreme example of a common pattern for a lesson. In contrast I am glad to say that one of the best lessons that I have ever seen, anywhere, was by a student teaching a Setswana language lesson in which she engaged the pupils through an enticing mix of her own personality and a variety of concrete objects and engaging activities rooted in the Setswana culture. I wonder if it was the fact that she was teaching Setswana that liberated her to involve all sorts

of traditional ideas and objects in her cause? Her lesson was as outstanding as it was atypical of common practice.

After the D&T lesson the student and I spoke about the advantages of getting pupils actively involved in their learning, about using their own experience and environment as a starting point, about using a variety of techniques and methods to help reinforce learning. Reflecting on that experience now, would that discussion have been more powerful if I had explicitly discussed the ways in which these sorts of ideas reflect not only current thinking in education but also many of the practices that would naturally have occurred in African education? Probably not, but what if that student had been exposed to those ideas - and seen them in practice - in his lectures and in the reading that he had done at college? Then maybe, yes.

Austin notes the following: research into how college and university education students are teaching during their school experience let alone once they have graduated has not yet begun in Zambia. I have yet to come across a research report, published or otherwise which has solely investigated classroom practice in Zambia. However, there is a lot said in seminars and in peer teaching about the need for education students to develop a repertoire of skills in relation to their teaching and to acquire enough knowledge about their teaching subject. Over the years I have reflected on what I have observed in peer teaching and teaching practice or school experience. In the last three years my involvement in Action Research with college of education lecturers has prompted me to share my observations with fellow educators about how student teachers ignore the teaching methods they were taught at college and university, and lecture during their teaching. But most fascinating in Zambian schools is the widespread tendency of teachers to only dictate notes to pupils. They take this as teaching. If not dictation, teachers lecture for as short as 15 or 10 minutes during which time they indicate on the chalkboard the main points of the topic and spend the rest of the time up to the 40th minute writing notes for the pupils. Of course such personal anecdote requires us to bring in research that point to the need for change in teaching methods, the appropriate use of the lecture method, the effect of poor teaching on pupil learning, and so on. Such research, however, ignores the indigenous knowledge. There is a wealth of literature on indigenous education although written by anthropologists at different times and for a different audience. What can we glean from these accounts of indigenous education for us to come up with what we could arguably call, postmodern methods?

As academics we spend much of our lives exhorting our students not to fall into the trap of mistaking our own personal experiences as some sort of universal truth so we shall hastily move into the findings of a wider literature from serious researchers. Starting in the Botswana context what little research there is looking at these themes seems to indicate that the 'knobs and hinges' style lesson is more common than the Setswana lesson.

A number of studies have investigated teaching in Botswana school classrooms (e.g. Fuller and Snyder (1991), Prophet (1995), and Hilsum (2003)). They have in common a conclusion that teaching practice in these classrooms is predominantly teacher centred, relies heavily on chalk and lecture methods, rarely uses higher order questioning skills and rarely takes account of the diversity of backgrounds and abilities in the pupil population. Prophet (cited in Tafa 2001;22) asks the question;

Is it the case that they [teachers] are not receiving enough exposure to methodologies such as 'group work' and 'student centered teaching' that are called for in current curriculum thinking or is it rather that the culture of the school is so powerful and sticky that innovative practices the student teachers are introduced to in pre service training are quickly discarded in the face of the reality of the classroom?

As for the Zambian context there appears to be a dearth of research into classroom practices but the introduction above provides a clear if anecdotal picture of teachers dependent on short lecture methods backed up by long periods of dictation. This would not be surprising; research looking at teaching more widely in the African context would seem to seem to bear this out. For example, Oplatka (2007: 482) in a systematic review of literature, such as it is, on the role of teachers in the developing world (in which the author includes Africa) concludes that although there are exceptions,

... teachers in developing countries are depicted as knowledge transmitters who follow prescribed curriculum and textbooks almost blindly, obviate any change towards student-oriented teaching methods, and usually use summative assessment and evaluation.

The summary of a large number of studies of teacher training across a number of countries in Sub-Saharan Africa (Lewin and Stewart 2003) concluded that training did not appear to have much effect on attitudes of the students and graduates towards teaching and in fact after training they were 'less positive about teaching', and did not translate any of their pre-course beliefs about more progressive methods into practice.

Classroom observations did not confirm the apparent trends towards more learner-centred pedagogy, and it may be an example of learning a discourse rather than a fundamental shift in belief. (p114)

As first Tanzanian president Nyerere noted (cited in Adeyemi, M. B. & Adeyinka, 2003 p 9)

‘... few of our schools are really an integral part of the village life, except in the sense that they occupy village children for so many hours a day.

This picture of a community unwilling to move beyond notions of teaching that involve highly didactic, lecture, dictation based methodologies has been analysed from a number of perspectives and it is not the place of this paper to investigate each of these in turn other than to say that there is probably a highly complex mix of factors from beliefs about traditional roles of teachers, legacies of colonial style education systems (Dei 2011,), enormous challenges presented by lack of resources and shockingly poor terms and conditions for teachers in many countries (VSO 2003). Add to this an ever growing suspicion based on critical reflection on post colonial experiences of Western ideas in general and maybe the lack of evidence of more progressive teaching practices are not so surprising after all.

It is probably true to say that Higgs (2008; 447) expresses the common view of the state of the relationship with regard to African educational discourse and Western educational ideas;

‘What is meant by the African Renaissance in educational discourse is, therefore, founded on the perception that the overall character of much of educational theory and practice in Africa is overwhelmingly either European or Eurocentric. In other words, it is argued by advocates of an African Renaissance in educational discourse ... (that) much of what is taken for education in Africa is in fact not African, but rather a reflection of Europe in Africa.’

Dei (2011) would seem to be in broad agreement with this noting that discussion about education is dominated by Western paradigms. He calls for the development of indigenous frameworks and categories to help understand societies in Africa and demands that (p 97), we pay particular attention to the production and the social organization of knowledge in West Africa, and particularly, to cultural dimensions of schooling, education and development.

Based on our own experiences as teacher educators in southern Africa, and a dual perspective, one from the inside out and one from the outside in, our argument is that in terms of the practice of teaching, a number of current trends in Western educational discourse in fact reflect traditional African practices. We do not claim that this is true for all practices or that this will somehow revolutionise teaching and teacher education in Sub-Saharan Africa or indeed that it is a unique and new notion. We do think though that too little attention has been paid to this idea and that consideration of it might make a small contribution to the important task of motivating our educators to engage their students in more meaningful experiences.

Method

A literature review was engaged with to try and explore what teaching practices were commonly used in traditional African education. The focus was broadly on literature from Botswana and Zambia though other examples have been used too. Standard internet searches using the British Education Index, Academic Search and Google Scholar were used as was a search of the catalogue of the Commonwealth Institute in London which enabled us to gain access to a number of paper based historical texts not otherwise freely available.

This review is not a systematic review. Citing Grayson and Gomersall, Papaionnou et al (2009) note the particular challenges that the social science researcher faces in attempting a systematic review not least of which are the phenomenal diversity of possible sources and the ambiguous, poorly defined terminology that a researcher has to make decisions about. It is rather the beginning of what Boell and Cecez-Kecmanovic (2010) call a hermeneutic process in the sense that it is an ongoing review the results of which continue to feedback into the process shaping it as we progress.

It is worth noting that although there are now a number of good and comprehensive studies of African education (Datta 1984, Falola 2000; Adeyemi & Adeyinka 2003; Higgs 2008) and as a brief summary of these works it is worth quoting at length from Adeyemi and Adeyinka who cite Kenyatta (1961) describing the educational system of the Gikuyu;

It will be found that education begins at the time of birth and ends with death. ... They aim at ... educating the children in the family and clan tradition. ... there is no special school building in the Gikuyu sense of the word: the homestead is the school ... This is one of the methods by which the history of the people is passed from generation to generation. (pp. 99–100) This traditional system of

education is similar in other African countries. In Nigeria, Ghana, Tanzania and Malawi traditional education of youngsters involves intellectual, physical and attitudinal training in order for them to develop fully into acceptable adults in the society. In addition, different kinds of games, including wrestling and running, training for healthy living, cooking, dressing, hunting, farming, carpentry, training to become a smith, critical thinking, drumming, dancing and marriage counselling form part of the traditional curriculum at different stages of the life of the youth. Even on becoming an adult after the usual rights of passage, traditional education continues as a lifelong process for the average African, to foster unity and citizenship in the immediate environment in which the African finds himself or herself.

It is still a challenge to be able to identify work that looks in any detail at the 'how' of education rather than the 'what', 'when' and 'where'. Maybe this is particularly true of the geographic areas that we focus on. Two challenges present themselves in the search for this literature - much is based on anthropological work / certainly in the Tswana context and secondly there is an air of secrecy around practices in formal traditional education (even Magdla (2003) notes the challenge of getting his aging Tswana interviewees to openly divulge the detail of their experiences of traditional education and Rasing's work on initiation rites in Zambia (1995, 2001) highlights similar issues).

Literature

Before we focus in on our home patches as it were, it is worth pointing out that one of the most commonly discussed frameworks in current education, particularly higher education, is that of Lave and Wenger's 'Communities of Practice' (COP). Many educators worldwide are aware of the fact that this concept or framework was developed as a result of Lave's work in studying the apprenticeship models of learning amongst tailors in Liberia (Kress and Marchand 2009). The fact that the notion COP is now often applied to online communities (e.g. Sayers 2011) shows just how adaptable a tradition from a supposedly hide-bound, conservative, risk averse society can be! What else might Africa have to offer the rest of the World? Quite a lot we think.

To start with a quote from the work of Richards (1960) from her observations among the Bemba people of what is now Zambia back in the 1930's. She acknowledges that even at this stage Bemba culture had been hugely changed by the migration of male members of the tribe to the mines in South Africa.

Nevertheless there was still little Western style education available for the majority of children. We will quote at length (p. 106);

Children practice housecraft amongst themselves. Little girls of 5 and 6 dig holes in the ground and sit opposite of each other with imitation pestles making believe to pound grain. They carry tiny bundles of firewood and pretend to cook. ... when slightly older they beg for scraps of food and go to the outskirts of the village where they make small huts of grass and here 'play at houses' cooking on small fire stands in old pots... This is a more elaborate game in which small boys pair off with small girls as married pairs.

So from a very early age we witness the kind of exploratory experiential learning that any student of Piaget will be familiar with.

Later at about 10 or 11 the girls form a community of their own, a bigger girl 'marrying' a smaller one and keeping permanently with her (by this time the girls are making fire stands at their houses, even serving up meals to friends or elders)... But in every case it is not the parents who are instructing, but the older child the younger. This is also true of the process of learning the different kinds of edible mushrooms or the wild spinaches in the bush.

It is not difficult to see this as a practical examples of Bruner's / Vygotsky's theories around social learning / scaffolding / peer support and particularly the notion that learning is best engaged in in a real life context. Maybe this deep tradition explains why Child to Child initiatives in African contexts seem to work well (Child to Child 2009). Falola (2000 p50, 67) also notes this group / peer to peer characteristic, though in West Africa. If as a teacher educator in Botswana I had talked about these theories through these particular lenses might I have had more success in persuading more of my students to give some group work a try?

Richards notes that although there was a formal initiation for these girls as they entered into puberty much of this was symbolic not a practical course and was designed through the use of song, riddle, dance and symbolic clay images (as well as direct instruction) to impress on the young woman the

'traditional attitude of mind towards a duty' (p 107). Here are echoes of Bruner's ideas of the 'symbolic' mode of representation. These figurines stood as representations of moral stances and obligations (Richards 1956, 163). In a contemporary context there is an intriguing echo of the use of such clay figurines by Serpell (2011) in Zambia as medium for providing culturally appropriate intelligence tests amongst children in certain rural parts of the country.

Although this discussion has used the example of girls so far much of the same could be said about boys though the roles are sharply differentiated. In Tswana culture boys would grow up with their elder siblings looking after the goats in the village and then progress to looking after cattle often in more remote regions where the threats from wild predators were significant. At the same time they would learn to make simple tools and weapons, work with wood and other natural materials. These skills would be honed during the formal period of Bogwera (Mautle 2001).

During the male initiation ceremony (Bogwera), Tswana boys, after circumcision, were given formal instruction (often through song - Livingston 2005 p 94) with regards to Tswana laws and customs and particularly sexual conduct. Interestingly although the Bogwera would be overseen by elders of the tribe much of the day to day instruction was the responsibility of the previous Bogwera cohort (or regiment as it is commonly called). Boys had to show themselves ready for participation in Bogwera and in the years preceding their initiation were reportedly allowed a lot of leniency.

[They] could do just as they liked... the words of their songs were often very insulting to people. Those whom they singled out by name had no legal redress. (Schapera 1978 cited in Livingstone op cit p 92)

Those familiar with the levels of respect routinely expected in Tswana society might be surprised at this period of leniency and it is interesting to note that the contemporary Tswana boy has no such window of opportunity; primary school staff demand great respect from them.

The way that the above descriptions of children's learning have included a variety of methods brings to mind the way that Howard Gardner's notion of Multiple Intelligences (Gardner 1997) has been taken up by educators in many Western educational contexts. Although traditional African teaching did not involve the use of the written form in the geographical areas that we are looking at the broader linguistic / oral tradition is seminal to much instructional activity. Higgs (2010 p 8) notes the importance of teaching children the oral tradition not just as a means to transmit knowledge but in a way that actively supports the child 'to learn to use language creatively and effectively'.

Other of Gardner's 'intelligences' that obviously present themselves in these contexts include the musical, spatial and bodily kinaesthetic. Gardner (1999 p 52) has more recently added the notion of Naturalist intelligence which... enables human beings to recognize, categorize and draw upon certain features of the environment. It 'combines a description of the core ability with a characterization of the role that many cultures value. Louis Liebenburg's 'The Art of Tracking: The Birth of Science' (1990) analyses in great detail the way in which traditional Bushman communities in Botswana educate their children from the earliest age to interpret the natural environment around them in a manner that is far beyond merely descriptive but predictive in the modern scientific sense.

Differences

This paper does not seek to prove that there is essentially no difference between current Western notions of good educational practice and traditional African pedagogies. There are major differences. We will briefly discuss just three.

Firstly the notion of the democratic classroom in the sense that learner centredness goes beyond making the children the main focus of activities and makes them the co-producer of much broader educational decisions. Certainly traditional formal educational practices in the contexts that we have examined were very hierarchical in nature and in the Botswana context this hierarchy was reinforced by strict corporal discipline. The first thing a new member of Bogwera would have experienced for example would have been a severe beating at the hands of his elders (with sticks that he would have been tasked with cutting from particular trees. Literally rods for their own backs). This was to reinforce notions of discipline within the tribe and to prepare for the fact that life in adulthood would be extremely tough (Livingston 2007).

Secondly there was a clear separation of boys and girls both in terms of the curriculum but also where they were taught. Richards (1960) implies that when very young Bemba boys and girls played together but evidence from the Tswana background (Mgadla 2003 p. 22) indicates that expectations of difference were emphasised at a very early stage. Boys that spent time with girls for example were called bophameseseng - 'those who hang around dresses' and separation was enforced.

Thirdly, the treatment of learners with a broad range of abilities / attributes needs to be considered. Adeyemi & Adeyinka (2003) cite Tiberondwa who notes that in extreme cases with the Ankole people (in what is now Uganda) 'slow learners and offenders were killed to discourage slow learning and scare

young people from committing similar offences' (Tiberondwa, 1978, p. 10). This means of teaching could only produce learners who, out of fear, were obedient and submissive. They committed to memory ideas that they did not understand and the values they had no right to question. Indigenous education thus tended to kill the spirit of initiative, innovation and enterprise, all of which are (or should be) promoted by modern education in Africa. Having said that, many pupils who are now considered 'disabled' in a modern system of schooling would not have been so identified in a traditional one. Dyslexia causes problems for a child when they are faced with systems reliant on reading and writing. Livingstone (op cit p. 212) reports a mother of children with microcephaly describing how modern school turns their difference into disability; 'I don't think I could have noticed it if it was in the olden days, because I think they would be plowing well, herding cattle like others are doing.'

The West catches up

It is worthwhile noting that current 'radical' practice appears to reflect some of these traditional practices. The concept of the 'Mantle of the expert' (Sayers 2011) is a way of introducing drama not as an extra curricula addition or even a stand-alone subject but as the main medium for engaging with learning across the whole of the curriculum. Dance too has become recognised as a way of engaging the whole body in a manner that increases retention of knowledge way beyond the performing arts – there are examples of children using it as a medium to learn about the scientific concepts for example (Ødegaard, 2003) for example and in the US the biologist John Bohannon encourages PhD students to communicate their findings through dancing their PhD's (Gonzolab, undated). These are not PhD's in the expressive arts or even in the humanities but in hard sciences (there is a prize each year for the best in biology, physics and chemistry). Africa needs to be careful or there will soon be Western consultants offering courses on such ideas at great cost; when really it should be the experts offering the expertise.

Conclusion

We conclude by citing the work of Mah (2000). He is considering Somalian indigenous knowledge but what he concludes can equally be applied to the focus of this paper. Mah argues that it is important to reclaim specific indigenous knowledge (in our case, teaching practices) for two reasons: first, because it helps with the reclamation of a wider set of cultural phenomena such as languages and other cultural expressions, and secondly, because it 'supports the construction of African identities' (p 71). This reclamation does not assume a return to some idyllic state. No knowledge or practice is frozen in time,

and nor does it assume a blind embracing of all previous practices (some of which as we have seen briefly can serve to exclude groups). But a critical reclamation of such knowledge and practice will enable the incorporation of its empowering elements into current African educational needs.

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Areas of Specialization Versus Present Teaching Subjects of NCE Teachers in Primary Schools in Nigeria (Shobola, Olawatosin & Olatomide)

Background

Over the time, education has been identified as one strong wheel that drives the development and growth of a nation to its destination fast, and teacher is one of the driving agents in realizing the set aims and objectives of the institution. It is with this in mind that government provides institutions to train teachers who would in turn impact the students with knowledge and make them functional to self and the society at large. The need to train teachers to serve in different educational levels (primary, secondary and tertiary) brought about the teacher training institutions such as Grade II Teachers' Colleges, The Institutes of Education, Colleges of Education, The National Teachers' Institute, and The Teachers' Center (Ojerinde, 2011).

In line with the educational restructuring in Nigeria to meet the educational demands of its citizens like other parts of Africa, it is no longer news that Nigeria Certificate in Education (NCE) is the minimum teaching requirement to teach especially in primary schools. This is due to the fact that "no educational system can rise above the quality of its teachers" (Federal Ministry of Education, 1981). It is the aim of the Federal Government of Nigeria to produce highly motivated, conscientious and effective classroom teachers for all levels of Nigeria's education system; teachers who can develop the spirit of inquiry and creativity; teachers who can have intellectual and background adequate for their assignment and who can adapt to any changing situation not only in the life of their country but also in the wider world; and teachers who are committed to the teaching profession (Federal Ministry of Education, 1981 in Adebile and Bateye, 2011). It is believed that the minimum educational requirement for all highlighted above is NCE qualification. Although, this adoption of NCE qualification as minimum requirement to teach in primary school did not please some educationists, as this was expressed by Ojerinde (2011) saying "of recent, some state governments have not only scrapped The Teacher Training Colleges but have also given an ultimatum to Grade II Teachers to obtain the Nigeria Certificate in Education or be sacked". He further explained that in some states in Nigeria, about 75% of the teachers teaching in the primary school are unqualified and some of them do not possess the Teachers' Grade II Certificate which Ojerinde (2011) considered as basic minimum requirement to teach in primary school. But it should be noted that NCE is the basic minimum requirement to teach in primary school at present (FGN 2004). This is not the concern of this study though, but to examine the correlation between course of specialization

of the teachers in the college and their ability to cope with teaching all subjects when they get classroom teaching job.

College of Education is one of the tertiary institutions in Nigeria that is specifically designed to train teachers for schools and it is supervised by National Commission for Colleges of Education (NCCE). The certificate that is awarded at the completion of the programme is Nigeria Certificate in Education (NCE). The institution usually operates school system within which there are departments; schools like Arts and Social Sciences, Education, Languages, Science, Vocational and Technical Education (Osun State College of Education, College Student Hand Book, Ila-Orangun and Ilesa Undated). The basic qualification to enroll for NCE programme is pass in five SSCE or GCE (O/L) subjects including English language, three of which must be at credit level at the same sitting or four credits at two sittings. Likewise a Grade II Teachers' Certificate (TCII), R.S.A or City and Guilds Intermediate Certificate, Associateship Certificate in Education (ACE), National Technical Certificate/National Business Certificate (NABTED) etc are all eligible for admission so long they possess the expected academic qualification.

In line with the structure of academic programme at NCE, students are meant to specialize in courses of their interest and academic strength as shown in their secondary school certificate or other certificates as the case may be. However, these teachers who have specialized in one area of study or the other are expected to teach all subjects if eventually offered teaching job in primary school after graduation. Then the question arises that if the teacher is qualified in terms of paper qualification, is he trained to qualify to teach all subjects in primary school? Its been observed that most primary school teachers in Nigeria often complain that adjusting to primary school teaching is difficult for them. Some complain that they weren't exposed to all subjects they teach now when they were in the college; and some claim that they need to re-train themselves in order to adjust to primary school teaching setting. All these form the thrust of this study.

Research Questions

How do the teachers perceive repacking the NCE syllabus to accommodate all the teaching and learning processes in Primary school?

Hypotheses

Two hypotheses were postulated for this study, and these are:

3. There is no significant relationship between Area of Specialization and Teachers' Adjustment to teaching in Primary School.
4. There is no significant relationship between the Teachers' academic qualifications and their adjustment to teaching in Primary School.

Methodology

Research Objectives

There were two main objectives for this study. One, it examined if the area of specialization of the teachers while in NCE is adequate to teach all subjects in primary school. Two, it investigated which of NCE holder and NCE plus Grade II holder was able to adjust quickly to primary school teaching.

Participants

The participants for this study were 182 (male 23 and female 159) primary school teachers (teaching primaries 1-6) with age range of 20 and 50 years drawn from twenty public and private primary schools. The teachers must have taught for not less than two years in primary school, and must be teaching all subjects in a primary school class. To qualify for inclusion in the study also, the participant must have had NCE or NCE plus Grade II Certificate.

Instruments

A self-constructed questionnaire tagged "teachers' specialization and the teaching subject in primary school" was used to elicit information from the participants. It contained nineteen items which examined their area specialization in NCE and academic qualification to see if it takes care of subjects they teach now in primary school.

Design

The study made use of ex-post facto survey design with the use of a questionnaire.

Procedure of Data Collection

To elicit information from the participants (with the copies of questionnaire), the researchers paid visits to the twenty primary schools (private and public) on different days to acquaint selves with the head teachers and to make known their mission in the schools. Having discussed with the head teachers and collected the number of teachers with NCE and or NCE plus Grade II Certificate qualifications, copies of questionnaire were given out to the teachers during their break time; filled and returned, and the exercise lasted eight working school days.

Results

The tables below present the demographic data of the respondents

Table1: Percentage Distribution of Respondents' Sex

Gender	Frequency	Percent
Male	23	12.6
Female	159	87.4
Total	182	100.0

The sample size had the female gender of 87.4% and the male gender of 12.6%. This shows that there was more female than male in the primary schools visited.

Table 2: Percentage Distribution of Respondents' Teaching Qualification

Qualification	Frequency	Percent
NCE	70	38.5
Grade II & NCE	112	61.5
Total	182	100.0

The table above shows the respondents' qualification, 61.5% of respondents had both grade II and NCE while 38.5% had NCE only.

Table 3: Percentage Distribution of Respondents' Area of Study

Area of Study	Frequency	Percent
Vocational	26	14.3
Science	37	20.3
Humanities	31	17.0
Primary Education Studies (PES)	88	48.4
Total	182	100.0

The table above shows the respondents' area of study, 14.3% were in the vocational area of study, 20.3% were in the science area of study, 17.0% of the respondents had their area of study in humanities and 48.4% were in Primary Education Studies (PES).

Research Question

How do the teachers perceive repackaging the NCE syllabus to accommodate all the teaching and learning processes in Primary school? The item that measure the teachers' perception of the NCE syllabus was analyzed with descriptive statistical tools and the result is in the table below :

Table 4: Percentage Distribution of Respondents' Perception of Repackaging NCE Syllabus

Options	Frequency	Percent
Am Strongly in Support	121	66.5
Am in Support	61	33.5
I am not in support	-	-
I am strongly not in support	-	-
Total	182	100.0

The table above reveals the respondents' perception of NCE syllabus repackaging to accommodate all teaching areas in primary school; 66.5% of the total respondents were strongly in support of the repackaging of NCE syllabus and 33.5% were in support of the repackaging NCE syllabus.

Hypotheses

- 2. There is no significant relationship between Area of Specialization and Teachers' Adjustment to teaching in Primary School.**

To find out if there was any significant relationship between the teachers' area of specialization and the teachers' adjustment to teaching in Primary School, chi-square was used to test the relationship and the result is presented:

Table 1: chi-square showing relationship between area of specialization and teacher’s adjustment to teaching in primary school

	Teachers' Adjustment to Teaching				X ²	df	p
	Very Easy	Easy	Difficult	Very Difficult			
Vocational	5 (19.2%)	2 (7.7%)	14 (53.8%)	5 (19.2%)	43.66	9	<.05
Science	8 (21.6%)	11 (29.7%)	9 (24.3%)	9 (24.3%)			
Humanities	5 (16.1%)	7 (22.6%)	13 (41.9%)	6 (19.4%)			
Primary Education Studies	39 (44.3%)	34 (38.6%)	9 (10.2%)	6 (6.8%)			

Table 1 presents information on how teachers adjust to teaching in the primary school in relation to their area of specialization. It was revealed in the Table that while 82.9% of the teachers with specialty in PES find adjustment to teaching in the primary school easy (44.3% very easy, 38.6% easy), 73.0% of those who specialize in vocational subjects did not find adjustment to teaching in the primary school easy (53.8% difficult, 19.2% very difficult). Furthermore, it was also revealed that while 51.3% of teachers who specialize in science find the adjustment to teaching in primary school easy (21.6% very easy, 29.7% easy), 61.3% of those whose specialty in the humanities did not find adjusting to teaching in the primary school easy (41.9% difficult, 19.4% very difficult). The table also revealed a chi-square value ($X^2 = 43.66$, $p < .05$) which is an indication that there is a significant relationship between area of specialization and teacher’s adjustment to teaching in the primary school. Thus, it could be concluded that teachers with specialty in PES find it easiest to adjust to teaching in the primary school than teachers in other fields of specialization.

2. There is no significant relationship between teacher’s qualification and teacher’s adjustment to teaching in primary school.

To find out if there was any significant relationship between the teachers’ qualification and the teachers’ adjustment to teaching in Primary School, chi-square was used to test the relationship and the result is presented:

Table 2: chi-square showing relationship between qualification of teachers and their adjustment to teaching in primary school

Teachers' Qualification	Teachers' Adjustment to Teaching				X ²	df	p
	Very Easy	Easy	Difficult	Very Difficult			
NCE	2(2.9%)	1(1.4%)	42(60.0%)	25(35.7%)	1.566	3	<.05
Grade II + NCE	55 (49.1)	54 (47.3)	3(2.7)	1(0.9)			

Table2 reveals the teachers qualification and how they adjust to teaching in primary school. It was shown in the Table that of the 70 teachers with only NCE qualification 95.7% did not in any way find adjusting to teaching in the primary school easy (60.0% difficult, 35.7% very difficult). While 96.4% of those with combined qualification from Grade II and NCE indicated that adjusting to teaching in the primary school was with ease (41.9% very easy, 47.3% easy). It therefore implies that adjusting to teaching in the primary school is much more easier for teachers that have combined qualifications of Grade II and NCE than NCE only. This is buttressed by the chi-square value ($X^2 = 1.56$, $p < 0.05$) which showed that the relationship between teacher's qualification and teacher's adjustment to teaching is significant.

Discussion

From the findings, it was obvious that all the respondents were in support of complete repackaging of NCE syllabus to cover primary school academic activity. This is in line with the complaints of the respondents that the academic syllabus that they had at NCE was different from the academic activity in primary school, therefore, making teaching in primary school a bit tedious especially at the entry stage. For instance, teaching in primary school requires that the teacher must have knowledge in all the ten/eleven subjects that are offered, but of which the teachers are not exposed to at NCE except one or two subjects that are related to their course of study. This invariably will pose a difficulty to them when they start to teach, because at NCE, they often specialize in one discipline or the other (for instance music, English, geography etc), but when they pick up teaching, they are meant to teach all subjects. Except at upper classes where they are meant to rotate some teaching according to their discipline; again, this does not cover all the subject areas and not in all the classes.

The results further show that teachers that studied Primary Education Studies (PES) were able to adjust to teaching in the primary school when compared with other teachers in other areas of specialization (Science, Vocational and Humanities). Again, the likely reasons for this adjustment are that PES' curriculum is specifically designed according to primary school academic activity. For instance, the curriculum entails hand writing, English language, arithmetic, physical and health education, creative arts etc, of which other teachers in other areas of discipline are not exposed to. Also, at teaching practice, PES student teachers are posted to primary schools for the assignment which gives them the opportunity to interact with children of that age, knowing their feelings and common behaviours. Invariably, when they become their permanent teachers, it would not become burdensome to relate and interact with them unlike other teachers from other areas of discipline.

The results also reveal that teachers with Grade II and NCE were able to adjust to primary school teaching activity compared with their counterparts with NCE only. This is likely to be so because Grade II programme is specifically designed to train teachers for primary school, while NCE as mentioned above allows students to specialize in one area of study or the other which does not take care of the primary school holistically except PES programme. In essence, a teacher that has gone through Grade II already has the full knowledge of teaching in the primary school; having NCE qualification (having specialized in a course or discipline) notwithstanding, he/she will be able to adjust well in the primary school setting.

Conclusion

It has been established that NCE is the minimum academic qualification to teach in Nigerian primary schools. But it is observed that the concerned teachers are not favorably disposed to their work because of the gap between what they studied in the college and what they are meant to teach when they are offered teaching appointment in the primary school. This is as a result of college system of specializing in one course or the other which does not cater for all primary school subjects and activity. This makes the teachers to embark on self-study to be able to record any success in the delivery of their teaching, and this sometimes can be tedious. Alternatively, some teachers may decide to be passive about this challenge and they keep on impacting wrong knowledge to the pupils or they purposely avoid some areas of teaching that seem difficult to them. Perhaps, this is one of the latent reasons that is responsible for low standard of education as is been echoed all over the country. This study concludes

that there is no correlation between the courses that are taught in the college (NCE) and primary school curriculum in Nigeria.

Recommendation

Based on the findings of this study

- Since Grade II programme is been scrapped, the curriculum should be infused into NCE programme irrespective of their areas of specialization such that all student teachers are exposed to primary school education system
- If Grade II curriculum is what is found in PES, then it shouldn't be an area of specialization but general area of study to all student teachers
- Student teachers should be made to have their teaching practice in primary school and not secondary school as it is done presently so that they can be further equipped for their future primary assignment (teaching in the primary school)

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Faculty development is a top internationalization strategy for Deans and Professors of Education. Internationalization strategies usually include actions or activities designed to achieve a vision that involves recruiting internationally-minded faculty for preparing globally competent teachers (Longview, 2008). International or Global-minded faculty may represent individuals who prescribe to a worldview where he or she perceives their connection to the world community and is aware of his or her responsibility for its members (Hett, 1993). Development of faculty global mindedness can involve international travel, and visiting scholar programs (Longview, 2008), however, the measurement of global mindedness does not appear among the reported outcomes. The lack of a criterion –based assessment framework for faculty global mindedness creates a problem for gauging the quality of faculty learning during professional development activities and the impact of faculty development activities on the development of global competence among pre-service candidates. If the preparation of globally competent teachers relies on globally-minded faculty there is a pressing need to develop a measure that provides evidence of faculty development initiatives contributing to the development of globally-minded faculty. Unless this type of development occurs there is little evidence to support a university's claim that their faculty are preparing teachers for the 21st Century classroom. This conceptual paper represents a response to this need via a discussion on the development of a faculty global mindedness framework for use by Deans and faculty involved in the preparation of globally competent teachers. The framework presented in this paper includes the introduction of a four dimension spectrum of global mindedness that ranges from 'global mindlessness' through to global 'mind-all- ness'. The exploration of faculty development and the elaboration of these four dimensions should assist Deans and faculty better understand the value of global mindedness to 21st-century teacher education as well as assist with increasing the effectiveness of faculty development linked to internationalization activities. The explorations and recommendations within this paper are presented into four sections. Section One explores the concepts of global mindedness (Hett,1993) and global competence (Longview,2008) and how they relates to teacher education. Section Two suggest the application of principles of professional learning (DEET,2005)to improve the design of professional the development of global mindedness among faculty to improve their capacity to develop globally competent teachers. Section 3 promotes the integration of the global competence (Longview,2008) and the principles of professional learning (DEET,2005) into the design of professional learning course to

develop global mindallness among faculty.. The final section of the paper suggests the integration of global mindedness (Hett, 1993), global competence (the Asia Society, 2010; the Longview Foundation, 2008), the Cultural Awareness Profile (Marx and Moss 2011) and Kirkpatrick's professional development evaluation model (1959) as a strategy for measuring the impact of the professional development activity.

Globally-minded Faculty Preparing Globally Competent Teachers.

Globally competence teachers are essential to the development of 21st Century Learners (Asia Society, 2012). The release of the Longview Foundation report Teacher Preparation for the Global Age (Longview, 2008) identifies a role for globally minded teacher educators as the developers of globally competent teachers. Researchers (see for example Kehl and Morris, 2007; Schuerholz-Lehr, 2007; Zhai and Scheer,2007) discussing global mindedness often refer to Hett (1993) who describes globally-minded people as those who see themselves as connected and responsible to the global community and reflect that worldview in their attitudes, beliefs and behaviors. Hett describes a globally minded people in terms of the following five dimensions

1. *Responsibility*: A deep personal concern for people in all parts of the world which surfaces as a sense of moral responsibility to try and improve conditions in some way
2. *Cultural Pluralism*: An appreciation of the diversity of cultures in the world a belief that all have something of value to offer and an motivation to explore and try to understand other cultural frameworks
3. *Efficacy*: A belief that an individual's actions can make a difference and that involvement in national and international issues is important
4. *Globalcentrism*: Thinking in terms of what is good for the global community, not just what will benefit one's own country. A willingness to make judgments based on global, not ethnocentric, standards
5. *Interconnectedness*: An awareness and appreciation of the interrelatedness of all peoples and nations which results in a sense of global belonging or kinship with the "human family

(Hett, p. 143, 1993)

Faculty involved in the development of globally competent teachers are expected to develop knowledge, skills, and dispositions linked to these dimensions in order to develop globally competent teachers who have

- Knowledge of and curiosity about the world's history, geography, cultures, environmental and economic systems, and current international issues
- Language and cross-cultural skills to communicate effectively with people from other countries, understand multiple perspectives, and use primary sources from around the globe
- A commitment to ethical citizenship.
- Knowledge of the international dimensions of their subject matter and a range of global issues
- Pedagogical skills to teach their students to analyze primary sources from around the world, appreciate multiple points of view, and recognize stereotyping
- A commitment to assisting students to become responsible citizens both of the world and of their own communities.

(Longview, 2008, p.14)

In order to better understand how global mindedness may contribute to the development of global competence Deans and faculty members need to be able to identify relationships between the dimensions of global mindedness and the characteristics of global competence. The following table represents an attempt to establish these relationships for the purposes of informing the design of a professional learning program for faculty that builds capacity in the development of Global Competence among pre-service teachers.

Global Mindedness	Global Competence
<i>Responsibility</i>	<ul style="list-style-type: none"> • A commitment to assisting students to become responsible citizens both of the world and of their own communities
<i>Cultural Pluralism</i>	<ul style="list-style-type: none"> • Knowledge of and curiosity about the world's history, geography, cultures, environmental and economic systems, and current international issues • Knowledge of the international dimensions of their subject matter and a range of global issues
<i>Efficacy</i>	<ul style="list-style-type: none"> • A commitment to ethical citizenship
<i>Globalcentrism</i>	<ul style="list-style-type: none"> • Pedagogical skills to teach their students to analyze primary sources from around the world, appreciate multiple points of view, and recognize stereotyping
<i>Interconnectedness</i>	<ul style="list-style-type: none"> • Language and cross-cultural skills to communicate effectively with people from other countries, understand multiple perspectives, and use primary sources from around the globe

Globally minded faculty would:

1. Be motivated by a responsibility to the global community to develop pre-service teachers who are responsible citizens both of the world and of their own communities.
2. model to their students an appreciation of the diversity of cultures in the world by introducing international issues and subject matter into their curriculum.
3. involve themselves in national and international issues would highlight a commitment to ethical citizenship.
4. design classroom activities to raise awareness of the need to think critically about the 'global good' , appreciate multiple points of view and avoid stereotyping when making personal and professional decisions
5. use primary sources to highlight the interrelatedness of all peoples when building language and /or cross-cultural skills among pre-service teachers.

Developing Globally Minded Faculty

Arriving at an understanding relationships between the dimensions of global mindedness and the characteristics of global competence provide an insight on how globally minded faculty can contribute to the development of globally competent teachers, however, it does little to assist Deans seeking to develop globally minded faculty. While many researchers have discussed the characteristics of effective faculty development (Adams, 2008, Elbe, 1988; Gaff, 1975), I would like to use this paper to explore the application of the principles of effective teacher professional learning to faculty development. In a similar fashion to faculty development (Adams, 2008) the motivation for engaging teachers in high quality professional learning is a belief that it is the most successful way to improve teacher effectiveness (Greenwald, Hedges & Laine 1995; Guskey & Huberman 1995; Elmore & Burney 1997; Hawley & Valli 1999; Elmore 2002). The following research –informed (DEET,2005) principles of effective professional learning have been adapted for use in post-secondary contexts.

Principle 1: Professional learning is focused on student outcomes (not just individual faculty needs)

Professional learning for faculty should be aimed at maximising the development of global mindedness so that all pre-service teachers have the opportunity to achieve their full potential as a globally competent teacher. Development activities should be based on global mindedness and centred on the development of global competence. Pre-service teacher outcomes will improve if professional learning increases the faculty members understanding of how to represent and convey global competence in meaningful ways.

Principle 2: Professional learning is focused on and embedded in faculty practice (not disconnected from the University)

Professional learning should be school based and built into the day-to-day work of teaching, research and service . The most potent and meaningful learning experiences occur in within the context of the university environment , where globally minded faculty can address the immediate problems and challenges of developing global competence. Off campus and international professional learning opportunities can provide additional enrichment activites to complement university-based professional learning.

Principle 3: Professional learning is informed by the best available research on effective learning and teaching (not just limited to what they currently know)

Successful professional learning programs immerse faculty in the content they teach and provide research-based knowledge about how students best develop their global competence through the content provided in the class. Globally minded faculty involved in the development of global competence should make accessible to others their findings on strategies shown to promote effective teaching and learning of global competence.

Principle 4: Professional learning is collaborative, involving reflection and feedback (not just individual inquiry)

Faculty professional learning opportunities should relate to individual developmental needs and be organised around collaborative problem-solving. Faculty should meet in traditional and /or virtual teams to share learning in order to deepen learning and to foster a mutual understanding of effective development of cultural competence. The performance of these professional learning teams can be enhanced by constructive, objective and actionable feedback provided by the group and where appropriate expert sourced from outside the university.

Principle 5: Professional learning is ongoing, supported and fully integrated into the culture and operations of the University (not episodic and fragmented)

Professional learning for faculty needs to represent ongoing cycles of improvement involving learning by doing, reflecting and refining. Faculty involved in this process should be supported by mentors outside expertise and additional resources to assist them negotiate unexpected problems. To ensure adequate levels of support professional learning around global mindedness and global competence must be embedded in the university's professional learning system.

Principle 6: Professional learning is an individual and collective responsibility at all levels of the system (not just the departmental level) and it is not optional

Professional learning on global mindedness and global competence should occur at all levels of the system. The development of global mindedness and the achievement of global competence outcomes need to be tied to the performance goals of individuals and departments. Individual faculty and administrators should work collaboratively to determine strategies for improvement and share best

professional learning practices to increase levels of global mindedness among faculty and improve the quality of global competence outcomes among pre-service teachers.

Principle 7: Professional learning is evidence based and data driven (not anecdotal) to guide improvement and to measure impact

Data from validated tools must be used to determine the content of faculty professional learning and to design and monitor the impact of professional learning programs on pre-service teachers. The evidence of impact needs to represent multiple sources and forms. Evaluations of faculty impact need to be both formative and summative. Formative assessment will provide faculty with the feedback to inform mid-program refinements. Summative evaluations will allow faculty and administrators to judge the effectiveness of faculty professional learning and their impact on the development of global competence among pre-service teacher candidates.

Developing a Professional Learning Program for Global Competence

A focus on student outcomes is the essential starting point for effective professional learning (DEET,2005) designed to develop student understanding (Wiggins and McTighe, 2005). In the case of global competence the desired student outcomes are reflected in the following matrix

INVESTIGATE THE WORLD	RECOGNIZE PERSPECTIVES	COMMUNICATE IDEAS	TAKE ACTION
Students investigate the world beyond their immediate environment.	Students recognize their own and others' perspectives.	Students communicate their ideas effectively with diverse audiences.	Students translate their ideas and findings into appropriate actions to improve conditions.
<p>Students:</p> <ul style="list-style-type: none"> Identify an issue, generate a question, and explain the significance of locally, regionally, or globally focused researchable questions. Use a variety of languages and domestic and international sources and media to identify and weigh relevant evidence to address a globally significant researchable question. Analyze, integrate, and synthesize evidence collected to construct coherent responses to globally significant researchable questions. Develop an argument based on compelling evidence that considers multiple perspectives and draws defensible conclusions. 	<p>Students:</p> <ul style="list-style-type: none"> Recognize and express their own perspective on situations, events, issues, or phenomena and identify the influences on that perspective. Examine perspectives of other people, groups, or schools of thought and identify the influences on those perspectives. Explain how cultural interactions influence situations, events, issues, or phenomena, including the development of knowledge. Articulate how differential access to knowledge, technology, and resources affects quality of life and perspectives. 	<p>Students:</p> <ul style="list-style-type: none"> Recognize and express how diverse audiences may perceive different meanings from the same information and how that affects communication. Listen to and communicate effectively with diverse people, using appropriate verbal and nonverbal behavior, languages, and strategies. Select and use appropriate technology and media to communicate with diverse audiences. Reflect on how effective communication affects understanding and collaboration in an interdependent world. 	<p>Students:</p> <ul style="list-style-type: none"> Identify and create opportunities for personal or collaborative action to address situations, events, issues, or phenomena in ways that improve conditions. Assess options and plan actions based on evidence and the potential for impact, taking into account previous approaches, varied perspectives, and potential consequences. Act, personally or collaboratively, in creative and ethical ways to contribute to improvement locally, regionally, or globally and assess the impact of the actions taken. Reflect on their capacity to advocate for and contribute to improvement locally, regionally, or globally.

Asia Society , 2010

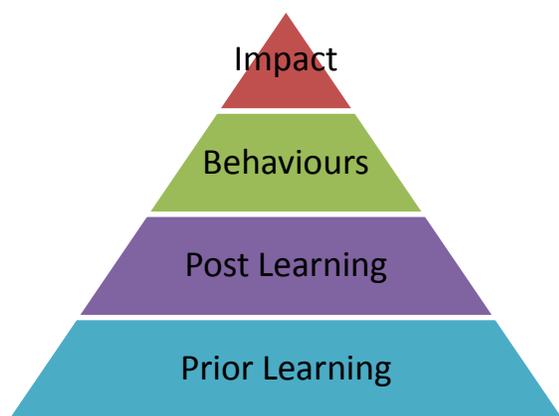
In its current form this matrix represents a collection of four outcomes (investigating the world, recognizing perspectives, communicating ideas and taking action) and the associated attributes of someone who was demonstrating evidence of achievement of each outcome. In its current form a faculty developer could use these outcomes to design assessment tasks to measure global competency (Longview, 2008) among pre-service teachers in all four dimensions (Asian Society, 2008).

Investigating the World	Recognizing Perspectives	Communicating Ideas	Taking Action
<ul style="list-style-type: none"> Demonstrating knowledge of and curiosity about the world's history, geography, cultures, environmental and economic systems, and current international issues 	<ul style="list-style-type: none"> Demonstrating a capacity to analyze primary sources from around the world, appreciate multiple points of view, and recognize stereotyping 	<ul style="list-style-type: none"> Demonstrating a capacity to use language and/or cross-cultural skills to communicate effectively with people from other countries, understand multiple perspectives, and use primary sources from around the globe 	<ul style="list-style-type: none"> Providing examples of responsible citizenship within the world and /or within their own community
<ul style="list-style-type: none"> Demonstrating knowledge of the international dimensions of their subject matter and a range of global issues 			<ul style="list-style-type: none"> Demonstrating ethical citizenship within the world and /or within their own community

Similarly the associated attributes of each dimension of global competency (Asia Society, 2010) provide useful teaching and learning activities that can be used by the faculty developer to develop global

competency teaching and learning activities for faculty .Maintaining the focus on teaching and learning activities will assist the developer embed the focus of the professional learning on everyday faculty practice. Incorporating the Global Competence activities (Longview, 2008) and the Global Competence Matrix (Asia Society, 2010) provides faculty with access to the best available research on effective learning and teaching of Global Competence. Presenting these professional learning workshops as a multi-session series creates the potential for collaboration, feedback and reflection. Incorporating synchronous and asynchronous technology would facilitate access to mentors, outside expertise and additional resources to assist faculty negotiate unexpected problems encountered while implementing their global competency curricula. This same technology would also allow for individual faculty members and university administrators to work collaboratively to determine strategies for improvement and share best professional learning practices with colleagues and peers.

Evaluating a Professional Learning Program for Global Competence and World Mindallness



The lack of a criterion –based assessment framework for faculty global mindedness creates a problem for gauging the quality of faculty learning during professional development activities and the impact of faculty development activities on the development of global competence among pre-service candidates. The proposed design for professional learning provides a framework of what to include and measure, however , in its current form the design fails to provide faculty

developers with a means for monitoring the impact of professional learning programs on faculty and pre-service candidates. A slightly modified version of Kirkpatrick’s Training Evaluation Model (Chapman, 2007; Kirkpatrick, 1998) provides a useful framework to begin to address this need. The first three levels of prior and post learning (what new knowledge and skills they acquired) and behavior (their application of learning in their classroom) provides data for evaluating short to medium term outcomes of professional learning

Assessing learning of global competence, using questions based on the attributes and dimensions identified in Table 2, prior to the first professional learning experience could provide a snapshot of a faculty member’s initial understandings about the attributes of Global Competence. For some faculty

their results may place them in the global mindlessness category (i.e. unconscious incompetence). Assessing learning using the same dimensions and attributes at the end at the workshop may demonstrate that some faculty have progressed to the global mindedness category (i.e. conscious incompetence). Continuing to assess the attributes of Global Competence once a faculty member has started to apply their new learning in their classroom may generate data that indicates some faculty have progressed to the global mindfulness category, (i.e. conscious competence). If this expectation to demonstrate learning continues as part of an ongoing cycle of improvement involving learning by doing, reflecting and refining, then the results may indicate some faculty may have achieved global mindallness (i.e. unconscious competence). Achieving global mindallness would be similar to a faculty member internalizing (Krathwohl, Bloom, and Masia, 1964) see the global competence professional learning to the point where the associated knowledge and skills consistently informs their curricula decisions. Table Three summarizes this development process.

Professional Learning Stage	Development Level	Performance Level	Affective Level
Prior Learning	Global Mindlessness	Unconscious Incompetence	
Post Learning	Global Mindedness	Conscious Incompetence	Receiving / Responding
Initial Cycle of Behaviors	Global Mindfulness	Conscious competence	Valuing /Organizing
Continuous Cycles of Behaviors	Global Mindallness	Unconscious Competence	Characterization

Since Hett (1993) found that people engaging in internationalization experiences are more likely to report higher levels of global mindedness , it is reasonable to expect that continued engagement by faculty in global competence professional learning (i.e.an internationalization activity) would contribute to the development of global mindedness and consequently higher levels of global competency among the faculty member’s learners. This testing of this assumption would relate to the final level of

Kirkpatrick's evaluation (impact) which could involve student completing a measure of global competence such as the My Cultural Awareness Profile (Marx and Moss 2011). This level of evaluation, while often ignored would provide faculty and administration with an alternative data source to guide future professional learning activities (Chapman,2005).

Next steps ??

The lack of a criterion –based assessment framework for faculty global mindedness provide the problem that served as the motivation for this paper. Finding solutions to this problem are an import step in enhancing faculty capacity to prepare teachers for the 21st Century classroom. The framework for global 'mind-all- ness' provides a target for measuring the effectiveness of faculty development linked to internationalization activities. The establishment of a relationship between global mindedness (Hett,1993) and global competence (Longview,2008) provides some clarification of how globally minded faculty can contribute to the development of globally competent teachers. The application of principles of professional learning (DEET,2005) provides faculty developers with a new set of design principles for professional learning programs. The tables linking global competence outcomes, assessment and activities offers a framework to inform the design of professional learning course to develop global mindallness among faculty. The outlined professional development approach (Kirkpatrick, 1959) including alternative data sources (Marx and Moss 2011) represents a strategy for measuring the impact of the professional development activity. All that remains now is to test the theory to see how well the ideas translate into practice.

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ADJUSTMENT NEEDS AND COPING PATTERNS OF INTERNATIONAL STUDENTS IN THE UNIVERSITY OF CAPE COAST (FORDE & BRENYA)

Introduction

Encouraging international students in one's country fosters global understanding. Gutierrez, Bhandari and Obst (2008) reported that 98 percent of the 533 institutions they surveyed had plans to increase international student enrollment. Zusman (2005) stated that demand for higher education will continue to grow in the next decade. Among the institutions they surveyed, 68 percent have specific and set objectives for international student enrollments, while the rest did not seem to have any set objectives for international students. As institutions of higher learning expand their populations of international students, attention must be given to the unique challenges such students face.

Several studies have suggested that the bigger the difference between the host culture and the home country, the worse the culture shock is, and the more trouble students have adapting (Forstat, 1951; Furnham, 2004; Graham, 1983; Wehrly, 1986). Attending school in a foreign country is one of the first major life transitions for many young adults. School in a foreign country brings a unique opportunity to interact and live with people from various backgrounds and cultures. For some students there is excitement about the new experiences of university campus life, while for others, it evokes feelings of apprehension. Foreign students must adapt to **new environments and relationships**, adjust to new living arrangements, and build up new relationships. Adjusting to roommates who may have very different boundaries and totally dissimilar characteristics than they are accustomed to, language barriers and cultural differences are some of the challenges of foreign students (Sümer et al., 2008; Furnham, 2004;)..

The attraction of living outside one's country and the independence and autonomy to take charge of one's choices and decisions be exciting, but Iversen (2009) noted that it may also feel overwhelming because the freedom to manage one's daily life can also be either very frustrating.

Foreign students must deal with many difficult responsibilities. Matlock, Merta, Ames & Ross (1995) emphasized the fact that international students encounter more, and other, difficulties than domestic students do. Managing time, balancing study and social events, handling finances in new currency and

new relationships need to be carefully attended to. According to Iverson (2009) every culture has a unique set of attitudes, values, cognitive etiquette, language and appropriate as well as inappropriate social behaviours. Ignorance of these could result in insecurity and prompt defensive behavior that could have a great effect on adapting to other cultures.

Khawaja and Dempsey in Iverson (2009) name social isolation as a contributor to the psychological distress of the international students International students are particularly vulnerable as they have left their social support networks behind and must mediating stressful circumstances to build new supportive networks to help them cope with new stressors and new problems (Lee, Koeske, & Sales, 2004). *Succeeding in higher education is a challenging engagement.* This can be further compounded by negative interactions and experiences which have the capacity to disengage students from a proper focus on the academic activities of the institution, and eventually lead to students' withdrawal or dropout (Pascarella & Terenzini, 2005). Some students undergo pressure from both themselves and their parents. Failure to efficiently manage these increased demands and expectations can lead to problems and anxiety (Bradley, 2000).

Carlson, Martin, & Buskist (2004) cited in Iversen (2009) describing how people cope with stress mentioned problem-focused coping and emotion-focused coping. Problem-focused coping entails dealing with the source of the stress directly, trying to change the situation in a way that would presumably eliminate or reduce the stress while emotion-focused coping is directed towards changing one's feelings about the situation, instead of changing the actual situation, such as trying not to think about the stressor. This means if the stressor can be removed or reduced with reasonable means, a problem-focused coping response is far more adaptive than an emotion-focused coping. Iverson writes that if the problem if the problem cannot be dealt with directly, emotion-focused coping is of course better than nothing. She suggests that the problem with this way of coping however is that many emotion-focused coping techniques can be rather unhealthy, such as smoking, excessive drinking or rumination.

Problem statement

Even though all students' first days in new environments require different forms of adjustment, the challenges of international students make them particularly vulnerable. Hendricks & Skinner (1977) opined that international students are often frequently reminded that they are outsiders. They have

peculiar problems created by language barriers, cultural differences, and lack of ties with the host society. The constant subtle reminders on the fact that they do not “belong” in the society where they currently reside could create a situation that is capable of hindering their academic success and social adjustment.

Purpose

This study was premised on the view that all students' first days in new environments require different forms of adjustment. For the increasing number of international students choosing to attend higher education in Ghana, sharp changes in cultural habits, language, environmental surroundings and homesickness could be strong barriers to adjusting to living and learning in their new environment. The purpose of this study was to explore the nature of the difficulties international students in the University of Cape Coast face in adjusting socially and academically whiles studying outside of their home countries.

Research questions

1. What are the socio-cultural adaptation challenges of undergraduate international students in the University of Cape Coast?
2. What are the academic adaptation challenges of undergraduate international students in the University of Cape Coast?
3. What types of coping strategies are most often used by undergraduate international students in the University of Cape Coast?

Hypotheses

1. Ho: There is no statistically significant difference between the responses of male and female undergraduate international students in the University of Cape Coast with regard to their socio-cultural adaptation challenges.
H1: There is a statistically significant difference between the responses of male and female undergraduate international students in the University of Cape Coast with regard to their socio-cultural adaptation challenges.

2. Ho: There is no statistically significant difference between the responses of male and female undergraduate international students in the University of Cape Coast with regard to their academic adaptation challenges.

There is a difference between the responses of male and female undergraduate international students IN the University of Cape Coast with regard to their academic adaptation challenges.

METHOD

Research design

The design adopted was a descriptive survey case study approach. Case studies investigate individuals, groups, institutions or other social units. The social unit may be an individual, a social group, a community or institution in the hope that insights gained will suggest ways to improve such individuals or institutions (Amehahe & Asamoah-Gyimah, 2008). Descriptive studies provide information on the current status of a phenomenon (Gay, 1992). Descriptive designs produce rich responses from a wide range of people (Fraenkel & Warren 1993). Best and Kahn (1987) noted that descriptive surveys investigate conditions or relationships and determine the nature of prevailing conditions, practices, attitudes and opinions that are held or processes that are going on. This type of study enables generalizations to be made from samples selected from the population and is versatile and appropriate to the identification of present needs (Osuala, 2001). Notwithstanding, its advantages, the use of the descriptive design could produce unreliable results especially when respondents feel the questions were threats to their privacy and thus may not be completely truthful in responding (Creswell, 1994). We believed that these shortfalls would not affect our study because the items in the questionnaire were non-threatening and confidentiality was assured.

Population

The population of the study was 268 international students in UCC in the 2010/2012 academic year. This number was made up of 241 fully enrolled and 27 who had enrolled for short-term (semester or year's) study.

Sample and Sampling procedure

Convenience sampling was used to select 90 Nigerian undergraduate students. The 90 respondents were made up of 47(52.2%) females and 43 (47.8%) males for the study. All 90 students consented to participate in the study after the purpose of the study had been explained to them. Their ages ranged from 16 to 26, with a mean age of 19 years. The single participant who was under 18 years was included in the study on the basis of her being considered to be an emancipated minor. According to wisegeek.com (2012), an emancipated minor is a child who has been granted the status of adulthood by

a court order or other formal arrangement. In some cases however, emancipation can be granted without due court granting when the minor is bound to make a decision for himself in the absence of his parents.

Instrument

The instrument used was a 55- item 3-likert scale questionnaire adapted from Ward and Kennedy's (1999) Socio-cultural Adaptation Scale. The questionnaire consisted of four sections. The first section was of a demographic nature, asking for age, gender, nationality and level. Respondents were asked to indicate how much difficulty they experience in 38 different areas, using a three-point scale. Participants were required to indicate items that gave them no difficulty, some difficulty and extreme difficulty.

Sections B, C dealt with socio-cultural adaption and academic adaptation respectively. Ten open ended questions were used in Section D to ascertain their methods of coping with their challenges. The Socio-cultural Adaptation Scale had relatively high reliability for this sample It had a Cronbach's alpha of $\alpha = .953$

Data Collection Procedure

Data was collected in a day. We met respondents on the day scheduled for the election of their executives after the necessary formalities had been followed with the Office of International Studies to gain access. About 15 minutes was spent in explaining the purpose of the study and soliciting the cooperation of respondents. Confidentiality was assured. Respondents took an average of 25 minutes to complete the questionnaire.

Data Analysis Procedure

The Statistical Product for Service Solutions was used to analyze the data. Research questions 1 to 4 were analyzed using frequencies and percentages whiles Hypotheses 1 and 2 were analyzed with the independent samples t-test. The final 2 hypotheses were using the ANOVA.

Results

This section deals with the results of the analyses of the data. Four research questions were addressed in the first part. **Research question 1 was:** What are the socio-cultural adaptation challenges of undergraduate international students in the University of Cape Coast? The results are presented in Table 1.

Table 1: Socio-Cultural Adaptation of Undergraduate International Students in UCC

Items	No Difficulty		Some Difficulty		Extreme Difficulty	
	No	%	No	%	No	%
Making friends	63	70.0	20	22.2	7	8.8
Transport difficulties	39	43.3	31	34.4	20	22.2
Making myself understood	37	41.1	39	43.3	14	15.6
Going shopping	46	51.1	27	30.0	17	18.9
Worshipping	63	70.0	12	13.3	15	16.7
Talking about myself	42	46.7	29	32.2	19	21.1
Too many unfriendly people	42	46.7	34	37.8	14	15.6
Getting used to the food	33	36.7	30	33.3	27	30.0
Following rules and regulations	65	72.2	15	16.7	10	11.1
Dealing with bureaucracy	38	42.2	33	36.7	19	21.1
Accommodation problems	47	52.2	31	34.4	6	6.7
Finding my way around	49	54.4	29	32.2	12	13.3
Dealing with the climate	47	52.2	21	23.3	22	24.4
People staring at me	38	42.2	31	34.4	21	23.3
Going shopping	54	60.0	24	26.7	12	13.3
Understanding the local language	11	12.2	19	21.1	60	66.7
Homesickness	19	21.1	32	35.6	39	43.3
Adapting to local etiquette	31	34.4	39	43.3	20	22.2
Getting used to Ghanaian way of life	21	23.3	33	36.7	36	40.0

Dealing with people of higher status	40	44.4	32	35.6	18	20.0
Knowing how to seek help	37	41.1	36	40.0	17	18.9

The four areas that the least numbers of respondents reported “No Difficulty” in understood the local language, getting used to Ghanaian way of life, adapting to local etiquette and homesickness. These were an indication that more international students had varying degrees of difficulty with these items. Some critical comments of respondents are presented below:

“The language factor... so for example when you even want to buy something at ‘Science Market’, the people selling don’t really understand the English language” ...“Flowing with the humour or jokes ...is quite a problem because it’s being said in their local dialect.”

Others reported discomfort related to feelings of being treated different.

“They (Ghanaian students) look at you and ...sometimes I would be looking at myself...wondering if I look funny or something...”

Research question 2 was: What are the academic adaptation challenges of undergraduate international students in the University of Cape Coast? Table 2: Academic Adaptation of Undergraduate International Students in UCC

Items	No Difficulty		Some Difficulty		Extreme Difficulty	
	No	%	No	%	No	%
Completing assignments on time	48	53.3	33	36.7	9	10
Expressing my ideas in class	35	38.9	39	43.3	16	17.8
Understanding academic requirements	53	58.9	26	28.9	11	12.2
Following academic regulations	70	77.8	10	11.1	11	11.1
Understanding lecturers	44	48.9	40	44.4	6	6.7
Making myself understood	40	55.6	28	31.1	12	13.3
Locating lecture halls	67	74.4	19	21.1	4	4.4
Getting used to academic work load	48	53.3	29	32.2	13	14.4
Selecting courses	55	61.1	27	30	8	8.9
Adjusting to University regulations	62	68.9	18	20	10	11.1
Knowledge of academic regulations	54	60.0	25	27.8	11	12.2
Getting used to examination procedures	54	60.0	23	25.6	13	14.4
Difficulties with academic work	39	43.3	38	42.2	13	14.4

Calculating my CGPA 46 51.1 24 26.7 20 22.2

The results indicate that undergraduate international students in UCC did not appear to have any outstanding academic adaptation challenges. Twenty (22.2%) indicated some difficulty with how to calculate their Cumulated Grade Point Averages, expressing their ideas in class and getting used to academic work load. The three least important academic concerns were locating lecture halls, understanding lecturers and selecting courses.

An open-ended question required respondents to indicate their single most difficult challenges in adjusting to UCC as foreign students. Responses are presented in Table 4.

Table 3: Hardest Adjustment Challenges

	Frequency	Percentage
The hardest things		
Language Barrier	33	36.6
Academics	24	26.6
Food	19	21.1

Comments related to the language barrier and academic struggles included:

“When lecturers use local language to explain things in class – it is uncomfortable.”

“When studying fellow students sometimes suddenly change to their local language”,

“Feeling left out because for example in class, most of the time, the lecturer cracks jokes in his own local language”

Research question 3 was: What types of coping strategies are most often used by undergraduate international students in the UCC?

The multiple responses of respondents on strategies they used to cope with their adaptation challenges are presented in Table 4.

Table 4: Coping Strategies Most Often Used by Participants

Coping strategy	Frequency	Percentage
Emotion-focused		
Ignore/Pretend problem is not there	40	44.4
Listen to music/eat/ sleep	34	37.7
Other	16	17.8
No response	10	11.1
Problem-focused		
Adjust/Learn language/Get used to	42	46.6
Discuss problem with friend/Lecturer	26	28.8
Other	10	11.1
No response	22	24.12

Emotion-focused or passive coping strategies used by respondents included ignoring or pretending that their problems did not exist, listening to music and eating. One female respondent aged 19 years stated:

I ate and I ate and ate and ate and ate and ate. I became an emotional eater. It made me feel better for a while then I became depressed again.

Some problem-focused ways of dealing with adaptation challenges emerged from the following comments:

"I worked hard to better myself...I even started learning the local language.:

"I talked to some lecturers and to a counselor. I learnt to be more independent then I made friends with some Ghanaians."

Responses from participants on a related open-ended question showed that 60 (66.7%) of respondents stated that the orientation programme helped them to make better socio-cultural and academic adjustments. The orientation helped them for instance to understand rules and regulations better. That 30 (33.3%) found it unhelpful is indicative that the programme needs to be further improved.

The two most common indicators of the effectiveness of the orientation were that it helped them to find their way around easily and it also helped them to understand the University's rules and regulations. Responding to how else they thought the University could help them adjust better socially

and academically, international students felt that if they were given some financial reliefs and if online registration could be extended to Nigeria, it would facilitate their adjustment in the university. Their responses are presented in Table 5

Table 5: Suggested Ways of Helping International Students Adjust Better

The role of the institution	Frequency	Percentage
Free transport	30	33.3
Reduced fees	26	28.8
Online registration	23	25.5

Hypotheses Testing

All hypotheses were tested at 0.05 level of significance.

Hypothesis 1 was: There is no difference between the responses of male and female undergraduate international students in the University of Cape Coast with regard to their socio-cultural adaptation challenges.

This hypothesis intended to find out whether a difference existed between socio-cultural adaptation of males and females. Table 6 presents the descriptive data. Table 9 presents the independent samples t-test for hypothesis 1.

Table 6: Independent Samples t-Test of Responses on Socio-Cultural Adaptation by Gender

Gender	N	Mean	Std. Deviation	t	df	Sig(2-tailed)
Totsca Male	43	36.3488	8.10609	-3.115	88	.002
Female	47	43.4468	12.76682			

Table 6 shows that for the socio-cultural adaptation of international students, males (M=36.35, SD =8.11) reported having less difficulty than did the females (M=43.45, SD=12.77), $t(88)=-3.115$, $P=.002$.

This implies that there was a statistically significant difference between males and females with regard to their socio-cultural adaption. The null hypothesis is therefore rejected and alternate is accepted.

Hypothesis 2 was: There is no statistically significant difference between the responses of male and female undergraduate international students in the University of Cape Coast with regard to their academic adaptation challenges.

This hypothesis sought to find out whether a difference existed between academic adaptation of males and females. Table 7 presents the t-test table.

Table 7: Independent Samples t-test for of Responses on academic Adaptation by Gender

Gender	N	Mean	Std. Deviation	t	df	Sig(2- tailed)
Total						
Male	43	20.9767	5.21668	-2.95	88	.004
Female	47	25.2979	8.19840			

Table 7 shows that males had less difficulty adapting to academic challenges (M=20.98, SD=5.21668) than females (M=25.30, SD=8.20, $t(88)=-2.95$, $P=.004$). This difference was statistically significant implying that there was a significant difference between international males and females students with regard to their academic adaption. The null hypothesis is therefore rejected and the alternate hypothesis is accepted.

Discussion

The respondents in our samkle reported that their most outstanding challenge with adapting socio-culturally was linked to their inability to understand the local language. This prevented them from socializing easily with their Ghanaian peers and heightened their fears of being different. According to Li and Kaye (1998), language problems cause homesickness and depression in international students. This study endorses their view that being able to make oneself understood is important for a successful stay abroad.

Poyrazli, Arbona, Bullington, & Pisecco (2010) in their study of 79 Turkish college students studying in the USA reported that that those who had better proficiency in the language of the country of sojourn

or study indicated that they had less problems with and better academic adjustment than those who did not. Participation plays an important role in determining academic success. IS's difficulty in expressing their ideas in class perhaps stems from their different accents, fear of making mistakes or being stared at and of potential ridicule from their classmates and professor.

Even though the majority of IS in UCC did not have academic adaptation difficulties that appeared to be outstanding, strategies still need to be put in place to meet that needs of those who did report that they had varying degrees of academic difficulties. Biggs (1997) stated that university teachers need to focus on improving the quality of teaching and learning for students from all educational and cultural backgrounds. Clanchy and Ballard (1997) suggested that specific strategies need to be put in place to assist international students in particular.

With regard to the coping patterns used in dealing with the adjustment problems, our findings showed that international students in UCC used both the emotion-focused and problem -focused coping patterns. We noted in addition that the emotion focused coping pattern was used more often than the problem-focused coping pattern. These findings are in consonance with those of Poyrazli, Arbona, Bullington, & Pisecco. The problem-focused coping strategy which was often utilized discussing concerns with friends and or lecturers. Unfortunately, the less utilized strategy was active coping. The emotion-focused coping strategy that was often utilized was listening to music, eating and sleeping followed by denial or pretending that the problem did not exist. In Poyrazli, Arbona, Bullington, & Pisecco's study, denial was the more often used than the emotion-focused coping method. Sümer, Poyrazli and Grahame (2008) wrote that social support groups for international students are critical.

Recommendations:

The Department of Languages should mount short courses in the basics of the Fanti language for IS during their first year of study. "Buddy" programmes to pair international students with Ghanaian students should be instituted to help foreign students practice speaking the language and bond with Ghanaian friends for even greater support. Formation of affiliation groups composed of first year Ghanaian students for group study and socializing should be encouraged. The Centre for International Education should be responsible for this.

Hall executives should make sure that ISs are included in campus social gatherings and events like Hall Week Celebrations. This would provide more opportunities for them to mix with and make friends with others who are not co-nationals. The Office of the Dean of Students must ensure that international students receive the same information about clubs, sports and other university events as local students.

The University's Counselling Centre must engage international students in programmes and hands on activities that will equip them with effective problem-focused coping and adjustment strategies. Guidance activities directed towards developing specific social skills and habits that would enable international students to better negotiate the difficult language barrier problems could be organized in their hall of residence. Keeping in mind that this student population is different from local students, professional counsellors should be assigned to each IS.

We think that lecturers might help IS increase their participation by both calling on them during class and giving them priority if they raise their hands. Further, to make the students more comfortable about speaking in class, faculty should wait for students to finish and not interrupt them regardless of pronunciation or grammar mistakes. Lecturers in UCC must be sensitive to the all the instructional needs of ISs and be careful not use local dialects in teaching. If the local dialect must be used, whatever is said must always be translated into English.

Recommendations for Further Study

The following could be considered as areas for further research: A comparative study on the adjustment problems of IS students who are freshmen. Some longitudinal studies could also be conducted on continuing ISs belonging to the same cohort to evaluate the impact of the university's orientation programme. Whether or not IS receive any formal psychological and other pre-departure briefing or training prior to leaving their home countries to begin studying in UCC needs also to be investigated.

A comparative study on the adjustment problems encountered during the first semester and those that are encountered during the second semester to find out if indeed the impact of school transition is stronger during the first semester. Psychological changes in students brought about by the challenges of leaving familiar social support networks and the struggle to mediate new terrain to build new supportive networks also provide situations that might be effectively investigated using a qualitative approach.

Conclusion:

The results of this study have provided a clear picture of Nigerian international students' experiences as they interact with their academic and social communities in the University of Cape Coast. The indication was that they lacked the necessary psychological preparation for studying abroad. Oberg (1960) opined in this regard, that training in socio-cultural, and problem-solving skills is imperative for international students because in the new cultural and educational environment, these students encounter a great deal of culture shock which if not properly addressed, would impede their academic success.

Volet and Ang (1998) stated that the goal of making higher education international venture is to prepare students to work in international and inter-cultural contexts. Marion (1986) stated that studying abroad provides international students with more realistic perceptions of both the home country and the country of their sojourn and produces graduates who have a broader, less nationalistic view of the world and increased self-confidence. These ideals should provide the impetus for the University of Cape Coast and other universities to the important task helping international students to successfully adjust in their countries of study. The first steps would be by implementing the recommendations presented in this paper.

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BRUNEI TEACHERS' ATTITUDES AND PERCEPTIONS OF THE INDIVIDUALIZED EDUCATION PROGRAM (TIMBANG & KOAY)

Background

In the past, students with special needs in Brunei Darussalam, especially those with mild disabilities, were admitted to regular schools. However, these students usually met with academic failures and subsequently repeated grades. Prior to 1990s, schools did not have teachers trained in special education to teach such students effectively. The cycle of repeated failures, without remediation, resulted in many over-age students and repeaters in the schools (Omar, 2001).

The large number of students who failed in the school system prompted the Ministry of Education to introduce special education into the schools in order to provide assistance to children and youth with special needs (Csapo & Omar, 1996).

According to Wong and Mak (2005), the Special Education Unit (SEU) was set up at the end of 1994, with the following objectives, roles and responsibilities:

- a) To identify students with special educational needs (SEN)
- b) To increase the awareness of all teachers and school personnel on students with SEN
- c) To establish educational services for students with SEN within the inclusive school system
- d) To increase the understanding of parents and the public in general on students with SEN
- e) To develop resources for students with SEN
- f) To keep a national data bank on students with SEN
- g) To develop specific primary and secondary programs, as well as programs for school staff on special education
- h) To evaluate the effectiveness of the special education programs
- i) To initiate and carry out research on special education and education in general
- j) To make short and long term plans and implement appropriate services within the school system
- k) To liaise with national and international agencies in order to provide the most effective services for students with SEN
- l) To prepare guidelines and assist in formulating policies for the successful implementation of special educational programs and services

The Sultan Hassanal Bolkiah Institute of Education (SHBIE), University of Brunei Darussalam (UBD) in collaboration with the SEU, Ministry of Education, jointly mounted the Certificate in Special Education in January 1995. This program was offered part-time over three semesters. The eight courses in this program are equivalent to 30 credit units. The main aim of the Certificate in Special Education is to train special education teachers called Learning Assistance Teachers (LATs). LATs are now known as Special Educational Needs Assistance (SENA) teachers. The SENAs are equipped with basic skills and knowledge about children with special needs. Their main roles are to conduct screening tests to identify students with special needs and to prepare and implement individualized educational plans (IEP) for these students. The first cohort of SENAs completed their training in May 1996. Beginning June 1996, the Learning Assistance Program was implemented in regular schools in the Brunei Muara district.

One hundred and fifty five countries, including Brunei Darussalam, attended the UNESCO's *World Conference of Education for All*, held in Jomtien, Thailand in 1990 (Norjum, 2002). This conference highlighted the basic learning needs of all students and called attention to the unmet needs of students with special needs. In 1994, representatives from 92 governments (including Brunei Darussalam) and 25 international organizations attended the *World Conference on Special Needs Education in Salamanca*, Spain (Norjum, 2002). The *Salamanca Statement and Framework for Action on Special Needs Education* (UNESCO, 1994) urged all governments to adopt as a matter of law or policy the principles of inclusive education.

The Ministry of Education, Brunei Darussalam embraces the concept of inclusive education and its philosophy, as stated in the Special Education Policy Guidelines (SEU, 1997, p. 1):

“All pupils are able to learn given an appropriate learning environment. Appropriate learning environments can be created within the inclusive school. The inclusive school is one that provides appropriate instruction for all pupils based on their level.”

The Minister of Education, Brunei Darussalam, during the opening address of the 1st *National Conference on Special Education* in 1996, stressed that:

“We must look at how the system can better serve all children, including children with special needs who require special education and related services if they are to realise their full potential

The special education, or special needs agenda in Brunei Darussalam, is an essential element of the drive for education for all. The emphasis is on inclusive education where the aim is to respond to the needs of all children."

(Abdul Aziz, 1996, p.2).

Delivery of Special/Inclusive Education in Brunei Darussalam

The implementation of special education into schools in Brunei Darussalam is based on the Learning Assistance Model. The SENA teachers are responsible for identifying students with special needs by using various screening tests designed by SEU. A draft Individualized educational plan (IEP) or remedial educational program (REP) is prepared by the SENA teacher with input from class teachers and parents. The former is a written plan which documents the individualized program designed specifically to meet the learning needs of the students with high support needs (HSN) and focuses on the independent living skills necessary for these students to cope with everyday life. The latter is a written record of the educational program that is designed to meet the student's individual learning needs by spelling out the remediation, adaptation and/or modification to the regular curriculum (based on general principles of remedial teaching) necessary for the student to acquire the academic skills needed to cope in class (Ratnawati, 2006).

The draft IEP/REP is then presented to the School Based Team (SBT), comprising the head teacher as chairperson, SENA teacher, regular class teacher, and parents. The SBT discusses the various adaptations/modifications in the draft IEP/REP to ensure that the student receives an appropriate education program to meet his or her individual needs. Members of the SBT collaborate and discuss ways to ensure the provision of appropriate resources and support for students with special needs at the school level. The teamwork and successful partnerships generated by SBT help promote decision-making and shared responsibility, thus translating inclusive education into reality.

Once the IEP/REP has been approved, it will be implemented and monitored by the SENA teacher, in collaboration with regular class teachers. From time to time, as appropriate, depending on the needs of the student, he or she may be pulled out for a short period to the Learning Assistance Centre (LAC) for individual or small group instruction by the SENA teacher. In the LAC, the SENA teachers use a variety of teaching materials and teaching strategies such as direct instruction, task analysis, precision teaching, record keeping procedures to monitor progress of students with IEPs/REPs, and the

token economy system as reinforcement. The SENA teacher also helps the class teachers to plan and make instructional adaptations for students with special needs, demonstrates teaching techniques and helps to monitor the student's progress.

Implementation of Individualized Education Plan

The IEP is developed to ensure that students with HSN receive the program to meet their needs. The students with HSN are given a range of assessments including formal tests, structured observations, reference to the past records and informal assessments by the regular or SENA teachers. The data collected is analyzed and a program is discussed and approved by the SBT. The educational psychologists from the SEU provide a written consultation report at the end of each visit which includes a range of suggestions and recommendations for the HSN student's IEP. These suggestions will provide a guide for the teachers in meeting the student's special educational needs. Follow-up visits by the educational psychologists may be conducted to evaluate the student's response to the specific suggestions and his/her progress.

The Support Services for students with HSN from SEU are essential to create an appropriate educational environment which is likely to promote the student's learning. It is done by giving direct and effective support to the regular teachers so that students with HSN could be included in the learning activities in the regular classrooms. Support Services for students with HSN also provide assistance to the SBT to collaboratively plan the student's IEP.

The regular school curriculum is differentiated to allow for differences in the students' abilities. Complex skills can be task analyzed and broken down into smaller sub skills. These sub skills, when taught in a carefully controlled environment and to a predetermined sequence, can enable all students, even those with the most complex and severe difficulties, to make progress and acquire usable skills.

Objectives and Significance of the Study

The main purpose of this study is to assess the perceptions and attitudes towards the IEP of a randomly selected sample of regular and SENA teachers in the Brunei-Muara district. The specific objectives are:

- a) To assess the overall attitudes towards the IEP of the regular and SENA teachers.

- b) To study the actual and preferred roles of regular and SENA teachers in the development and implementation of the IEP.
- c) To study the perceptions of the regular and SENA teachers regarding various issues/concerns pertaining to implementation of the IEP for students with high support needs, including the: (i) efficiency of the IEP, (ii) procedure/process of the IEP, (iii) teachers' involvement in the IEP process, (iv) impact of IEP on teaching activities, (v) resources needed, problems encountered, (vi) suggestions to overcome these problems.
- d) To make various recommendations and suggestions to policy-makers and head teachers to enhance and support the implementation of the IEP.
- e) To make various recommendations and suggestions to the SEU, Ministry of Education and Sultan Hassanah Bolkuah Institute of Education, University Brunei Darussalam in the preparation of workshops to train regular teachers on how to implement the IEP.

Methodology

Research Instruments

Two main instruments were used in this research.

Survey Questionnaire

The survey questionnaire consisted of four sections. Section A was used to collect various demographic data of the respondents, including gender, age, highest academic qualification, location of schools, teacher type, years of teaching experience, grade level taught, pre-service special education course attended, years of experience teaching students with special needs, number of students with high needs taught, number of students and number of students with IEPs in the class, perceived knowledge and skills in teaching students with high support needs (HSN).

Section B of the survey questionnaire, *Attitudes towards the IEP Scale (ATIEPS)* was adapted from Tarver (2006) and Chua, Salwa and Noraini (2003). The *ATIEPS* consisted of 30 Likert items which were rated on a five point scale, namely "Strongly Disagree", "Disagree", "Undecided", "Agree", and "Strongly Agree". These items were divided into 5 sub-scales; each measuring the perceptions and attitudes of teachers towards the IEP, namely a) Efficiency of IEP, (*Regular teachers and SENA teachers*

use the IEP in teaching of HSN students in the classroom”) b) Procedure/IEP process and implementation of IEP, (*“The IEP process helps the regular teachers and SENA teachers teach the HSN students with various types of disabilities”*), c) Teachers’ involvement in the IEP process, (*“Regular teachers and SENA teachers collaborate, share and discuss in the drafting of the IEP process”*) d) Impact of IEP on teaching activities, (*“The IEPs are giving good impact in organizing, structuring the teaching activities in the instructional planning of Regular and SENA teachers”*) and e) Resources needed (*“The school has provided a lot of teaching materials to cater to the students’ needs”*).

Reliability of ATIEPS

The overall Cronbach alpha of ATIEPS was .86 and the test-retest reliability of ATIEPS .90 ($p < .001$). The subscale alphas were as follows: (1) *Efficiency of Individual Educational Program* (.84), (2) *Procedure /IEP process and implementation of IEP* (.67), (3) *Teachers’ involvement in the IEP process* (.68), (4) *Impact of IEP on teaching activities* (.79), (5) *Resources* (.59).

Sample

A total of 258 sets of questionnaires were distributed to all the primary schools (N = 52) with a SENA teacher in the Brunei Muara district. 43 SENA teachers (82.7%) and 191 regular teachers (81.6%) returned completed and usable questionnaires.

Results and Discussion

The results of the data that were collected consisted of the discussions of the outcomes from the analyses. For this research study, a total of 258 sets of questionnaires were distributed to all the primary schools (N = 52) with a SENA teacher in the Brunei Muara district. 43 SENA teachers (82.7%) and 191 regular teachers (81.6%) returned completed and usable questionnaires.

Characteristics of the Sample

This section describes the respondents of the study according to the following characteristics: gender, age, highest academic qualification, school zone, teaching level, teaching experience, pre-service special education course attended, years of teaching students with high support needs (HSN), number of HSN students with taught, perceived knowledge and skills in teaching students with HSN.

The sample consisted of 198 (84.6%) female and 36 (15.4%) male respondents. The female respondents comprised 161 regular teachers and 37 SENA teachers, whilst the male respondents consisted of 30 regular teachers and 6 SENA teachers. There were more females than males among the respondents.

The age of the respondents was range from 21.0 to 55.0 years with a mean of 36.7 and standard deviation of 8.7. Almost one third, N=69 (29.5%) of the teachers were in their twenties and thirties respectively. Fifty-two (22.2%) were in their forties, and 13 (5.6%) in their fifties.

Slightly more than half (51.3%) of the responsible had a first degree, 8.5% and 9.4% had an “O” level and “A” level pass respectively and 6.0% had a Master degree.

Approximately one quarter of the respondents were teaching in Brunei I, Brunei IIB and Brunei IV zone, whilst 13.2% and 13.7% were in Brunei IIA and Brunei III zone, respectively. Almost half of the respondents (49.1%) were teaching Year 4 whilst one quarter each was teaching Year 5 and 6, respectively. Less than one third (29.5%) of the teacher had 0 - 5 years teaching experience. About one fifth had taught 5-10 years (18.4%) and 10-15 years (20.5%), respectively. 42 (17.9%) of the teachers had taught 15-20 years.

Less than one quarter (23.5%) of the respondents had attended a pre-service special education course. As expected, SENA teachers had more years of experience teaching students with HSN compared to their regular counterparts. In terms of the number of HSN students taught, the regular teachers on the whole, had taught less HSN students.

In general, relatively more SENA teachers perceived that they had higher levels of knowledge and skills in teaching students with special needs as compared to their regular colleagues.

Attitudes towards the Individual Educational Program Scale (ATIEPS)

Independent Samples t-Tests of *ATIEPS*

Independent samples t-tests were carried out to determine if there were significant differences in attitudes towards the Individualized Education Plan, as measured by the independent variables, such as overall scale, and the five subscales with respect to the various independent variables. The results of the dichotomous comparisons are summarized below.

Gender

Overall, male teachers had slightly higher means of attitudes towards the IEP than female teachers. There were no significant differences in the attitudes towards the IEP in terms of gender for the Overall Scale and Subscales 1, 2, 4 and 5. However, for Subscale 3, male teachers had significantly ($p < .05$) higher means of attitudes than female teachers towards the IEP.

Teacher Types

Since the major focus of this study was on the attitudes and perceptions of regular and SENA teachers towards the IEP, the results of the independent samples t-tests of the dependent variables, namely the Overall Scale and each item in the five Subscales with respect to the independent variable, teacher types will be described and discussed in detail in this section.

SENA teachers had significantly higher mean of attitudes towards the IEP as compared to the regular teachers in the Overall Scale ($p < .001$); Subscale 2 ($p < .001$); Subscale 3 ($p < .001$) and Subscale 4 ($p < .01$).

SENA teachers when compared to the regular teachers had higher means of attitudes towards the IEP for all the items in Subscale 1. However, these differences were not statistically significant. Thus, both groups of teachers agreed that the IEP was useful to students with high support needs (See Table 1).

Table 1

Comparison of means of attitudes towards the IEP between regular and SENA teachers (SD in parentheses) for items in Subscale 1

Subscale 1 – <i>Efficiency of IEP</i>		Teacher Types		
		Regular	SENA	t-value
1.	<i>The Individualized Education Program (IEP) is useful for a student with high support needs.</i>	4.60 (.53)	4.72 (.45)	-1.36
2.	<i>The Individual Education program (IEP) can help teachers to address the needs of a student with high support needs.</i>	4.53 (.57)	4.63 (.54)	-1.04
3.	<i>The IEP provides individual attention to students with high support needs in my class.</i>	4.47 (.55)	4.53 (.55)	-0.74
4.	<i>IEP goals and objective provide a curriculum for my students.</i>	4.26 (.65)	4.42 (.66)	-1.42
5.	<i>The IEP serves as a tool in evaluating the student’s program and services.</i>	4.21 (.56)	4.37 (.66)	-1.67
6.	<i>It is feasible to use the IEP to teach students with various types of disabilities.</i>	4.29 (.64)	4.47 (.63)	-1.65

As shown in table 2, for eight out of nine items in Subscale 2 - *Procedure/process and implementation of IEP*, SENA teachers had significantly higher means (Items 7, 11, 12 and 13, $p < .001$; Items 10 and 15, $p < .01$; Items 8 and 14, $p < .05$) when compared to the regular teachers. Thus, SENA teachers were more positive towards the procedure/process when implementing the IEPs as compared to regular teachers. An exception to the above was found for item 9 - *The IEP development was solely the responsibility of the SENA teachers*. The results indicated that SENA teachers had significantly ($p < .001$) lower means than regular teachers for this item. Thus, SENA teachers disagreed that the development of the IEP should solely be their responsibility. Rather, it should be the responsibility of

both regular and SENA teachers to collaborate in this important procedure/process of the IEP. Both groups of teachers should plan and implement the IEP together.

Table 2

Comparison of means of attitudes towards the IEP between regular and SENA teachers (SD in parentheses) for items in Subscale 2

Subscale 2 – Procedure/process and implementation of IEP	Teacher Types		t-value
	Regular	SENA	
7. <i>Regular teachers should know the objectives of the IEP of each student with high support needs.</i>	4.20 (.71)	4.70 (.47)	- 4.36***
8. <i>The number of students in the classroom does not affect the implementation of IEP students with high support needs.</i>	2.76 (1.23)	3.21 (1.21)	-2.18*
9. <i>The IEP development is solely the responsibility of the SENA teachers.</i>	3.73 (1.29)	2.23 (1.31)	6.82***
10. <i>I discuss with other teachers the IEP implementation.</i>	3.93 (.73)	4.33 (.47)	-3.43**
11. <i>Regular teachers should adapt their teaching strategies according to IEP of individual student with high support needs.</i>	3.83 (.88)	4.44 (.63)	- 4.33***
12. <i>It feasible to adapt my teaching strategies according to the IEP for a student with high support needs.</i>	3.55 (.96)	4.40 (.58)	- 5.54***
13. <i>I try to teach and adapt my instruction according to the IEP of the students with high support needs.</i>	3.79 (.80)	4.47 (.51)	- 5.36***
14. <i>Regular teachers should have a copy of the IEP.</i>	4.14 (.78)	4.44 (.55)	-2.45*
15. <i>I feel confident in implementing the IEP.</i>	3.55 (1.12)	4.02 (.67)	-2.67**

***p<.001, **p<.01, *P<.05

As indicated in Table 3, SENA teachers as compared to regular teachers had significantly (Item 17, $p < .001$; Items 18 and 19, $p < .01$; Item 20, $p < .05$) higher means for four of the five items in Subscale 3. Thus, SENA teachers strongly supported the notion that regular teachers should collaborate with the former in drafting and writing the IEP; share teaching strategies listed in the IEP with other teachers and that the SBT meeting was helpful in developing the IEP.

Table 3

Comparison of means of attitudes towards the IEP between regular and SENA teachers (SD in parentheses) for items in Subscale 3

Subscale 3 - <i>Teacher's involvement in the IEP process</i>		Teacher Types		t-value
		Regular	SENA	
16.	<i>There is a need for regular meetings with relevant specialists to discuss about students with high support needs.</i>	4.09 (.77)	4.33 (.64)	-1.87
17.	<i>Regular teachers should collaborate with the SENA teacher in drafting and writing the IEP.</i>	4.09 (.85)	4.51 (.51)	-4.24***
18.	<i>I share the teaching strategies listed in the IEP with other teachers.</i>	3.89 (.78)	4.30 (.51)	-3.29**
19.	<i>The SBT meeting has been helpful in developing the IEP.</i>	4.08 (.63)	4.42 (.50)	-3.30**
20.	<i>I feel confident in collaborating with other teachers to implement the IEP.</i>	3.94 (.69)	4.21 (.64)	-2.32*

*** $p < .001$, ** $p < .01$, * $p < .05$

As expected, SENA teachers as compared to regular teachers had significantly higher means for three items in Subscale 4 (Items 22, 23 and 25, $p < .01$) as this was their field of expertise and as regular teacher tends to think that IEP is solely the responsibility of SENA teachers. Nevertheless, both teachers

ensure that the students' on an IEP receives an educational program that meets their individual learning needs through adaptation and/or modification of the curriculum (See Table 4).

Table 4

Comparison of means of attitudes towards the IEP between regular and SENA teachers (SD in parentheses) for items in Subscale 4

Subscale 4 - Impact of IEP on teaching activities		Teacher Types		
		Regular	SENA	t-value
21.	<i>I help to choose IEP goals for my students.</i>	3.95 (.73)	4.09 (.75)	-1.17
22.	<i>The data shared during the SBT meeting helped me developed goals and objectives.</i>	3.95 (.71)	4.35 (.61)	-3.37**
23.	<i>The IEP helps me to organize and structure my teaching better.</i>	4.04 (.59)	4.35 (.48)	-3.19**
24.	<i>I am a better teacher because I have the IEP to guide my instructional planning.</i>	3.93 (.81)	4.09 (.65)	-1.27
25.	<i>I use my IEP goals and objectives to plan instructional activities.</i>	4.02 (.71)	4.35 (.48)	-2.88**
26.	<i>Using a list of IEP goals and objectives provides me more time for teaching.</i>	4.02 (.70)	4.09 (.61)	-.63

**p<.01

The four items in Subscale 5 (see Table 5) referred to resources which teachers used for teaching the students with HSN. Of the four items in Subscale 5, the SENA had significantly ($p<.001$) higher means for item 27 - *I make lots of materials for teaching students with high support needs*. This result indicated that SENA teachers, as compared to their regular counterparts, were more inclined to make teaching aids for teaching students with HSN.

Table 5

Comparison of means of attitudes towards the IEP between regular and SENA teachers (SD in parentheses) for items in Subscale 5

Subscale 5 - Resources		Teacher Types		t-value
		Regular	SENA	
27.	<i>I make lots of materials for teaching students with high support needs.</i>	3.69 (.96)	4.26 (.62)	-3.69***
28.	<i>My school has sufficient resources that I can use to teach students with high support needs.</i>	3.65 (1.12)	3.42 (1.12)	1.22
29.	<i>The headmaster allocates a budget to buy resources for students with high support needs.</i>	3.65 (1.11)	3.40 (1.12)	1.35
30.	<i>I have a teacher aide that provides support in teaching the students with high support needs.</i>	3.27 (1.40)	3.19 (1.40)	.34

***p<.001

Attendance of a Pre-service Special Education Course

Surprisingly, teachers who did not attend a pre-service special education course had slightly higher means of attitudes towards the IEP as compared to those who had attended the course. However, these differences were not significant for the Overall Scale and Subscales 1, 2, 3 and 4. As for Subscale 5, the difference was slightly significant [p<.05] (See Table 6).

Table 6

Comparison of means attitudes towards the IEP and attendance of a pre-service special education course

Dependent Variable		Attended Sp. Ed Course		t-value
		No	Yes	
Overall Scale	<i>ATIEPS total scale</i>	119.45 (9.63)	118.96 (12.59)	.30
Subscale 1	<i>Efficiency of IEP</i>	26.51 (2.48)	26.49 (3.10)	.31
Subscale 2	<i>Procedure/IEP process and implementation of IEP</i>	33.86 (4.03)	34.44 (4.71)	-.89
Subscale 3	<i>Teacher's involvement in the IEP process</i>	20.33 (2.36)	20.64 (2.68)	-.83
Subscale 4	<i>Impact of IEP on teaching activities</i>	24.25 (2.60)	23.95 (3.73)	.69
Subscale 5	<i>Resources</i>	14.51 (2.97)	13.45 (3.43)	2.21*

***p<.001

One-Way ANOVA of ATIEPS

One-way ANOVA were carried out when comparisons were made between more than two groups.

Age

In terms of the teacher's age, those in their 40's had the highest mean of attitudes towards the IEP compared to those in their twenties, thirties and fifties. However, there were no significant differences for the Overall scale and as well as all the five Subscales.

Academic Qualification

Again, there were no significant differences in the attitudes towards the IEP with respect to the various academic qualifications of the respondents.

School Zone

In general teachers in Brunei-Muara I had higher means of attitudes towards the IEP as compared to their colleagues teaching in the other school zones. As shown in Table 7, when comparisons were made between school zones significant differences were obtained for the Overall Scale and Subscales 2, 3, and 4. Post hoc pair-wise comparisons indicated that teachers in Brunei-Muara I had higher significantly ($p < .001$) higher means of attitudes towards the IEP as compared to those teaching in Brunei-Muara IIB and Brunei-Muara III for the overall Scale and Subscales 3 and 4.

Table 7

Comparison of means attitudes towards the IEP and school zone (SD in parentheses)

Dependent Variables	Brunei I (n=55)	Brunei IIA (n=31)	Brunei IIB (n= 59)	Brunei III (n=32)	Brunei IV (n=57)	F
Overall Scale	125.56 (7.21)	119.10 (13.57)	116.32 (9.99)	115.16 (10.33)	118.84 (8.82)	8.53***
Subscale 1	27.09 (2.53)	27.19 (2.88)	26.00 (2.39)	25.72 (2.90)	26.51 (2.52)	2.54
Subscale 2	36.00 (2.83)	33.81 (4.96)	32.92 (4.10)	32.59 (4.79)	34.04 (3.96)	5.43***
Subscale 3	21.73 (1.80)	20.58 (3.21)	19.71 (2.40)	19.47 (2.60)	20.26 (1.86)	7.25***
Subscale 4	25.64 (2.41)	23.77 (3.88)	23.37 (2.95)	23.81 (2.83)	24.00 (2.20)	5.32***
Subscale 5	15.11 (3.09)	13.74 (3.29)	14.32 (2.96)	13.56 (3.08)	14.04 (3.08)	1.76

*** $p < .001$, ** $P < .01$

Teaching Level

There were not significant differences in the teachers' attitudes towards the IEP for the Overall Scale and as well as all the five Subscales with respect to the level of teaching year 4, 5 and 6.

Teaching Experience

Again, there were not significant differences in the teachers' attitudes towards the IEP for the Overall Scale and as well as all the five Subscales with respect to the years of teaching experience.

Years of Teaching Students with HSN

There were no significant differences in the teachers' attitudes towards the IEP for the Overall Scale and as well as in Subscales 1, 2, 3, and 4 with respect to the years of experience teaching students with HSN. For Subscale 5, post hoc pair-wise comparisons indicated that teachers who had taught students with HSN for six to nine years had slightly significant differences ($p < .05$) when compared to those who had experience teaching these students for three to six years.

Number of HSN Student Taught

There were no significant differences in the teachers' attitudes towards the IEP and the number of students with HSN taught for the Overall Scale and as well as all the five Subscales with respect to the years of teaching experience (See Table 15).

Perceived Knowledge of Teaching Students with HSN

In general, teachers who perceived their knowledge in teaching students with HSN as "good" had highest means of attitudes towards the IEP. As shown in Table 8, there were significant differences ($p < .05$) for the Overall Scale, Subscales 2 and 3. However, post hoc pair-wise comparisons indicated significant differences for teachers who perceived their knowledge in teaching students with HSN as "Good" and "Fair" for the Overall Scale and those who perceived their skills as "Good" and "Insufficient" for Subscales 2 and 3.

Table 8

Comparison of means attitudes towards the IEP and perceived knowledge of teaching students with HSN (SD in parenthesis)

Dependent Variables	Insufficient (n=70)	Fair (n=121)	Good (n=43)	F
Overall Scale	118.57 (11.58)	118.47 (10.05)	122.91 (8.42)	3.23*
Subscale 1	26.90 (2.51)	26.24 (2.69)	26.58 (2.61)	1.43
Subscale 2	33.37 (4.47)	33.81 (4.22)	35.49 (3.26)	3.71*
Subscale 3	20.14 (2.74)	20.22 (2.35)	21.33 (1.90)	3.93*
Subscale 4	24.30 (3.50)	23.88 (2.64)	24.77 (2.42)	1.58
Subscale 5	13.86 (3.44)	14.31 (3.10)	14.74 (2.45)	1.14

*p<.05

Perceived Skills in Teaching Students with HSN

Similarly, teachers who perceived their skills in teaching students with HSN as “good” had highest means of attitudes towards the IEP (See Table 9). There were significant differences for the Overall Scale ($p<.01$) and Subscales 2 ($p<.05$) and 3 ($p<.01$). However, post hoc pair-wise comparisons indicated significant differences in the Overall Scale for teachers who perceived their skills in teaching students with HSN as “Good” and “Fair” over those who rated themselves as “Insufficient.” Furthermore, for Subscales 2 and 3, teachers who perceived their skills in teaching students with HSN as “Good” had significantly higher means of attitudes towards the IEP as compared to those who rated themselves as “Insufficient.”

Table 9

Comparison of means attitudes towards the IEP and perceived skills in teaching with HSN (SD in parenthesis)

Dependent Variables	Insufficient (n=70)	Fair (n=131)	Good (n=33)	F
Overall Scale	117.40 (12.36)	119.02 (9.24)	124.55 (8.33)	5.67**
Subscale 1	26.83 (2.63)	26.18 (2.72)	27.09 (2.07)	2.41
Subscale 2	32.99 (4.75)	34.11 (3.91)	35.64 (3.46)	4.77**
Subscale 3	19.93 (2.86)	20.41 (2.21)	21.36 (2.04)	4.01*
Subscale 4	23.89 (3.69)	24.07 (2.44)	25.18 (2.52)	2.46
Subscale 5	13.77 (3.35)	14.26 (3.14)	15.27 (3.10)	2.67

**p<.01, *p<.05

Implications and Conclusion

ATIEPS

Several implications and recommendations may be deduced from the main findings of the study, such as the following:

Overall, as expected, SENA teachers had significantly more positive attitudes towards the IEP and perceived roles in the development and implementation of the IEP than regular teachers.

Some of the main findings of the independent samples t-tests and one-way ANOVAs of *ATIEPS*, together with some suggested implications are summarized as follows:-

- a) There was no significant difference in attitudes towards the IEP according to gender. Hence, both male and female teachers were equally positive towards the IEP.
- b) In terms of teacher types, SENA teachers, as compared to their regular counterparts, had significantly higher means of attitudes on the overall scale as well as in all the five subscales in *ATIEPS*. These results clearly support the current policy and practice of encouraging more regular teachers to pursue the Certificate in Special Education and other training workshops and seminars related to Special Education in order to equip these teachers with knowledge and skills in teaching students with special needs in the regular classrooms. More opportunities should be given to SENA teachers to upgrade their knowledge by pursuing the Bachelor of Education (Special Education) and Master of Education (Special Education) and by attending other specialized workshops related to teaching students with HSN.
- c) Teachers who had taken special education courses during their pre-service teacher education program were found to have more positive attitudes towards the IEP than those who had not. The implication is that during the pre-service teacher education ensure it is important to equip all teachers with some basic knowledge about students with special needs in order to prepare these teachers to be more positive with special needs in their regular classroom. This finding supports the rationale of the Sultan Hassanal Bolkhiah Institute of Education, University Brunei Darussalam of having a core course called *Inclusive Education* for all primary teacher education programs, namely the Diploma in Primary Education and the Bachelor of Primary Education.
- d) Overall, there were no significant differences towards the IEP with regards to age groups, highest academic qualification, years of teaching experience and number of students with HSN taught.
- e) However, teachers from Brunei-Muara I schools were significantly more positive towards the IEP for students with HSN than teachers from the other zones in the Brunei-Muara district. More efforts should be carried out by the Special Education Unit, Ministry of Education to strengthen the attitudes of teachers towards the IEPs for students with HSN in the other zones in the Brunei-Muara district.
- f) It was interesting to note that teachers with twelve to fifteen years of experience teaching HSN students were most positive towards the IEPs for students with HSN.
- g) Finally, as expected, teachers who perceived that their levels of knowledge and skills in teaching students with HSN as “good” were significantly more positive towards the IEP than those who

rated their knowledge and skills as “fair” or “insufficient.” Thus, equipping both regular and SENA teachers with the relevant knowledge and skills in teaching students with HSN through continuing professional development workshops is very important in meeting the country’s policy of inclusive education, that it, placing students with special needs (including those with high support needs) in regular classrooms.

Suggestions for Further Research

This initial study on IEP in Brunei Darussalam has yielded answers to the various research questions posed. Follow up and more in-depth research could be carried out as listed below:

- As the present study is largely a survey, follow up research could include classroom observations of both teacher and students with HSN during the IEP process. Action research, case studies and other types of qualitative research methodologies could obtain more in-depth data.
- At the school level, there is a need to study the mechanics and dynamics of the relationship between teachers who are trained in teaching students with HSN (e.g. the SENA teachers) with those who are not. The critical aspects of personal mastery, team-working and team-learning as well as the personal aspirations between the two groups of teachers need to be studied and understood. The objective is to enable one to utilize these personal attributes for productive purpose and for a more effective administration of the IEP.
- The respondents of the present study are teachers from primary schools in the four districts of Brunei Darussalam. Future studies might involve teachers from secondary schools, particularly those teachers who are involved in teaching students with HSN in the Pre-Vocational programs.

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ASSESSMENT, ACCREDITATION AND QUALITY ASSURANCE

Introduction

Diploma Disease: What is it?

The thirst for accumulating paper results is what the English sociologist Ronald Dore termed the “*diploma disease*”. According to Dore (1976) if education is learning to do a job, then qualification (i.e. diploma or degree) is a matter of learning in order to increase your capacity to do the job in better ways. When most academics speak of “education”, they have in mind a process of learning, which has mastery as its object. For such people, it is the mastery of the knowledge itself which counts in education and not what they can do with the knowledge. But Dore (1976, 1997) makes a distinction between a **programme that educates** and **one that leads merely to earning a qualification**. He stressed that the *effect of education the way it alters peoples’ capacity and will to do things* depends not only on what they learn or the way they learn it, but also on *why they learn it*. That is at the basis of the distinction between a tertiary programme that provides education, and a tertiary programme which is only a qualification, a mere process of certificating or “credentialing”.

In this regard, the diploma disease is sometimes referred to as credential inflation. It is an unintended consequence of the belief that educational certificates are the key to obtaining the best-paid and most secure jobs, individuals may come to strive for constantly higher credentials in order to procure jobs which previously did not demand these, and for which their education does not in any case prepare them. Education thereby becomes merely a ritualistic process of accumulating qualifications.

According to Lehmann (2007), two common misconceptions about education threaten the quality of what we teach our future professionals. First, there is a prevailing view that the more education, the more advanced a society is likely to be. The second misconception is that education is determined by the number of hours spent in a classroom, or other pedagogical environment. Education has a much broader and deeper meaning; it is not confined to time or space, it is an attitude, a constant search for learning founded on an insatiable curiosity. An “educated” person is not only someone who knows a great deal, but someone who wishes to learn in any circumstance, who poses questions, who probes, reflects and assimilates, to gain knowledge, skills and wisdom.

In this presentation I will discuss the diploma disease breeding in teacher education programmes for Ghanaian basic school teachers.

Manifestations of the Diploma Disease in basic teacher education

Recent reforms in various sectors of the economy – industry, education, health, agriculture, etc. – have made workers in the lower professions to seek diplomas through the university and polytechnics. For instance, the Free Compulsory Universal Basic Education (FCUBE) policy document stated that certificate ‘A’ teachers should be re-trained to obtain Diploma in Basic Education (MOE, 1996). This was because

Criterion Reference Tests (CRT) developed and administered by the Primary Education Programme (PREP) of Ministry of Education, with the support of USAID, for primary six pupils from 1992 to 1996 had revealed that majority of pupils in public primary schools were learning very little in terms of basic skills. In fact the CRT tests showed that less than 20% of the pupils reached minimum competency levels in the two subjects tested – English and Mathematics. To meet this demand some universities designed diploma programmes to upgrade the teachers. Also recently, the colleges of education have begun offering sandwich programmes to award similar diplomas. But the question is, has the performance of the majority of public primary schools pupils improved?

Even though many teachers have since obtained diplomas and degrees in the last decade, very little improvement is seen in the general quality of basic education in terms of the proportion of pupils reaching proficiency in literacy and numeracy. National Education Assessments (NEA) conducted since 2005 indicated that the performance of primary pupils in Mathematics and English had been consistently low with only about 35% reaching proficiency (Adu, Acquaye, Buckle & Quansah, 2005, 2007 & 2009; ASU-CRDD, 2011). The proportions of primary pupils reaching minimum competency and proficiency level in NEA in 2005 to 2011 are presented in Table 1.

Table 1 Distribution of primary pupils reaching minimum competency (35%) and proficiency (55%) in NEA in 2005 and 2007

Year	PRIMARY 3				PRIMARY 6			
	ENGLISH		MATHEMATICS		ENGLISH		MATHEMATICS	
	Minimum competency	Proficiency						
2005	50.6	16.4	47.2	18.6	63.9	23.6	47.2	9.8
2007	50.2	15.0	42.6	14.6	69.7	26.1	46.2	10.8
2009	57.6	20.0	61.2	25.2	76.9	35.6	61.9	13.8
2011	66.3	24.2	52.6	18.2	78.9	35.3	56.9	16.1

Source: (Adu, Acquaye, Buckle, Quansah, 2005, 2007 & 2009; ASU-CRDD, 2011)

Also the results from the Trends in International Mathematics and Science Studies (TIMSS), which were carried out in 2003 and 2007, indicate the performance of our JHS2 students' in mathematics and science, remains among the lowest in Africa and the world (Anamuah-Mensah, et. al. 2004, 2008). In 2007, their performance placed Ghana at the 47th and 48th positions in mathematics and science respectively on the overall achievement table when the 48 participating countries were ranked by their mean performances.

Like many tertiary education programmes, teacher education programmes by Distance Education mode for upgrading basic school teacher in Ghana are market-driven programmes, also referred to as income-

generating academic programmes. The objective of such programmes has been to provide instruction for a fee using teaching methods which are not conventional university pedagogies. Though the programmes have helped the teachers to acquire more knowledge, it had not necessarily made them better prepared basic school teachers. That is, the higher qualifications have not helped the teachers to research and/or learn how to overcome pertinent classroom problems. Anamuah-Mensah, Mereku and Gharthey (2008) identified some of these problems as

- dealing with students' with reading, comprehension and writing difficulties
- teaching problem solving
- meeting the challenges of teaching large classes
- using of the recommended textbooks for effective teaching
- setting challenging School-Based Assessment (SBA) tasks
- constructing science and mathematics tests
- dealing with students with diverse abilities
- designing tests with a balance of items in the higher cognitive domains.

National Education Assessment (NEA) and School Education Assessment (SEA) are two national minimum-competency-based tests that reflect the essential elements of the curriculum considered basic to the class level performance expected for pupils' continuation. Though the tests were instituted in 2005 to provide quality information to the Ministry of Education and Sports, Donor Groups and Communities, the Ghana Education Service, teachers and parents, to improve instruction, many teachers know very little about these tests (Mereku, *et. al*, 2007; Mereku, *et. al*, 2011).

One of the key innovations introduced into the educational system is the preparation of School Performance Improvement Plan (SPIP), a short term plan of action, for heads and teacher to ensure improvements at the school level. The SPIP is prepared by the Head teacher together with the staff with the approval of the School Management Committee (SMC). It is to cover the whole academic year but broken down into terms. The SMC is to oversee the implementation of the SPIP, which is an important requirement for spending 'capitation grant' is expected to cover such key areas as enrollment drives, provision of teaching and learning materials, support to needy pupils, school and cluster based in-service training, minor repairs, administrative costs (including T&T and stationery), etc. In spite of their immense usefulness in ensuring quality education, the SPIP and other innovations that came with the recent educational reforms are not part of our basic teacher education curriculum.

Purpose of study and research questions

The major concern investigated in this study was whether or not programmes for upgrading basic school teachers were achieving their intended objectives. Today many Certificate 'A' teachers have upgraded their qualifications to diploma and others to bachelor of education degrees. But the question is, have these had any impact on quality of education in our schools? Have the programmes altered teachers' capacity and will to teach in new ways and improve pupils' achievement? To address these concerns, the following questions were formulated to guide the study?

- i. What are the experiences and outcome expectancies of basic teachers who had obtained degree or diploma qualifications recently in teacher education programmes?

- ii. What difficulties do basic teachers who have pursued teacher education programmes leading to degree or diploma qualifications have in their classroom practice?
- iii. How knowledgeable are basic teachers who pursued distance teacher education programmes about the national assessment and standards?

Methodology

Design, population and sample

The survey design and document analysis were used for the study. All 'Post-Diploma' full time students in the Basic Education in UEW were intended to be used and there was no attempt at randomization because of the small nature of their number. The Post-Diploma' Basic Education students, who were in all about 6000 (from the Department Basic Education and Centre for Distance Education both in UEW) formed the study population. Unfortunately, only 124 Post-Diploma' full time students in the Basic Education (54 males and 70 females) were purposively sampled for the study. The selection was explicitly not one meant to represent a national scale sample of all tertiary teacher education institutions, rather to capture knowledge to be shared from teachers who had participated in the programmes.

Instrument

The study combined analysis of textual data and survey techniques in the data collection. The questionnaire was in five sections. Section A elicited respondents' demographic data; Section B contained items measuring on a five point Likert-scale respondents motivation to pursue teacher education upgrading programmes; Section C, D and E also contained Likert-scale items that elicited respondents rating of their distance education experience, outcome expectancies of the programme and difficulties they currently have in performing their classroom roles, respectively.

Data collection

The survey was carried out in September 2011. The group originally targeted for the pilot was the post-diploma DE students at the Winneba Centre, but were unable to complete the questionnaires because they had quiz on the day of the research. So the pilot study rather involved 124 post diploma students in the Basic Education Department of UEW who were all teaching in public schools (47% primary and 53% JHS) prior to their admission. These comprised females (56%) and males (44%); from nine of the regions of Ghana with 72% receiving their diplomas from the University of Cape Coast DE programme.

Findings

Distance teacher education participants' satisfaction with their experiences

The result indicated that the participants rated their experiences of most aspects of the DE programme as satisfactory (see Figure 1). They were most satisfied with 'the knowledge and skills they acquired in teaching' and 'dealing with current classroom challenges'.

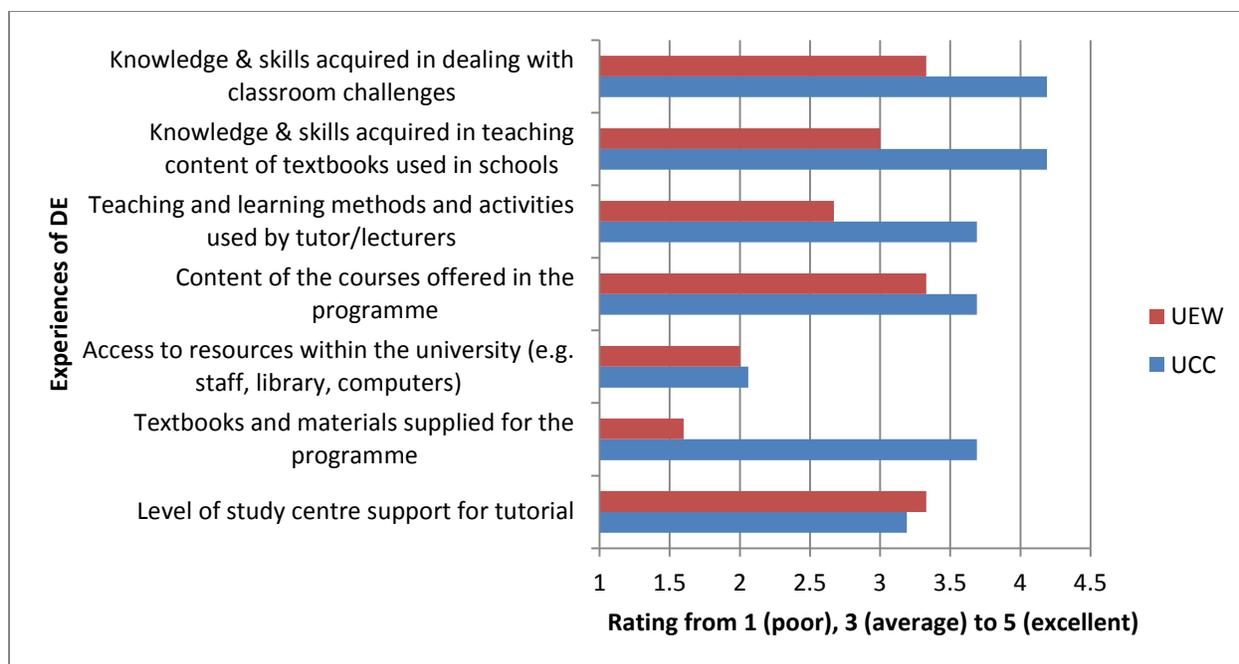


Figure 1 Teachers' experiences of aspects of the DE programme

But they were least satisfied with 'textbooks and materials supplied for the programme' and 'the access they had to resources within the university (e.g. staff, library, computers)'. It is interesting to note that except for 'level of study centre support for tutorial', the teachers who took the programme at UCC rated their satisfaction with the DE experiences higher than their counterparts who took the programme in UEW.

Distance teacher education participants' outcome expectancies of the programme

Outcome expectancies in this context refer to the expected positive and negative consequences of the programme experiences on one's classroom practice. Thus, they are equivalent to concepts like normative and personal behavioral beliefs, perceived costs, barriers, and effectiveness. They were asked to rate statements about improvements in their teaching, effectiveness, success and pupils' attitude. The results in Figure 2 indicate that the teachers had positive outcome expectations of some aspects the programme.

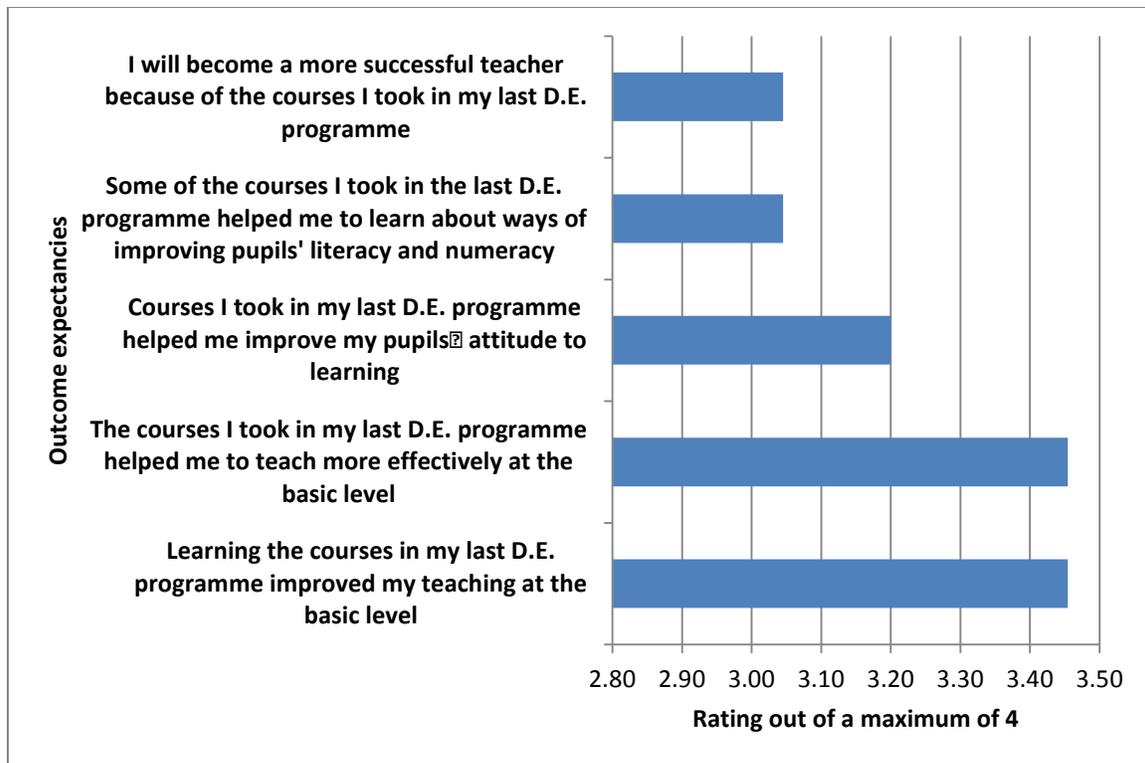


Figure 2 Teachers' outcome expectations of aspects of the DE programme

They however have negative outcome expectations of other aspects of the programme including its use in their future work in basic schools, their success in teaching, as well as its use in implementing new assessment reforms (SBA) (see Table 2).

Table2 Aspects of the DE programme that teachers expressed negative outcome expectations

	Percentage disagreeing with statement
i. Some of the courses I took in the last D.E. programme helped me to learn how to implement school-based assessment (SBA)	68%
ii. Most of the courses I took in the last D.E. programme will help in my future teaching at the basic level.	48%
iii. Most good teachers do not need the courses in the D.E. programme to teach at the basic level	43%
iv. My success in teaching at the basic level is related to how well I performed in the last D.E.	37%

programme

- v. I will probably never use knowledge and skills from most of the courses I took in the programme as a teacher 37%

Basic teachers' motivation for the programmes and difficulties they encounter in classroom practice

The results show that the teachers were highly motivated to enroll on the DE programme by factors such as 'wanting new ways of meeting classroom challenges' (96%); 'improving one promotion prospects' (90%); and wanting to make a difference in one's career' (90%). In spite of these high motivations majority indicated they had difficulties when they were asked to rate their difficulties currently in performing certain classroom teaching activities on the scale of 1 – 5 (where 5 = Very great difficulty, 4 = Great difficulty, 3 = Minor difficulty, 2 = No difficulty, 1 = Undecided). Table 3 shows the mean rating obtained on classroom teaching activities ranked from the most difficult to the least.

Table 3 Top ten challenging classroom teaching activities ranked from the most difficult to the least

Challenging classroom teaching activities	
i. Teaching large classes	3.86
ii. Integrating ICT tools (including mobile phones, TV, DVD, calculators, etc.) into one's teaching	3.52
iii. Designing projects tasks for SBA	3.14
iv. Using strategies that ensure differentiation in teaching (i.e. meeting the different individual abilities of each child)	3.10
v. Implementing school-based assessment (SBA)	3.00
vi. Assisting children who have difficulties with particular concepts	2.95
vii. Using the thematic approach to promote learning across the curriculum	2.90
viii. Improving low levels of literacy and numeracy in our basic schools	2.86
ix. Providing opportunities for children to engage in problem solving	2.81
x. Develop test items that challenge children's application and reasoning abilities	2.71

Teachers' knowledge of innovations in the curriculum

In this study, the post-diploma basic education teachers were asked to indicate whether or not they were introduced to SEA and NEA in any of the courses they took in the Distance Education programme. Seventy-five percent (75%) of them said none of the courses they took made reference to these national tests and none of them was able to state the standards (i.e. percentages) set as the *minimum competency level* (i.e. 35%) and the *proficiency level* (i.e. 55%) for these tests.

When asked to indicate whether or not they were introduced to how to design a School Performance Improvement Plan (SPIP) in any of the courses they took in the Distance Education programme, 85% of them said indicated no.

Discussion

In the last five years the two universities together have upgraded over thirty thousand certificate 'A' teachers to obtain diploma in basic education qualifications and over ten thousand of these to obtain bachelor of education degrees. In 2010, UEW alone awarded diploma in basic education to 1,509 teachers and bachelor of education degrees to 509 post diploma teachers who pursued her DE programme. In spite of the large numbers of teachers upgraded to diploma and degree qualifications, pupils' achievement in basic schools continues to be very low (Adu, Acquaye, Buckle & Quansah, 2005; 2007, 2009; ASU-CRDD, 2011).

As the teachers are unaware of such innovations as SEA, NEA and SPIP which are intended to transform the very system they are striving to improve, it is not surprising that actual proficiency in literacy and numeracy at primary level continues to be low in spite of their higher qualifications. Also the public continues to blame them for the low proportion of pupils qualifying for SHS, when it is the educational system's failure to make the students qualify. It can be argued that with respect to improving achievement and explaining issues related to it, the tertiary teacher education upgrading programmes had contributed little in developing the teachers' capacity.

Conclusion and the way forward

The result of this preliminary study had shown that though teachers were satisfied with their experiences of most aspects of the distance teacher education programmes; they rated low their outcome expectancies of the programme with respect to their effectiveness and success in teaching. The low teachers' perceived outcome expectancies of some aspects the programmes, their weak knowledge on national assessment and standards as well as preparation of SPIP, their difficulties in carrying out new classroom roles that have come with changes in the curriculum have all led to the low pupils' achievement results in national and international examinations (NEA, TIMSS and BECE). In this light, one can argue that the distance or in-service teacher education programmes have not been successful in increasing basic teachers' capacity to teach more effectively in order to raise pupils' achievements in numeracy and literacy as envisaged by the initiators of the policies that led to the design of such programmes. The findings are therefore manifestations of diploma disease in the nation's teacher education system. There is therefore a need for concrete measures to be taken to recapture the quality of education through the provision of meaningful teacher education programmes that go far beyond the mere issuance of certificates, i.e. diplomas or degrees.

The goal of any national education system is to ensure all children of school going age acquire knowledge and skills (core competencies) which will make them successful in future so that they can contribute to national development. Schools are therefore expected to provide children with opportunities to acquire core competencies which will make them successful citizens. The

competencies, which are core to all subjects and essential for ALL, go beyond knowledge (i.e. understanding and remembering stuff) to include processes of learning. The competencies, which are largely communication skills, may be classified under domains such as literacy, numeracy, graphics and ICT proficiency. The basic school teacher education programmes we have had in this country in the last decade emphasise the former (i.e. understanding and remembering stuff).

There is therefore the need for our teacher education institutions to review of their programmes and study modules so as to emphasise the processes of learning that will enable the development of core competencies that are valued globally in education – literacy, numeracy, graphics & ICT proficiency. The revised programmes should integrate these core competencies into the content, teaching and assessment methods in the basic school teacher education curriculum. In this regard, the adaptation of teacher education modules, which are open educational resources (OER) available on the internet, will be very relevant for developing teachers' pedagogical content knowledge in Ghanaian teacher education programmes.

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INTRODUCTION

That what we call **science** remains the same – by implication and by connotation. The characteristics are invariably unchanged – be it “home” science, “natural” science, “political” science, “applied” science, “environmental” science or “medical” science. Science denotes a way of living, a way of doing things, a way of knowing, a way of behaviour, a way of reasoning, a way of analysis, and indeed a way of culture. That does not necessarily mean that the underlying principles behind **this** science or **that** science are obvious. They must be laid bare to put to bed all speculative machinations. It thus becomes imperative that scientists put forth cogent reasons (including advantages) for the adoption or implementation of any particular kind of science.

The case of the first dilemma

It is in line with this that the proponents of the Ghana **Integrated** Science concept gave various rationales for its introduction at the primary school, junior high school and senior high school levels respectively. In affect the essence of studying integrated science at these levels is to equip the learners with the tenets of undertaking simple logical reasoning and action; cultivate the scientific culture in the process of seeking answers to problems through experiments and other hands-on activities; discover knowledge within their environment and in the laboratory; infuse in them the scientific religion of critical thinking; make them aware that scientific literacy is needed by all citizens, especially for their own survival in the Ghanaian society (CRDD, 2007a; 2007b; 2007c; 2007d).

The general aims of Ghana's Integrated Science include developing a spirit of curiosity, creativity, interest and a strong inclination for the students towards the pursuit of scientific work; to live quality life

by adopting safety practices at work and life in order to promote healthy lifestyles; keenness to identify and answer life-relating questions through carrying out careful investigations; and above all to develop understanding of scientific concepts and principles to solve problems inherent in the Ghanaian society (CRDD, 2007a; 2007b; 2007c; 2007d).

These aims are very noble and well-intended especially when they are viewed against the background that the integrated science is proposed, and expected, to be presented to the students as a *fusion* of the various normal science disciplines including the basic sciences, agriculture, health, and industry – in an attempt to offer the students a body of knowledge and skills to meet the requirements of everyday living and for Ghana’s nation building.

Furthermore, key pillars to cement this integrated approach are in its intended approach. The teaching, learning, and presentation of the *Integrated Science* are premised on being based on *themes* that the students can easily relate to the world around them, and more importantly, to their everyday life situational experiences. Hence, the proponents of the Ghana’s Integrated Science concept have identified the five themes as: Diversity of Matter, Cycles, Systems, Energy and Interactions of Matter.

There are good philosophical underpinnings behind these themes. Students should recognize that there are common threads that connect living things, despite their *diversity*, and that there are unifying factors in things in the physical world around us. Mathematically speaking, there are relations and relationships (mutual and cordial) in all matter around us if one takes time to make careful and insightful observations.

Under *cycles*, students would eventually come to the realization that there are repeated patterns of change in nature, even if these repetitions do not have the same time period for all events. Naturally,

this knowledge would stimulate in students the necessary need for them to predict events and take precautions against unforetold expectations.

Studying **systems** ought to lead students to recognize that any whole is made up of parts that work together to perform or undertake a function successfully. Hence, to survive in society one cannot go it alone – cooperative work is vital at all point in time, and that no one part is more important than the others (even if it seems so to the eyes), be it at home, work place or school. Above all to make things happen changes and movements need to take place and these cannot materialize unless there is a flow, or change, of **energy** here and there. Finally, to understand the mechanisms of human beings and their roles in the surrounding environment better, there must be **interactions** among matter.

To facilitate the firm implant of these wonderful ideals about Ghana’s Integrated Science, the teacher has been enjoined not to treat any theme as if it were in isolation of the others, since there are also some common linkages between some aspects of the various themes, as and when due. Another injunction on the Integrated Science teaching is the **spiral approach** method, whereby concepts and skills are expected to be revisited at different levels with increasing degrees of depth (CRDD, 2007a; 2007b; 2007c; 2007d).

These impositions on the would-be Integrated Science teacher, to me, are far-fetched. How can one single teacher be so universally/scientifically broadminded to, professionally and competently, treat any aspect of a given theme to unify the sciences? To succeed that teacher should ideally be one who is **not** biased single-science-subject. He should be a jack of all the natural and applied sciences at the same time. And where was he trained? Or, to be precise who trained him in Ghana? Our problems seem compounded when Ghana does **not** – up to today – have a **single** science teacher/lecturer who can boastfully bare his/her chest out and say he or she is a “**professionally- trained**” Integrated Science

teacher/lecturer – who has been professionally handled and competently prepared to teach Integrated Science in an integrated manner, scientifically.

A way out would apparently be to “integrate” the teaching of Integrated Science by the employ of various teachers and experts of different science backgrounds and biases into every single Integrated Science lesson *simultaneously*. But, this would send a wrong message/signal to the students who would not see the integration of the sciences – that the Integrated Science concept seems to portray – since different teachers and personnel would be cutting in here and there every now and then, within a single Integrated Science lesson with divergent examples and explanations. They would see Integrated Science in a **dis-integrated** manner.

Interestingly enough, the proponents of Ghana’s Integrated Science concept themselves appear to be so dis-integrated in their conception of Integrated Science. A deeper look at the structure, content and scope of any existing Ghanaian Integrated Science syllabus shows that virtually any unit under each theme is not presented in a unified science manner, as they expect the would-be Integrated Science to do with his students in the Primary, Junior High or Senior High school. Rather, topics have been introduced everywhere and these topics are most of the time *either* pure Physics, Biology *or* Chemistry.

The teaching-learning sections in the various units under each theme depict very little students-oriented activities. They have been presented in such a way that that they are teacher-centred, and teacher-dominated. There is very little room for teacher-innovations and teacher-flexibilities. The integrated science teacher has no choice but to resort to the lecture method as his main avenue to reach the inquisitive minds of his tutees. How can he inculcate the spirit of science into his students – the future budding scientists waiting to take Ghana on to the path of nation building and economy recovery? Moreover, each Integrated Science syllabus is heavily overloaded – so overloaded that the teachers,

even going by the theoretical traditional approach of teaching, cannot cover its entirety within the stipulated/assigned periods.

The expectations of science as a hands-on and minds-on discipline have been subsumed and submerged in the heavily-weighted theoretical practices by teachers embedded in the prescribed Integrated Science syllabi. How can we then catch the students as young scientists when we have hardly afforded them enough opportunities to engage in activities that can expose them to the familiarization and acquisition of the basic processes of science? How do we arouse their interest, curiosity, and creativity when we passively engage them in the classroom or laboratory discourse? How do we expect them to relate their integrated science to the world around them when they are hardly exposed to situations to train to appreciate the scientific method, the scientific process and the scientific culture?

This **dilemma** is a big albatross hanging over Ghana's Integrated Science concept. How "**integrated**" is this so-called Integrated Science? I dare say that we are **not** integrated in its teaching, or in its approach, or in its conceptualization, or in its curriculum outlays.

We may have wonderful rationales on paper, but if our philosophies are not translated into concrete action in the classroom environment of what use are they? Would it not be better to return to the old practices of **General** Science or **Core** Science, where teachers concentrated on narrow areas of the natural sciences (Physics, Biology, or Chemistry) and exposed their students to the rugged regiments of the science in question – even with little laboratory practical exposure and experiences of their students?

The case of the second dilemma

Another area of concern for Ghana's science education is the apparent notion that science students do not perform well these days in external examinations (WAEC, 2008a; 2008b; 2008c; 2008d; 2009a;

2009b; 2009c; 2009d; 2010a; 2010b; 2010c; 2010d). These concerns generating more from Chief Examiners reports need to be examined carefully with a view to getting to the bottom of issues to address the issue. Are our science students really *that stupid*?

Much as we need to continuously re-examine our methods of instruction, we should also re-examine our methods of assessment in the classroom and the laboratory to improve upon them for the maximum benefit of our science students. In Ghana today are we not more interested and inclined to concentrating on assessing our science students in their paper-and-pencil tests at the expense of assessing the proficiencies and levels of acquisition of scientific skills in whatever they do, especially when they are engaged in hands-on and minds-on activities? Do we care to take particular note of how our science students go about issues? Are we interested in exploring to ascertain whether they carefully and logically plan whatever they intend to investigate? Do we honestly really engage them in activities that could enable us get into their mindset to know whether they think through what they set off to do, using the principles, processes and methods of science? Are we not mainly and *merely* concerned with the products/outcomes/final answers?

We hardly take cognizance of the extent to which our science students organize data, interpret results, and provide cogent reasons to support their logical deductions and conclusions. Yet these are the tenets that differentiate science from the other disciplines. We hastily pass judgment on our science students and label them as stupid just because of their abysmal performance in paper-and-pencil tests and external examinations – which are invariably assessed with marking schemes that stress more heavily on products. Are we fair to our science students, knowing that science is not only a product but also a process and a person; and that the cutting edge of modern technology rests more solely on science as an applied entity. If our students perform badly on paper-and-pencil tests, this could be attributable to many reasons. For example, couldn't it be due to the inadequate time given to our science students to

complete tasks? Why do we write them off, easily? Are we by our actions and/or inactions not discouraging them? Is this not a paradox, if not a panacea? That is the second dilemma that Ghana's science education faces.

The biggest blow, to me, could be that whereas emphasis in many science curricula is to place importance upon skill and process-oriented objectives, many paper-and-pencil examinations do not cover these aspects but are skewed towards final products – cognitive answers. Unless we redirect our assessment to check whether our science students use their hands more often, are challenged to be imaginative, and think through whatever they are doing, we may continue to mark them down as non-performers. One way we can overcome this, I dare say, is to shift emphasis from subjecting our science students *from* paper-and-pencil examinations *to* science performance assessment, since such assessments are more *beneficial, realistic, efficient, worthwhile, significant, meaningful* and *authentic* (Doran & Tamir, 1992).

By exposing students more to non-traditional, performance-based assessment exercises, Ghana's science educators, lecturers, teachers and students alike will begin to see assessment as both a teaching and a learning tool (De Ture, Fraser, Giddings & Doran, 1995; Gronlund, 2010; Lloyd-Jones & Bray, 2011). By engaging our science students to undertake performance-based tasks, we can scientifically assess how they use hands-on and minds-on approaches to demonstrate their knowledge of science process skills, manipulative skills, and problem solving skills. They will, in turn, be able to learn how to assess themselves continuously as they proceed through learning processes. The ultimate end, according to Tamir (1989), is that such students who are engaged in more hands-on and minds-on activities begin to score higher even on paper-and-pencil achievement tests.

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IMPROVING INTERNSHIP IN GHANAIAN POLYTECHNICS: STAKEHOLDERS' PERCEPTIONS OF ITS ORGANISATION (ZIKHALI)

Internship as a form of workplace learning is a vital component of many professional programmes in vocational education (Levesque et al., 2000). It can assist students to bridge the gap between the academic learning process and the practical reality (Lam & Ching, 2007) by exposing them to real-life experience. The meaning of an internship and its operational definition can be different around the globe. As various types of training in the work environment have developed differently, the terminology in the field varies as well (Busby & Gibson, 2010). Definition of internship is dependent on the cohort of students (interns) participating, its duration, type of employment, its ultimate objectives as well as the context within which it is organised (Crnković-Pozaić, 2006). For example in the UK, the most frequently used term for the period of internship is “sandwich placement” (Busby, 2003), which can be defined as ‘a temporary period of student employment as part of a student’s course which is effectively planned and managed and takes in the negotiated requisites of the student, employer and HEI’ [higher education institution] (Keynote Project, 2002, p. 5). Internships in the UK are effectively regulated by the code of practice for the assurance of academic quality and standards in higher education (Quality Assurance Agency, 2007). They are generally supported by the ASET (2009) guidelines regarding the duties of the academic institution, student and industry before, during and after internships.

In Ghana, the context of this study, the term ‘industrial attachment’ is often used to mean internship, to be considered an educational strategy where learning in the classroom alternates with learning in the workplace and allows for the competencies of students to be developed and nurtured by the mentors before students graduate (Effah, 2005). It offers interns in almost all fields an opportunity to gain professional experience in their area. It is predominantly unpaid, unregulated and domestically oriented (Effah, 2005). Working in a professional environment, interns develop a sense of responsibility as they interact with a wide range of age groups, meet potential role models and get feedback through performance assessment. However, in Ghana this form of linkage between theory and practice is still minimal and there are no established criteria for screening prospective interns (Effah, 2005). Usually

internship is organised by educational institutions and students are supposed to comply with the start date and duration.

This study is aimed at identifying by means of a needs analysis the effective key components of internship as perceived by the relevant stakeholders from polytechnic students to hospitality industry personnel. The needs identified are assumed to be the building blocks of a curriculum to improve internship.

Conceptual Framework

In general, internship programmes are valuable ways to acquire broad competencies where practical knowledge obtained supports and complements the theoretical studies learned in the educational institutions (Mihail, 2006). This study is aimed at identifying the effective key components of internship as perceived by the relevant stakeholders from polytechnic students to hospitality industry personnel. Research identified relevant conditions that contribute to the benefits derived from internships and, when well managed, could create an authentic learning environment in the workplace for students. These conditions are: *collaboration* between school and industry (Divine et al., 2007), *placement* procedures (University of Pittsburgh 2009), *duration* and time (Divine et al., 2007; Mihail, 2006) and *assessment* procedures (Walo, 2001) which will culminate in the manner in which implementation is carried out (Lam & Ching, 2007; McManus & Feinstein, 2008). In this study we try to inventory the perceptions of stakeholders concerning to what extent these conditions are present in the internship practice in Ghanaian Polytechnics and how they can be improved.

Research has shown that effective collaboration between educational institutions and industry promotes successful internship (Divine et al., 2007) which emphasises interns' placement being relevant to their academic programme (Christou, 1999). This is an effective way of interns transferring newly acquired competencies to a real-life-test and better appreciative of their future career (Christou, 1999). There is no literature or empirical evidence on a specific duration for internship. However, duration for internships depends on objectives (Busby & Gibson, 2010), nature and arrangements for the industrial training (Divine et al., 2007). Studies indicate that assessment by both industry and academic institution's supervisors provide an effective monitor of interns (Lam & Ching, 2007; Walo, 2001; Waryszak, 2000).

School-industry *collaboration* has far-reaching effects. The impact of collaboration can generate new knowledge which can contribute to an industry's improved performance (Pertuzé, Calder, Greitzer, & Lucas, 2010) during internship. The greater ability to identify and bring in external ideas and technologies enhances an industry's flexibility to respond to changing customer needs. A close collaboration gives rise to joint interest, ambition and purpose towards a shared vision (Kliknaite, 2009) in any well organised internship. Internship is often viewed as being mutually beneficial to the intern, the educational institution and the industry (Borkowski, 2008; Divine et al., 2007). The mutual benefits, nevertheless, cannot be guaranteed because its success or failure depends largely on the way in which the various stakeholders collaborate in its implementation process. For the school, internship can strengthen links with industry and better understand what business and industry expect from students while for industry internships can be an avenue for producing qualified candidates for the industry (Johnston, 2008). The success of internship depends on the collaboration between representatives of the industry, the school and the student (Clark, 2003; Schappert, 2005). These three parties need to agree on the conditions of the internship, the responsibilities of each party, and the reporting requirements. The reverse is true when the links between school and industry is episodic, it may lead to students performing menial tasks (Johnston, 2008), resulting in interns become quickly demoralized and will learn nothing about applying their expertise to a business environment. Therefore school, industry and student need to specify their distinctive roles during student internship (Rothman, 2007). It stands to reason that formalisation of links between industry and school will foster the collaboration. Thus, internship well organised will help students to transit smoothly from school to industry (Carlin & Manson, 2007).

Internship *placements* for interns can be categorised into two: managed and unmanaged or unstructured (Divine et al., 2007; Effah, 2005), haphazardly planned (McManus & Feinstein, 2008). The former is where students have no freedom of choice but the school arranges by assigning students to different industries (Christou, 1999). In the case of the latter, students are allowed on their own to look for companies for themselves. Divine et al. (2007) argue that the unmanaged option has the advantage of students having firsthand knowledge about the labour market which becomes a source of information for future employment. They were however quick to state that a student who fails in the attempt may not get the chance of having internship experience. The relevance of the industry to students' major

area of study will go a long way to advance their training (Walo, 2001). From the curriculum perspective, the managed option is preferable because the school makes sure students are placed in industries relevant to their field of study (League of Oregon Cities, 2009) and ensures coherence between what is taught in school and outside school (Walo, 2001).

The *duration* as well as the *time* of the year in which internships are organised varies across countries. A six-month period for internship is quite usual with academic institutions around the globe (Lam & Xiao, 2000; Mihail, 2006; Walo, 2001). Generally, internship programmes in the USA provide two to a maximum of 18 months internship periods in relevant study programmes of interns (Internship USA, 2008) whilst in most European countries a minimum of three to maximum of 12 months (Aston University Careers and Employability Centre, 2009). In both geographical blocs placements are available all the year round which is similar to that of Singapore (Republic Polytechnic, 2008). Internship periods could be classified as full time and part-time (Divine et al., 2007). The full time option is where students do not engage in class work (lecturing) and internship concurrently but the part-time does. The full time option looks better than part-time because the latter is restrictive but the former is not.

To elicit what students have learned during their internship clear *assessment* requirements and procedures need to be in place. Students are assessed by both the academic institution's supervisor and industry's supervisor (Republic Polytechnic, 2008; Walo, 2001). Sometimes students have options to choose the type of assessments from the curriculum to carry out during internship (Clark, 2003). However, research on internship programmes has shown significant gaps in the expectations of students' job performance among students, school and industry (Lam & Ching, 2007; Waryszak, 2000). Such chasms could be narrowed or bridged if there are shared curriculum materials, including a description of assessment criteria and procedures.

Conditions for successful implementation of internship are characterised by strong *collaboration* between school and industry, a reasonable *duration* of the internship, clear *placement* and *assessment* procedures. Successful implementation of internship may be threatened by challenges students face during internship: non-payment of interns, lack of communication between employees and interns, an uncomfortable and hectic work environment, negative supervisor's attitude, lack of responsibility and

limited opportunities (Collins, 2001). Such challenges were most probable in haphazardly planned internships (McManus & Feinstein, 2008).

In this study, teachers, alumni and students of the HCIM department, management representatives of the polytechnics and hospitality industry personnel were questioned about their perceptions of student internship. Stakeholders' views on collaboration, placement (access and relevance to the workplace), duration of internship, assessment procedures, the overall student internship implementation, the challenges students face during internship and suggestions for improvement in subsequent internships were elicited from respondents. The main research question is: *What are the perceptions and suggestions for improvement among the various key stakeholders of HCIM education regarding student internship organisation?* The study is guided by the following sub-questions:

1. To what extent do the perceptions of stakeholders differ regarding collaboration, placement, duration and assessment of internship for HCIM students?
2. What are the implementation challenges student internship faces?
3. What are the suggestions to improve internship for HCIM students?

VET and Higher Education in Ghana

Polytechnics are part of the higher education system in Ghana and are primarily responsible for TVET at the tertiary level. Polytechnic education in Ghana started as second cycle institutions in the 1960s under the Ghana Education Service (Agodzo, 2007; Nsiah-Gyabaah, 2005). But in 1993 their status was changed from second cycle to tertiary cycle through the promulgation of the Polytechnic Law (PNDC Law 321). It should be noted that the change in status did not change the facilities nor an upgrade of the staff to commensurate the new status. Currently, Ghana has 10 polytechnics (offering different academic programmes of both second and tertiary courses). All are state-owned and are vocational in orientation, offering applied programmes in the sciences, technology and business management leading to the award of the Higher National Diploma (HND).

The polytechnic system in Ghana has not received the requisite attention it deserves to enable the sector contributes effectively to national human development which is so vital for establishing a

productive and skilled workforce for Ghana's development (OXIA Ghana Limited, 2004). The TVET curriculum is institution-based, supply-driven and regarded as being out-of-date and not responding to the demands of the labour market (Akyeampong, 2010). The mismatch between institutional training and the needs of industry has serious implications for Ghana's economy and the employability of graduates from the TVET institutions especially the polytechnics. Research from Boateng and Ofori-Sarpong (2002) revealed that industries were enthused in contributing to student internship. In spite of the enthusiasm demonstrated by Ghanaian industries toward polytechnic internships, the collaboration between both entities lacks joint interest, ambition and vision (Kliknaite, 2009) to propel effective industrial training of students. Internships in the polytechnics are restrictive in the sense of placements and time, and beset with challenges because they are haphazardly planned (McManus & Feinstein, 2008).

Methods

Respondents

The Departments of HCIM in four polytechnics were involved in the study. From each polytechnic second and third year HND students were randomly selected to participate: Ho, $N=40$; Kumasi, $N=30$; Takoradi, $N=60$ and Tamale, $N=30$. Forty alumni selected (through snowball approach) comprising 10 each from the respective departments form part of the respondents. In addition, 20 hospitality industry representatives (five per polytechnic) were purposively selected based on where students carry out internship and accessibility. Deans of Schools of Applied Science ($N=4$), members of the academic board ($N=4$) and industrial liaison officers ($N=4$) (hereafter referred to as management representatives) from the polytechnics were part of the study. Finally, all teachers ($N=45$: Ho, $N=12$, Kumasi, $N=10$, Takoradi, $N=15$, Tamale, $N=8$) in the respective HCIM departments constitute part of the study. Teachers, students and management representatives were all given questionnaires and the response rates were 73%, 100% and 92% respectively. Alumni and hospitality industry representatives were each given a questionnaire. The response rate in each case was 100%.

Instrumentation

Sets of questionnaires were administered to all the respondents. Question items were predominantly in a five-point Likert scale using responses graded: 5 *strongly agree*, 4 *agree*, 3 *neutral*, 2 *disagree* and 1

strongly disagree to determine the level of agreement to statements. A few questions were open-ended and respondents were asked to respond to them appropriately. The open and close-ended questions aimed at gathering information about the four effective conditions: collaboration, placements, duration, and assessment, and the characteristics of implementation challenges and suggestions for improvement of internships (Table 1).

Table 1 Overview of the constructs and example questions/statements

Construct/concept	Question/statement
Collaboration	The hospitality industry collaborates with teachers of the Department of HCIM in the training of the students; There should be closer collaboration between all key stakeholders of HCIM education in the polytechnics.
Placement	HCIM students find placement in organisations which are related to their course areas of study during internship; Where did you do your first internship?
Duration	For how long was the internship period?
Assessment	Students are made to write reports on their experience on internship; Employers are generally satisfied with the job performance of HCIM students on internship.
Implementation	Internship programme for HCIM students is well implemented.
Challenges	What challenges did you face during internship?
Suggestions	Hospitality industry should redouble their support in the training of HCIM students; Time for internship programme for HCIM students should be extended.

Results

Perspectives of stakeholders: Collaboration

Apparently stakeholders did not differ in their views concerning collaboration. Regarding the links between hospitality industry representatives and teachers in the training of students, the means ranged from 2.7 to 3.6 ($F = 2.007$, $p = 0.09$, *ns*). The highest mean went for management representatives with standard deviation of .81 and the least alumni. Perceived relatively low means from students, alumni

and teachers could imply links between the department and industry might be weak which might stem from roles of the stakeholders not clearly specified; a probable characteristic of haphazardly planned internship (McManus & Feinstein, 2008). Industry's response was quite refreshing which confirmed the extent of preparedness by Ghanaian industries towards student industrial training (Boateng & Ofori-Sarpong, 2002). Formalisation of links between industry and polytechnic would foster joint interest and vision (Kliknaite, 2009) that would create a congenial platform for ensuring that students were well trained.

Perspectives of stakeholders: Placements

Stakeholders generally agreed to the statement that students largely found internships in industries which related to their study programme - means ranged from 3.6 to 4.1 ($F = 0.901$, $p = 0.46$, *ns*). Industry representatives recorded the highest mean of 4.1 indicating that they agreed to the statement that students find placements at appropriate industries which relate to their study programme during internship. In a related issue on where students did their previous year's internship, majority of the students (about 78%) took up internship in the hospitality industry and about 20 percent found placement in health centres. It is important to note that interns practise in the appropriate industries which relate to their study programme. Interns' ability to blend theory with practice better prepares them for their careers. In spite of this result, it should be noted that there is still room for improvement. In some instances, students fail to proceed on internship due to limited number of vacancies. Students were asked where they had their first internship. The responses were as follows: 61% (98) did indicate they had it in hotels, guesthouses and restaurants whilst 17% (27) stated health centres and 1% other companies. However, 21% (33) did not participate in internship due to the limited number of access to industries which could characterise unstructured internship (Effah, 2005).

Perspectives of stakeholders: duration

Officially, it was expected that each student embarks on at least six months internship throughout the three-year HCIM programme which is in consonance with other studies (Christou, 1999; Lam & Xiao, 2000). Thus three months each after first and second year. Majority of the students in both first (47%) and second (51%) internship periods spent four weeks. About 13% of the students in each period spent six weeks whereas 28% and 16% of the respondents spent eight weeks respectively for first and second periods of internship. Some interns (6 to 8%) spent periods between two and three weeks. Only 2% of

the second year students and 10% of the third year students could satisfy the mandatory period of three months for first and second periods of internship. If about 6% of the students on average could satisfy the mandatory period, then, there is cause for concern. So, most students spent less time in internship than was planned in the curriculum. Bottlenecks associated with internship were limited number of places for internship, students' lack of information regarding available places (in the absence of search engines and websites), and students' preparations toward internship which eat into the already relatively short summer break. Stakeholders did not differ in their perception of time spent during internship – 2.6 to 3.2 ($F = 0.899, p = 0.47, ns$), but the means were relatively low. Students were neutral regarding the time that was earmarked for internship programme (mean=3.0). Alumni were ranked the highest, slightly above students, with a mean of 3.2. Management and industry representatives had the same mean of 3.1. Teachers were least on the agreement scale with a mean of 2.6.

Perspectives of stakeholders: assessment

With respect to students writing reports on their experience while on internship, all the stakeholders unanimously agreed to the statement. The means ranged from 4.1 to 4.5 ($F = 1.489, p = 0.21, ns$). Stakeholders were very certain of students writing reports on their industrial experience during internship (means ranging from 4.1 to 4.5 and standard deviations between .83 and 1.02). A follow-up statement was *student internship reports form part of students' assessment*. In response to this statement, all stakeholders (does not apply to industry) responded in the affirmative with means between 3.8 and 4.1 ($F = 0.252, p = 0.86, ns$). The interns wrote reports and these were assessed by teachers. So, regarding assessment, Ghana's practice is similar to practices elsewhere (Clark, 2003; Walo, 2001).

The last statement on assessment looks at the views of alumni, teachers and industry on the extent of satisfaction of jobs performed by students when on internship. Both alumni (mean=3.9) and teachers (mean=3.8) contended that employers were generally quite satisfied with the job performance of students. Industry representatives were the least ranked on satisfaction with job performance of students during internship with mean of 3.4 ($F = 1.853, p = 0.16, ns$). The means suggest there were no significant differences among stakeholders. The means of alumni and teachers may imply that they were quite confident in their students for rendering satisfactory jobs in industry. A percentage rating of 55% of industry respondents in total agreeing to the statement is quite positive.

The hospitality industry (predominantly private sector owned) in Ghana was quite satisfactory with HCIM students. However, the private sector employs a relatively low number (25%) of alumni whilst in the public sector, particularly in the health and the education, as high as about 67% were employed. The figures confirm the study by Boateng and Ofori-Sarpong (2002) that in Ghana graduates from tertiary institutions prefer to work in public sector (job security is guaranteed and career progression is favourable) than in the private. Table 2 summarises the perceptions of stakeholders regarding student internship.

Table 2 Summary of perceptions of stakeholders regarding internship

Condition	Remarks
Collaboration	Industry-polytechnic links (HCIM departments) need to be strengthened
Placement	Relevant to interns' academic programme but about 20% couldn't go through internship
Duration/time	Relatively shorter than required; About 50% of students spent 4 weeks; only 6% on average did meet target period
Assessment	Stakeholders unanimously concurred students wrote reports about their industrial experience; Reports were assessed by teachers; Job performance of students on internship was quite satisfactory

Implementation challenges facing students

Stakeholders' views on implementation of internship programme did not differ (Table 3). The mean values ranged from 3.0 to 3.6 with standard deviation between the magnitude of 1.20 and 1.42 ($F = 0.489$, $p = 0.69$, ns). It is interesting to note that when it comes to implementation of internship programme for students only management representatives quite agreed (3.6) to the statement but the rest (does not apply to industry) remained neutral. The means of students in the four polytechnics

ranged from 2.3 and 3.5 ($F=5.263$, $p = 0.002$). Tukey's *post hoc* test reveals that there was a significant difference between students of Kumasi and Takoradi ($p = 0.001$).

Table 3 Views of stakeholders on implementation of internship

Statement	Student ($n=160$)	Alumni ($n=40$)	Teacher ($n=33$)	Management representatives ($n=11$)
Internship programme for HCIM students is well implemented.	3.1 (1.42)	3.0 (1.21)	3.1 (1.41)	3.6 (1.20)

The challenges that students faced during internship were unfriendly relationship between industrial staff and students and unwillingness of industrial staff to teach interns constitute 25%. Industry's failure to provide transport and high transportation fares to and from industry and lack of accommodation for interns was 16%. Other challenges were no proper training during internship constitutes 15% whilst 13% stated they were restricted to some departments/sections of industry and restricted to one activity (particularly, duties like slicing of vegetables and washing of dishes).

In all, about 10% each of the students indicated unqualified industrial staff and lack of modern facilities, and no allowance given to students after internship. Other equally important challenges that need to be addressed were limited time for internship and difficulty in obtaining placements and lack of monitoring by both academic staff and industrial staff. These challenges had percentage ratings of between 4% and 7%. These challenges are usually symptomatic of unstructured internship.

Table 4 shows a summary of stakeholders' perceptions about challenges faced by students during internship.

Table 4 Summary of implementation challenges

Status/Challenge	Remarks
Status of implementation	Stakeholders were quite hesitant to the well implementation of

	internship; perceptions on implementation did not differ generally
Social	Uncooperative nature of industrial staff constitutes 25%
Economic	Lack of transportation and accommodation (16%) and non-payment of allowance (10%) summing up to 26%
Technical deficiency	Limited time and placement constitute 7%
Professional commitment	Lack of professional commitment on the part of industry and teachers sums up to 42%.

To sum up, students faced a catalogue of challenges during internship. These challenges could be categorised as social, economic, technical deficiency and lack of professional commitment.

Suggestions to improve internship

Stakeholders responded to statements regarding suggestions for improvement in implementation of internships. The purpose of these statements was to determine how prepared stakeholders were towards subsequent internships. Suggestions from stakeholders regarding organisation of student internship have been summarised in Table 5.

Table 5 Summary suggestions for improvement on implementation of internship

Suggestion	Remarks
Industry support	Stakeholders were positive toward hospitality industry redoubling support in the training of students; There was a significant difference in views expressed by management representatives and students.
Time extension	Stakeholders unanimously agreed to the extension of internship period.
Teacher involvement	Stakeholders concurred that teachers should actively involve in internship.
Closer collaboration	Stakeholders were of the opinion that there should be closer collaboration among them.

In summary, stakeholders did not differ in their views regarding suggestions for improvement except in the area of support where the difference was significant between students' and management representatives' views. Stakeholders saw the need for internship activities to be reinvigorated so as to achieve the intended objectives in the curriculum. They did not differ in their views concerning extension of time however, teachers and industry were more optimistic. To industry, internship is a means through which potential workers are subsequently employed. It is also a way of 'employing' cheap labour so extension of time for internship accrues to the benefit of industry. Alternatively, teachers feel more satisfied if their students fit in the labour market after graduation hence may clamour for more time for internship. Conversely, students who did not benefit from internship may frown on extension of time. All stakeholders suggested teacher active involvement in internship programmes as laudable.

Conclusion and Discussion

This study aimed at getting a better understanding of stakeholders' perceptions and suggestions for improving student internship in the HCIM curriculum. Generally, stakeholders' perceptions on collaboration, placement, duration and assessment did not differ. Institutional collaboration between polytechnic and industry to foster student internship needed to be strengthened. HCIM students usually did their internship in industries relevant to their study programme and students were assessed based on a report written about their experience in industry. Students faced challenges like social, economic, technical deficiency and lack of professional commitment during internship. Despite these challenges, the views of alumni, teachers and industry did not differ regarding the satisfaction of employers toward job performance of interns during internship. Stakeholders did not differ in their views regarding suggestions for improvement except in the area of support where there was significant difference between students' and management representatives' views. Stakeholders perceived extension of time for internship critical for interns' learning.

From the data gathered, it could be inferred that relationship between teachers and industry was weak. With collaboration not formalised between them (Effah, 2005), it is likely that both the polytechnics and industry did not understand their distinctive roles when it came to student internship. There is real

cause for concern if about 20% of students did not carry out internship because of limited number of vacancies in industries for placement and 6%, on the average, could satisfy the six-month mandatory period for internship. Stakeholders were unanimous on assessment of interns but if the relationship between the polytechnics and industry was episodic (Johnston, 2008), then, the kind of assessment (Clark, 2003; Walo, 2001) could be questionable. Effective assessment should involve closer collaboration of teachers, industry and interns with clear-cut objectives spelt out which would improve on feedback system and thereby hone the competencies of interns. By so doing, stakeholders would be much more satisfied with the job performance of interns. In the absence of a collaborative curricular material jointly prepared by teachers and industry to help guide stakeholders, interns are bound to face myriad of challenges which eventually result in stakeholders being less satisfied with job performance of interns (Collins, 2001). It is however refreshing stakeholders' suggestions for improvement inspire confidence in future implementation of internship.

In order to articulate the proposition that internship is mutually beneficial to all stakeholders, the onus lies on stakeholders to collaborate effectively in ensuring that the proposition is materialised. Active teacher involvement in internship programme is paramount. A policy directive specifying the functions of each stakeholder could guarantee that authentic learning environment for interns' training. In a follow-up study, teachers, industry and students will jointly prepare curriculum material that may help streamline the implementation of internship with the view of improving internship. If stakeholders collaboratively prepare the material, it is believed they may consider the curriculum as their own product and not 'imposed' on them (Van den Akker, 2003). A grassroots approach to curriculum design is likely to promote implementation because participants who craft the document may also implement and evaluate. The hope of Ghana becoming tourist country of choice may be a reality if the human resource in the tourism and hospitality industry is given the needed impetus. In spite of the fact that this study has its limitations, and for that matter findings are tentative, the study provides baseline information for subsequent study which is geared toward managed internship (Divine et al., 2007).

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EFFECTIVENESS OF THE IMPLEMENTATION OF THE OUT SEGMENT OF THE IN-IN-OUT PROGRAMME IN COLLEGES OF EDUCATION WITHIN THE CENTRAL AND WESTERN REGIONS OF GHANA (LEMAIRE, AMOAH, BONNEY, MICAH, DUNYO & WOYOE)

Background to the Study

Teaching practice is a major component of the pre-service preparation of teachers throughout the world. It is referred to as the most universally approved education course (Guyton and McIntyre, 1990). Teaching practice is a vital component of the Teacher Training curriculum at the pre-service level. Teaching practice session can range from informal practice of a particular technique, perhaps with other trainees acting as students to a formally assessed lesson (Walter & Philips, 1988). This is what is referred to as on-campus teaching practice. It exposes the Teacher trainee to the teaching profession at the pre-service stage. Teaching practice as an integral part of teacher education focuses on the teaching skills and techniques where the teacher is required to direct the learning activities of the class (Walter & Philips, 1988). An introduction to the realities of the class room situation is an essential part of effective professional training.

As a teacher development programme, teaching practice has come under the limelight for some time now in Ghana.

The 38 colleges of Education in Ghana and the University of Education Winneba (UEW) have replaced some-weeks of teaching practice with a new programme of one year out programme that seeks to enhance the efficiency of teacher trainees.

Statement of the problem

Before the implementation of the out segment of the In-In-Out programme in the year 2000, the final year students in the Colleges of Education did twelve weeks of teaching practice where they stayed in their respective Colleges and went to their various schools of attachment daily to practice teaching during the teaching practice period.

It was envisaged that with the advent of this programme, the trainees would have a lot of exposure to the art and skills of the teaching profession be equipped with the relevant pedagogical skills and knowledge needed for effective teaching and learning in the classroom.

However, some heads of basic schools bemoan the abysmal performance of the teachers who are products of the In-In-Out programme in the classroom.

When given the chance, some head teachers would prefer staffing their schools with teachers who are not products of the In-In-Out programme.

Purpose of the study

The purpose of the study was to assess the effectiveness of the out segment of the In-In-Out programme in the Central and Western Regions of Ghana.

Research Questions

1. What are the characteristics of the schools of attachment of the Out programme?
2. What are the qualities of the mentors in the basic schools where the trainees were attached?
3. What is the level of effectiveness of the orientation given to the mentors and mentees?
4. How beneficial is the out segment of the In-In-Out programme to the trainees, and mentors?
5. What are the challenges confronting the mentees, tutors, mentors, and management of the colleges of education?
6. What are the solutions to the challenges confronting the mentees, tutors, mentors, lead mentors and management of colleges of education?

Hypotheses

1. There is no significant difference in the level of challenges confronting the out segment between the Colleges of Education in Central and Western Regions.
2. There is no significant different in the level of impact of the out segment on mentees in the Colleges of Education.

Significance of the Study

It would enable the implementers of the out segment of the In-In-Out programme to identify the bottlenecks associated with the implementation of the programme which adversely affect the successful implementation of the programme and the performance of the teachers in the classroom.

It would aid policy makers and curriculum developers to make the necessary amendments and come out with well designed policies and curriculum to facilitate the implementation of the out segment of the in-in-out programme.

METHODOLOGY

Research Design

Descriptive survey research design was used to conduct the study.

Study Population

The study population consisted of tutors in the Colleges of Education, mentees (third year students of the colleges of education), mentors (teachers in the basic schools), and management of Colleges of Education in the Central and Western Regions of Ghana.

Sampling Procedure

The lottery type of the simple random sampling method was used to select the tutors, mentees and mentors. Convenience sampling method was used to select the management of the colleges of education. The same method was used to select the colleges of education in the Western and Central Regions of Ghana.

The selected Colleges of Education were Holy Child Colleges of Education, Komenda College of Education, OLA College of Education and Enchi College of Education.

Simple random sampling was used to select the participants.

The sampling size was 724 comprising 300 mentees, 300 mentors, 120 tutors and 4 principals.

College of Education	Number of mentees	Number sampled
Komenda College	274	80
Enchi College	170	70
OLA Colleges of Education	275	80
Holy Child College Of Education	189	70

Research Instrument

Questionnaire was the main instrument for the data collection because all the participants were well educated.

Data Collection

Questionnaire was administered personally by the researchers. Data collection began first in Holy Child College of Education then Komenda College of Education, OLA College of Education and Enchi College of Education respectively.

Data Analysis

Percentages, means and frequency distribution were used to summarise the data on characteristics of the schools of attachment, qualities of the mentors, level of effectiveness of the orientation given to the mentors and mentees, benefits mentees and mentors derived from the out segment, challenges confronting the mentees, tutors, link tutors, mentors and management of the colleges of education and solutions to the challenges confronting the mentees, tutors, link tutors, mentors and management of Colleges of Education.

Independent t-test was used to compare the level of challenges the out segment presented to mentees in the Colleges of Education in Central and Western Regions

Analysis of variance was used to compare the level of impact of the out segment on mentees in the Colleges of Education.

RESULTS AND DISCUSSIONS

Research Question 1

What are the characteristics of the schools of attachment of the In-In-Out programme?

Setting of the School of Attachment

Setting	Frequency	Percentage
Urban	24	8.1
Semi Urban	99	33.1
Rural	177	58.9
Total	300	100.0

It was observed that majority (58.9%) of the schools of attachment have rural setting. Barely 8.1% of the mentees were attached to urban schools.

Nature of School Buildings

Type of Buildings	Frequency	Percentage
Cement	242	80.6
Clay	53	17.7
Bamboo	5	1.6
Total	300	100.0

Eighty point six percent (80.6%) of the schools of attachment were built with cement. Only 1.6% of the mentees indicated that their schools were built with bamboo.

Enrolment of Schools of Attachment

Enrolment	Frequency	Percentage
11-20 Pupils	41	13.7
20-30 Pupils	31	10.5
31-40 Pupils	70	23.4
41-50 Pupils	143	47.6
51-60 Pupils	12	4.0
61 Pupils and Above	2	0.8
Total	300	100.0

Fifty two point four percent (52.4%) of the mentees indicated that the enrolment in the schools was between 41 and 61pupils per class. This shows that enrolments in the schools of attachment are large.

In Ghana, the teacher pupil ratio is 35 pupils to one teacher.

Availability of Materials/Equipment

Materials/Equipment	Mean	Std. Deviation
Chalk	1.9	2.12
Furniture	2.4	1.30
Playing field	2.5	1.48
Pictures	3.1	1.30
Text books	3.2	1.29
Charts	3.4	1.31
Globes	3.8	1.39
Maps	4.0	0.89
Sand Tray	4.5	0.02
Merry Go Round	4.5	0.13
See -Saw	4.6	0.91
Lego/ Building Blocks	4.6	0.10
Sport equipment	4.9	1.37

(1=Very Adequate 2=Adequate 3=Somehow Adequate 4=Inadequate 5=Not Available)

Text books, Pictures, Charts and Globes were somehow adequate but Sand Tray, Merry Go Round, See - Saw, Lego/ Building Blocks and Sport equipment were inadequate in the schools.

Generally materials/equipment for teaching and learning were inadequate in the schools of attachment especially in Early Childhood Centres where these materials are needed most.

Early Childhood Education is designed to lay the foundation for the development of skills and acquisition of knowledge and prepare the children for the primary schools (Kathyanga, 2011). Inadequate instructional materials make it very difficult for the teachers to teach the children those relevant skills.

Research Question 2

What are the qualities of the mentors in the basic schools where the trainees were attached?

Qualities of the mentors

Quality	Mean	Standard deviation
Empathy	3.1	1.02
Patience	3.2	0.91
Good sense of humour	3.5	0.32
Interpersonal skills	3.8	0.96
Friendliness	4.2	0.85
Ability to guide mentees teaching	4.4	0.11

(Scale: 1 = Excellent 2=Very Good 3=Good 4 =Fair 5= Poor)

Mentors' empathy, patience, sense of humour and interpersonal skills were rated good and their friendliness was rated very good.

Papp, Markkanen & Von Bonsdorff (2003) similarly reported that mentors should have a good sense of humour, patience, effective interpersonal skills, approachability and professional development abilities.

Research Question 3

What is the level of effectiveness of the orientation given to the mentors and mentees?

Duration of Orientation for Mentors and Mentees

Duration	Mentors		Mentees	
	Frequency	Percentage	Frequency	Percentage
1 day	97	32.3	-	-
2 days	133	44.4	-	-
3 days	65	21.8	17	5.6
4 days	2	0.8	31	10.5
5 days	2	0.8	252	83.9
Total	300	100.0	300	100.0

Forty-four percent (44.4%) of the mentors indicated that the duration for their orientation was two days, 32.3% of the remaining mentors said the duration for their orientation was 1 day.

But 83.39% of the mentees indicated that the duration for their orientation was 5 days.

Adequacy of Orientation Given to Mentors

Level of Adequacy	Frequency	Percentage
Very adequate	33	26.6
Adequate	47	37.9
Fairly adequate	26	20.9
Inadequate	18	14.5
Total	124	100.0

Thirty seven point nine (37.9 %) of the mentors indicated that the orientation given to them was adequate. Only 14.5% said the orientation was inadequate.

Effectiveness of the Orientation

Level of effectiveness	Mentors		Mentees	
	Frequency	Percentage	Frequency	Percentage
Very Effective	77	25.8	73	24.0
Effective	138	46.0	139	46.0
Somehow effective	68	22.6	70	23.0
Ineffective	10	3.2	12	4.0
Very ineffective	7	2.4	6	2.0
Total	300	100.0	300	100.0

Forty percent (46.0%) of the mentees and mentors indicated that, the orientation they were given was effective and 25.8% of the mentors said the orientation was very effective whiles 24.0% of the mentees also said that their orientation was very effective.

Research question 4

How beneficial is the out segment of the In-In-Out programme to the mentees and mentors?

Benefits Mentors Derived From In-In-Out Programme

Item	Mean	Std. Deviation
Tolerate mentees unusual behaviour very well	3.3	2.78
Understand mentees behaviour better	3.07	0.64
Lessen mentor's workload	3.1	0.88
Developed supervisory skills for effective supervision of mentees teaching	3.2	0.65
Develop interpersonal development skills.	3.6	0.67
Experienced some professional development/ growth as a result of participating in mentoring programme	3.2	0.71
Provided opportunities for collegiality and collaboration amongst mentors and mentees	3.1	0.69

(1= Strongly Disagree 2= Disagree 3=Agree 4= Strongly Agree)

Benefits of Mentees from the Out Segment of the In-In-Out Programme

Item	Mean	Std. Deviation
Developed skills for effective teaching and learning	3.5	0.80
Developed love for the teaching profession	3.2	0.77
Could set teaching targets and work tirelessly to achieve them	3.3	0.68
Could take concrete decision on issues affecting their welfare.	3.3	0.71
Made effective use of financial and other resources effectively.	3.4	0.76
Could deal effectively with different issues or situations both in the school and community.	3.2	0.73
Appreciated and adapted effectively to rural setting or semi rural setting.	3.3	0.76
Could deal favourably with pupils who have unusual behaviour in the school.	3.2	0.73
Developed team spirit and could work effectively with people in the community and the school.	3.4	0.76
Learnt to work on their own with little assistance	3.5	0.79
Gained a lot of subject knowledge in areas they were not experienced in.	3.5	0.78
Gained support, empathy and friendship from mentoring relationships.	3.9	1.43
Gained confidence and self esteem	3.6	0.73
They gained knowledge of school policies and procedures	3.4	0.76
Mentees were better prepared for career and career advancement	3.5	0.67

(1= Strongly Disagree 2= Disagree 3=Agree 4= Strongly Agree)

From the data obtained on the benefits mentors and mentees derived from the out-programme, it can be seen that, there are positive outcomes. These include opportunity for collegiality and collaboration, professional development/growth, skills for effective teaching and learning, love for the teaching profession and subject knowledge in the areas they were not experienced in. These are in line with the outcomes stated by Huling-Austin (in Johnson, 2002).

Research Question 5

What are the challenges confronting the mentees, tutors, mentors and management of the Colleges of Education?

Challenges Mentors Encountered

Item	Mean	SD
Low motivation	3.1	1.08
Conflict between what the tutors taught mentees at college and what the mentors asked them to do	3.2	1.01
Mentees' absenting themselves from classes without permission	3.7	1.37
Mentees' unwillingness to accept constructive criticism	4.1	0.15

(1= Strongly Disagree 2= Disagree 3=Agree 4= Strongly Agree)

Major challenges mentors encountered during the out programme were low motivation and conflicts between them and tutors at the colleges of education over what they practice in their schools and what tutors taught the mentees, mentees' absenting themselves from classes without permission and mentees' unwillingness to accept constructive criticism

.Aire & Tella (2003) asserted that people are more likely to work hard when they perceive a reasonable chance to be rewarded. When mentors are properly motivated they would put up their best for the success of the out programme.

Challenges Mentees Encountered

Item	Mean	SD
Lack of decent accommodation for the mentees	3.1	1.12
Financial constraints	3.2	0.17
Mentees did not enjoy the cooperation of their mentors	3.4	1.63
Inadequate instructional materials for teaching and learning	4.6	0.79

(1= Strongly Disagree 2= Disagree 3=Agree 4= Strongly Agree)

Financial constraints, lack of decent accommodation for the mentees, lack of cooperation from mentors and inadequate instructional materials for teaching and learning were the major challenges they encountered during the out programme.

Challenges Tutors Encountered

Item	Mean	SD
Low motivation	3.2	0.91
Mentees did not practice exactly what they were taught at college.	3.8	0.62

(1= Strongly Disagree 2= Disagree 3=Agree 4= Strongly Agree)

Low level of motivation and mentees not practicing exactly what they were taught were the constraints that tutors in the colleges of education encountered.

Motivation, either extrinsic or intrinsic, is vital to induce peoples to put up their best in their academic work. Individuals' achievement behaviour depends to a large extent on the motivation they receive (Aire & Tella 2003).

Research Question 6

What are the solutions to the challenges confronting the mentees, tutors, link tutors, mentors, lead mentors and management of colleges of education?

Solutions to the Challenges

Item	Mean	SD
Providing adequate motivation for mentors and tutors	4.8	0.01
Ensuring effective coordination among the stakeholders involved in the out programme	4.2	0.64
Provision of adequate instructional materials to the schools of attachment	3.9	0.47
Conducting efficient on-campus teaching practice to prepare the mentees for the out programme	3.5	0.53

(1= Strongly Disagree 2= Disagree 3=Agree 4= Strongly Agree)

The challenges can be solved by:

- Providing the mentors and mentees adequate instructional materials
- Ensuring effective coordination among the stakeholders involved in the out programme
- Providing of adequate instructional materials to the schools of attachment
- Conducting efficient on-campus teaching practice to prepare the mentees for the out programme

Hypothesis 1

- 1 There is no significant difference in the level of challenges confronting the out segment between the Colleges of Education in Central and Western Regions.

Independent T-test comparing challenges that confronted the implementation of the out programme between colleges of education in central and western regions

Variable	t	Sig.	Remark
Challenges that confronted the implementation of the out programme	.415	1.291	Not Significant

There was no significant difference in the challenges confronting the out segment between the colleges of education in central and western regions of Ghana.

Hypothesis 2

There is no significant different in the level of impact of the out segment on mentees in the Colleges of Education.

Colleges of Education	Sum of Squares	df	Mean Square	F	Sig.
Between Colleges	3.822	2	1.911	3.870	.025
Within Colleges	42.967	87	.494		
Total	46.789	89			

The differences that occurred in the challenges that confronted the mentees were significant.

LSD Multiple Response comparing challenges that confronted mentees

(I) College Of Education	(J) College Of Education	Mean Difference (I-J)
Enchi College Of Education	OLA	-.40000(*)
	Holy Child College Education	.06667
OLA	Enchi College Of Education	.40000(*)
	Holy Child College Education	.46667(*)
Holy Child College Education	Enchi College Of Education	-.06667
	OLA	-.46667(*)

The difference occurred between OLA and Enchi colleges of Education as well as Holy Child College of Education and OLA College of Education

Conclusions

- The schools of attachment have rural setting and materials/equipment for teaching and learning were inadequate.
- Orientation programmes to prepare mentees and mentors for the out programme was effective
- The mentors' professional qualification was moderately high but their academic qualifications and teaching experience were low.
- There were few challenges that militated against effective implementation of the segment of the in-in-out programmes and the differences that occurred was not statistically different.
- Mentors and mentees benefited a great deal from the out programme and the impact the out programme had on the mentee in the colleges of education was statistically significant.

Recommendations

1. The government, NGOs, District Assemblies and Religious organisations should endeavour to provide the school with adequate materials/equipment to enhance effective teaching and learning in the schools.
2. The headteachers should also use part of their capitation grant to procure adequate materials/equipment to enhance effective teaching and learning in their schools.

3. Parents, community members and religious organisations should provide decent accommodation for the mentees so that they would feel comfortable and diligently perform their duties.
4. The teaching practice coordinators and management of the Colleges of Education should ensure that only mentors who have high level of experience are mandated to mentor the mentees during the out segment of the in-in-out programme.
5. The mentors and tutors in the colleges of education should come to terms on the standards the mentees should follow when they are on attachment to ensure cooperation and mutual respect for one another for successful implementation of the out programme.
6. The management of the various Colleges of Education should endeavour to motivate the mentors and tutors either in cash or kind to induce them to work very hard to ensure successful implementation of the out programme.

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LABOUR MARKET PROSPECT AMONG TERTIARY SCHOOL UNDERGRADUATES AS A CORRELATE OF QUALITY
ENTREPRENEURSHIP EDUCATION IN NIGERIA (OBUNADIKE & UGHAMADU)

Introduction

Tertiary education is a specialized type of education which students obtain at the post-secondary school levels. It is given in such institutions like universities, polytechnics, colleges of education, colleges of agriculture and other monotechnics. The criticism against Nigerian tertiary education programme is that they are bookish, elitist and colonial in nature (Olukayode 1984; Odo 2010; Nwankwo & Odo 2010). The result is the high rate of unemployment among Nigerian youths. The current emphasis on entrepreneurship education in tertiary institutions in Nigeria is one of the attempts at reducing unemployment in the country. It is therefore very necessary to assess the labour-market prospects among undergraduates so as to give direction to effective implementation of entrepreneurship education programme in tertiary institutions in Nigeria.

The effort in this study was to assess the labour market prospects of undergraduates in our tertiary schools. The background information on the study was provided under the following sub-headings: labour market; prospects for undergraduates; entrepreneurship education; purpose of entrepreneurship education; objectives of entrepreneurship education and development of entrepreneurship education in Nigeria.

Labour Market Prospects for Undergraduates

Labour market means all institutions and methods by which persons who are desirous of productive employment are put in touch with one or more prospective or probable to fill vacant positions that are known to exist or that may be notified by employers. Two major kinds of labour market exist-formal labour market and informal or traditional labour market.

In Abakaliki as in other urban areas such as Enugu, Awka, Warri and others the informal or traditional system is quite pervasive among certain operators. Labourers, artisans craftsmen seeking works have

developed the habit of converging in some designated places, each carrying his or her tools of trade like shovels, cutlasses, head-pans, mechanics or carpenters' tools etc. Anyone who needs their services, usually for casual work, goes to the point of convergence where he or she is usually swamped and surrounded by the job-seekers haggling for the job. There are more than one of such centers within the cities. The job-seekers are remarkably well organized and disciplined, offering and negotiating with the prospective employers in turns. Indeed, they form a kind of unregistered and informal trade unions, laying down the terms on which a member of each trade should accept a job such as the minimum rate and length of the working day. For the foreseeable future, this kind of informal roadside labour market is likely to persist and grow.

Of course, it would be too simplistic, for example to think that an uneducated labourer is within the same labour market stratum as an educated one. This therefore brings in the formal type of the labourer market. With this in mind, Yesufu (2000,p.115) noted, "thus, a labour market, in functional terms, is one that caters for economically identifiable or occupationally stratified labour that display comparatively levels of education and training and substitutability, and consequently, command comparative wages or salaries". The focus of this study is on the formal labour market.

The criterion for measuring the success of an educational system is in part, the degree to which the schools provide trained personnel to fill the needs of firms (Blang, 1970). Essentially, schools are viewed as the single most important agency of socialization for creating competent adult workers for modern work institutions (Persons, 1960). Sanusi (2002:8) probably had this in mind when he said that:

There should also be an effective linkage between the tertiary institutions and industries in undergraduate training, and in research and development. Our tertiary institutions should be guided strictly by a credible admission policy and course basis with a view to checking the imbalance in the system and reflecting national development needs.

The above remark is not without a cause. The general belief in the country is that the quality of tertiary education (and indeed other levels) has reduced drastically (Junaid 2009). Many have deteriorated beyond producing half-baked graduates. The labour market prospects for the undergraduates are therefore limited (Sanusi 2002; Babalola 2006).

The labour market report on the prospect of Nigerian graduates shows that employees complained that graduates are poorly prepared for work (Jimoh 2007). The report affirmed that academic standards have fallen drastically and as a result, Nigerian graduates are viewed as half-baked and ill-equipped for the labour market. The major consequence therefore is unemployment. This calls for entrepreneurship education in order to drastically reduce the rate of unemployment in the nation.

Entrepreneurship Education

In Nigeria, unemployment is everywhere and everyday, thousands of graduates are being turned into the labour market. The challenges above culminated in renewed interest of the government in self-reliance. In order to achieve self-reliance, government has mounted several support programmes aimed at generating entrepreneurship spirit among the populace. Academic institutions were also encouraged to design programmes that will equip students on graduation with skills capable to making them entrepreneurs rather than job seekers.

Generally, entrepreneurship means bringing together the factors of production-land, labour and capital in order to produce goods or services. Operationally, we may define entrepreneurship as the willingness and ability of a person to explore and exploit investment opportunities, establish and manage a successful business enterprise. Citing Timmons (2008), Ashmore (2009:4) defined entrepreneurship in the following words:

The ability to create and build something from practically nothing. It is initiating, doing, achieving and building an enterprise or organization, rather than just watching, analyzing, or describing one. It is the knack for sensing an opportunity where others see chaos, contradiction and confusion. It is the ability to build a "founding team" to complement your own skills and talents. It is the know-how to

find, marshal and control resources (often owned by others) and to make sure you don't run out of money when you need it most. Finally, it is the willingness to take calculated risks, both personal and financial, and then do everything possible to get the odds in your favour.

Some generalizations can be derived from the above conceptualization and can be summed thus:

1. Entrepreneurs risk their own money;
2. They organize their own work;
3. They have income that varies with market success;
4. They make all the final decisions;
5. They must find customers to survive; and
6. Entrepreneurs handle diverse activities at the same time.

These are some of the reasons why entrepreneurs behave differently from others. This implies that entrepreneurship is not just skill acquisition for acquisition sake but for creating employment for self and others. It leads to the development of small, medium and sometimes large scale businesses based on creativity and innovation. The question now is: What is entrepreneurship education?

Entrepreneurship education is a carefully planned process that eventuates into the acquisition of entrepreneurial competencies. Entrepreneurship education equips the learner with skills on decision making, acquisition of new ideas, method of raising and maintaining conversations and establishing business relationships (Ikeme, 2006). Entrepreneurship education relates to what Adamu (2005) referred to as the four pillars of education-learning to know; learning to do; learning to live together and learning to be. Entrepreneurship education fulfils some purposes.

Purpose of Entrepreneurship Education

The purpose of entrepreneurship education in Nigeria as in other parts of the world is to empower the citizenry to rise above the boring jobs of the past, create jobs of interest for themselves and for productive employment. According to UNSECO in report NUC/ETF (2004:9), the purpose of entrepreneurship education includes:

1. Educating individuals for, and about business.
2. Providing a continuous programme of planned learning experiences designed to equip individuals to fulfill effectively three roles;
 - (a) Providing and distributing goods and services as workers;
 - (b) Using the products as consumers; and
 - (c) Making wise socio-economic decision as citizens.
3. Providing career information that helps individual students relate their interests, need and abilities to occupational opportunities in business.
4. Providing educational opportunities for students who are preparing for careers in field other than business, to acquire business knowledge and skills needed to function effectively, for example, to handle effectively both oral and written communications, and to develop interpersonal and human relation skills.

The objectives and purpose of entrepreneurship education as noted above are not only unambiguous but laudable. They can be achieved if they are qualitatively pursued.

Development of Entrepreneurship Education in Nigeria

Historically, education in Nigeria is actually the birth of different missionary bodies struggling to proselytize the people in an attempt to produce teachers for the existing church schools as well as catechists, clerks and literate personnel needed for evangelism. Before and after independence in 1960, Nigeria was operating the British system of education. This system was 8-5-2-3 system of education which means eight years in primary school, five years in secondary school, two years in higher school and three years in the university. This system of education was highly criticized. Nwangwu (2006) noted the criticism against the British system of education in Nigeria to include:

- 1) It laid emphasis on academic subjects.
- 2) The educational opportunity was restricted on the upper level of the system.
- 3) The British grammar school system of education was transposed in Nigerian without the consideration to the culture, environment, labour market, needs and aspirations of Nigeria as a country.
- 4) It laid emphasis on religious with bible and catechism forming the major substance of reading, writing and scripture.
- 5) Examples in arithmetic and English have no relationship with either Nigeria as a country or Africa as a continent.
- 6) The system encouraged rote learning which does not produce critical mind.

The above apprehensions and disenchantments culminated in the 1969 National Curriculum Conference in Nigeria. This conference was sponsored by the Nigerian Educational Research Council (NERC as it was then called) and was attended by Nigerians drawn from all walks of life to deliberate on school curriculum for Nigerian school.

The conference was then followed by a seminar of experts to deliberate on the national policy on education for an independent and sovereign Nigeria. The outcome was the National Policy on Education (NPE) first published in 1977 and first revised in 1981. The hallmark of NPE is the 6-3-3-4 system of education which replaced the 8-5-2-3 colonial system of education. Within the period under review, 1960s and 1980s, unemployment and poverty were not a national concern as they are now.

Thus, between 1960s and 1980s, the country's agricultural, industrial, and the buoyant public service sectors were able to absorb a very high percentage of the labour force. However, political instability and inconsistencies in the socio-economic policies of successive governments led to the emergence of high level of poverty and unemployment that hit the roof. This was made worse by the faulty educational system that failed to take cognizance of the dynamics of labour market but produced a large army of graduates who are faced with the problem of poverty and unemployment. To contend with the soaring problem of poverty and employment, the Federal Government in 1987 mounted the National Directorate of Employment (NDE) as one way of reducing unemployment among youths and university graduates in the country by creating employment opportunities. The NDE mounted a programme, Entrepreneurship Development Programme (EDP) to produce and train more entrepreneurs that are

needed to accelerate industrial enterprise and to stimulate self-employment for the unemployed (Paul, 2005). This marked the beginning of more emphasis on entrepreneurship education which among other objectives is designed to offer functional education for the youths so as to enable them to be self-employed and self-reliant and to offer graduates with adequate training that will enable them to be creative and innovative in identifying novel business opportunity (Nwangwu 2006).

Purpose of the Study

The major purpose of this study is to assess the labour market prospects among tertiary school undergraduates in Nigeria. Specifically, the study sought to:

- a) identify differences in labour market prospects of students according to type of university.
- b) ascertain whether any relationship exist between the theoretical and practical knowledge acquired in tertiary schools and labour market prospects among undergraduates in Nigeria.
- c) determine the implications of the theoretical and practical knowledge being given in tertiary schools for quality entrepreneurship education.

Research Questions

The following research questions guided the study:

- 1) Are there differences in labour market prospects among undergraduates in Federal and State Universities?
- 2) Does any relationship exist between the theoretical and practical knowledge acquired in tertiary schools and the undergraduates labour market prospects?
- 3) Are there implications of the theoretical and practical knowledge being given in tertiary schools for quality entrepreneurship education in Nigeria?

Research Hypotheses

The following hypotheses guided the study and were tested at the .05 level of significance.

- 1) The mean ratings of undergraduates in Federal and State Universities will not indicate any significant relationship between knowledge acquired in tertiary schools and the labour market prospects.
- 2) The mean ratings of the undergraduates will not indicate any significant implication of the theoretical and practical knowledge being given in tertiary schools for quality entrepreneurship education.

Methodology

The study is a correlational study carried out in the South-East of Nigeria. All the population of the study comprised all undergraduates in Two Federal Universities (University of Nigeria, Nsukka and Nnamdi Azikiwe University, Awka) and five state universities (Abia State University, Uturu; Anambra State University, Uli; Ebonyi State University, Abakaliki; Enugu State University of Science and Technology, Enugu and Imo State University, Owerri) in the zone. Purposive sampling method was used to select one hundred (100) final year students each from the seven (7) Universities.

A researcher-developed questionnaire titled “Labour Market Prospect Survey (LAMPS)” was the instrument for data collection. The instrument was structured into sections. Section “A” solicited background information of the respondents. Section ‘B’ was on the schools and the labour market prospects while section ‘C’ was on the implications of the kind of knowledge being given in the tertiary institutions for quality entrepreneurship education in Nigeria.

The instrument was duly validated by experts. With the score from a pilot test done with 30 final years students of Delta State University, Abraka a calculated reliability coefficient of 0.82 was obtained using the Pearson Product Moment Correlation. The data were collected by the researchers who distributed the instrument to the students and collected each batch the same day. This was done between the months of June and July, 2010.

A total of seven hundred copies of the questionnaire were correctly filled and retrieved. The analysis of data were done using mean to answer research questions and t-test statistic to test the hypotheses at 0.5 level of significance. Four-point scale was used. In answering the research questions, decisions were based on 2.50 mean score. Any item that has the mean score of 2.50 or above was taken to mean that the respondents agreed with the researcher while any mean score for each item that is less than 2.50 was taken to indicate that the respondents disagreed with the researchers.

Results

**Table 1: Mean (\bar{x}) Ratings on Differences in Labour Market Prospects
among Students of Federal and State Universities**

S/N	Differences in labour market prospects	Federal Universities (\bar{x})	State Universities (\bar{x})
1	The quality of education you are receiving in your school is sufficient to prepare you for the labour market.	2.60	2.51
2	Your level of exposure to practical knowledge is sufficient for you to be self-employed.	2.54	2.40
3	Most of those who read the same course you are reading are self-employed.	2.41	2.30
4	Most of those who read your course have got paid employment.	2.50	2.52
5	Most of those who read your course are still roaming the street in search of jobs.	1.45	2.00

The results in table 1 shows that the labour market prospects of the undergraduates are geared towards paid jobs (employment) rather than self-employment. There seem to be much difference in the direction of their ratings. The ratings of item 3 indicate the labour market prospect that most graduates are not self-employed and by the ratings of item 5, some of the graduates are still searching for paid jobs.

**Table 2: Institutional Training and Labour Market Prospects among
Students of Federal and State Universities**

S/N	Mean (\bar{x}) Ratings on labour market prospect.	Federal Universities (\bar{x})	State Universities (\bar{x})
6	Learning in your school is providing you with enough experiences that will enable you to meet the demands of the labour market?	1.54	1.60
7	Your school offers a broad selection of challenging courses sufficient for you to be employed in the labour market?	1.61	1.50
8	Your school offer a broad selection of challenging courses sufficient for your to be self-employed?	2.41	2.30
9	Your school library/workshop or laboratory have enough books and resources/equipment for you to use?	2.72	2.40

The results in table 2 show that the undergraduates are mainly prepared for paid jobs rather than being equipped for self-employment. Learning in their schools does not provide them with enough experiences that will enable them meet up with labour market demands (item,6); their schools do not offer them challenging courses (items 7 and 8).

Table 3: Implications of Theoretical and Practical knowledge being offered the Universities for Quality Entrepreneurship Education

S/N	Need for Quality Entrepreneurship Education	Federal Universities (\bar{x})	State Universities (\bar{x})
10	If I am exposed to practical skills, it will enhance my entrepreneurial skills.	2.81	2.75
11	Our school curriculum has more emphasis on theoretical knowledge which may hinder entrepreneurial skills.	2.50	2.60
12	I believe there is a mismatch between education being provided in my school and the demands of entrepreneurship.	2.61	2.56
13	Entrepreneurship education is being given adequate attention in my school.	2.40	2.37

The results in table 3 show that entrepreneurship education has the potential of making the student entrepreneur but it is not given adequate attention.

Table 4: t-test Analysis of Labour Market Prospects

Groups	N	\bar{X}	SD	Df	t-cal	t-crit	Sig-level
Federal Universities	200	1.90	0.54	698	11.93	1.965	p>.05
State Universities	500	2.11	0.22				

The t-cal is greater than the t-crit, the null hypothesis is therefore rejected (p>.05).

Table 5: t-test Analysis of the Implication for Quality Entrepreneurship Education

Groups	N	\bar{X}	SD	Df	t-cal	t-crit	Sig-level
Federal Universities	200	2.53	0.33	698	29.82	1.965	p>.05
State Universities	500	3.02	0.32				

The results presented in table 5 show that the t-cal is greater than the t-crit. The null hypothesis is therefore rejected (p>.05).

Summary of Findings

The major findings of the study include:

- 1) The quality of education being given in tertiary institutions is sufficient to prepare the undergraduates for labour market but most of the graduates still roam the street in search of jobs.
- 2) Learnings in schools do not provided students with enough experiences that will help the student to meet up with the demands of labour market.

- 3) Entrepreneurship education is not being given adequate attention in Nigerian universities.
- 4) Much emphasis on theoretical knowledge hinders the acquisition of entrepreneurial skills in tertiary institutions in Nigeria.
- 5) There is mismatch between education being given in tertiary institutions and the demands of entrepreneurship education.
- 6) The kind of knowledge being given in the tertiary schools has implications for quality entrepreneurial studies.

Discussion of Findings

One of the major findings of this study is that undergraduates in most Nigerian tertiary schools are not adequately trained entrepreneurially. This is evident in the mean ratings of items 1 and 4 by both undergraduates in federal and state universities. It is also evident in low ratings of items 3 and 5 by the same respondents. The finding is in agreement with Okebukola, (1997) where it was noted that many students now leave school without having the capacity to join a vocation or make rational decisions in adulthood. In the same manner, Jimoh (2007) found that employers complained that the graduates are poorly prepared for work.

In addition to the above, the mean ratings presented in table 2 show that there is mismatch between institutional trainings and the labour market prospects. This is evident in the mean ratings for items 6 to 8 in table 2. Sanusi (2002) had earlier observed the lack of congruence between institutional trainings and labour market expectations. This therefore calls for quality in the management and implementation of the entrepreneurship programmes in our various tertiary institutions. Okafor (1988) observed that children who would have been higher achievers can be destroyed academically if their handling at the years of preparation is characterized by inadequacies. Quality entrepreneurship education in terms of exposing the students to practical skills, emphasis on entrepreneurial skills may enhance the entrepreneurial skills of the students.

Conclusion/Recommendations

The problem of graduate unemployment has become a national concern. Cases abound where students graduate from the tertiary institutions only to discover that there is no job in the labour market. The conclusion to be drawn from this study is the fact that the high rate of unemployment among graduates in the country calls for quality in the management and implementation of entrepreneurship education in tertiary institutions. Quality entrepreneurship education will make the students entrepreneurs thereby reducing unemployment in the country. In the strength of the findings of this study, the following recommendations are made:

- 1) The curriculum of our tertiary schools should be reviewed to make adequate provisions for acquisition of entrepreneurial skills by students and make it also responsive to the demands of the labour market;
- 2) There should be adequate funding of our tertiary institutions so as to enable the management of the respective institutions to provide facilities for entrepreneurial studies;
- 3) There should be self-employment and entrepreneurial development programmes for our undergraduates targeting such areas as trading, crafts, food production and food processing.

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Introduction

This article presents an effective format for developing knowledge, skills and dispositions needed to meet the expectations for 21st century learners worldwide. Teaching is most effective when students can immediately apply newly constructed knowledge in an authentic setting or retain newly constructed knowledge over time for later application in an authentic setting. However, students often fail to apply newly constructed knowledge in authentic settings due to de-contextualized classroom activities. Action learning is effective because it is a way of contextualizing the classroom to match the realities outside the classroom. Action learning is a performance-oriented, student-centered, problem-based strategy that promotes immediate and long-term knowledge and skill transfer. A sample lesson plan format is presented here based on the proven success of the action learning approach.

Action learning is founded upon a particular philosophical approach to teaching and learning. The philosophy of action learning stated by Johnson (1998) “is that learning is not solely about acquiring knowledge or a skill by reading a book or listening to a lecture” (p. 298). Johnson contends, “Only when we can transfer our knowledge, skill, behaviours, beliefs, or insights, to something practical, thus providing evidence that we are able to apply it, can we claim that we have really learned” (p. 298). Therefore, those adopting such a philosophy believe that teaching is most effective when students can immediately apply newly constructed knowledge in an authentic setting or retain newly constructed knowledge over time for later application in an authentic setting. Action learning enhances learning because it is presented as a way to contextualize the classroom to the realities outside the classroom. Lesson plans based on action learning are effective because of the high congruence [or so called fidelity] that is sought between classroom-based activities (learning space) and requirements outside the classroom (performance space).

Action learning defined

Action learning is a strategy that arranges intentional learning environments in a way that reflects the spaces in which people will actually demonstrate the knowledge and perform the skills that were constructed during the episodes of teaching and learning. Foy (1977) based action learning on three principles: 1) mature people learn best when they are directly involved in authentic problems for which answers are unknown, 2) an individual's experience, combined with the experience of others, can be used to effectively solve problems, and 3) learning by doing is effective for solving problems in unfamiliar situations. McGill and Beaty (1995) introduced detailed information about action learning, and the skills needed for effective action learning programs by explaining the relationship of action learning to learning and development as being based on the relationship between reflection and action. McGill and Beaty stated "We all learn through experience by thinking through past events, seeking ideas that make sense of the event and help us to find new ways of behaving in similar situations in the future" (p. 21). Mwaluko and Ryan (2000) contend that action learning programs that are systematically designed and implemented can be more effective than common didactic forms of instruction. Bunning (1997) described three essential features of action learning:

1. "There must be action in the real world rather than in some simulation.
2. The activity must be conducted in a way that involves others, especially other participants who are working on the same or quite different projects.
3. The emphasis must be upon learning; not just the taking of action and this is what distinguishes Action Learning from project team membership" (p. 91).

According to Zuber-Skerritt (2002), action learning "is learning from concrete experience and critical reflection on that experience – through group discussion, trial and error, discovery, and learning from and with each other" (pp. 114-115). "Because action learning is concrete and concerned with learners' actual experiences, it is immediately relevant to their practical work" (Zuber-Skerritt, 2002, p. 115). Smith and O'Neil (2003) defined action learning as "a form of learning through experience" (p. 63), learning by doing. Smith and O'Neil also characterize action learning as programs where students practice solving genuine problems in real time in supportive and collaborative environments. An individual "makes sense of an experience by conceptualizing it and generalizing the replicable points; and plans for future actions based on the learning gathered" (Smith & O'Neil, 2003, p. 64). Bierema (1998) identified six elements of action learning that frame a strategy for providing learners with

experiences that are immediately relevant to their practical work: “1) Establish a Set, 2) Identify a Project, 3) Create Inquiry Process, 4) Promise Action, 5) Designate a Set Advisor, and 6) Commit to Learning” (Bierema, 1998, p. 98). Bierma’s first element of action learning is to establish a *set* by forming of a team of 4-8 members who offer diverse perspectives and call on external resources as required. Second, select a project where complex issues addressing systemic variables are identified. Third, create an inquiry process that establishes methods for questioning, listening, reflecting, engaging in dialogue, and constructing ground rules. Fourth, provide actual opportunities to practice and test new ideas. Fifth, designate a facilitator for the set whose primary role is to help the team scrutinize the issues as well as scrutinize the process being used. Sixth, have team members commit to taking responsibility for the learning processes for themselves, for others and for the organization, and dedicate time for dialogue and reflection on the lessons that have been learned (Bierema, 1998). Bierma’s strategy offers a way for teachers to think about the way they frame their lesson plans. Our position is that teachers should adopt action learning as a way to frame lessons through authentic and real-time experiences as a way to promote immediate and long-term learning transfer.

Andragogy as the core of action learning

Action learning incorporates multiple theories, but the foundation of the action learning construct is andragogy. Knowles (1970) defined andragogy as “the art and science of helping adults learn” (p. 38). However, today’s students could also benefit from similar strategies, therefore, we contend that the same principles apply practically to any student beyond puberty. Merriam (2001) emphasized the significant impact andragogy has as a guide to effective adult learning practices, philosophical criticisms notwithstanding. Andragogy can be “a model of assumptions about learning or a conceptual framework” (Knowles, 1989, p. 112) from which educators and adults could benefit for their teaching and learning. The andragogy approach has been expanded to six core assumptions: 1) Adults need to know why they need to learn, 2) Mature adults move from dependent to self-directed, 3) Adults acquire internal resources for learning, 4) An adult student’s readiness to learn is related to his or her social role, 5) Mature people desire immediate application, and 6) Adults are internally motivated (Knowles, Holton, & Swanson, 1998). We have adopted Knowles’ et al. six core assumptions for a broader age range of students in the following ways. A student needs to know what to learn, how to learn and why he or she needs to learn it before

learning something new. Students are likely to spend more time and effort toward learning things that they feel will help them in everyday practice. A person's self-concept moves from that of a dependent personality towards one of a self-directing human being as a person matures. Students accumulate an ever-increasing amount of experience, which is a valuable resource to be considered during lesson planning periods. Learning should be viewed as a process for constructing knowledge where students make their meanings using their prior experiences. Learning is also cumulative in nature, meaning that new information should be related to existing knowledge, enabling students to expand or modify their knowledge schema accordingly. Students are more ready to learn when they recognize how they can benefit from episodes of intentional learning. There is a change in time perspective as people mature, from future application of knowledge to immediacy of application. Thus, students become more problem-centered than subject-centered in learning. Knowles et al. (1998) stated, "Adults are motivated to learn to the extent that they perceive that learning will help them perform tasks or deal with problems that they confront in their life situations" (p. 67). We contend the same motivating factors are true for all students beyond the age of puberty.

The concept, theory, and practice of action learning

Action learning is framed here along three dimensions, concept, theory and practice. A concept is covert, often idiosyncratic and socially constructed, a theory is a body of theorems representing a concise systematic perspective on a subject, and practice means to apply principles and processes consistent with their related concepts and theories. A summary of these three dimensions applied to action learning is presented in Figure 1.

	Concept	Theory	Practice
Action Learning	Intentional learning contexts that approximate the realities outside beyond the classroom to intentionally promote effective learning transfer.	People learn best when they are involved in real problems, group work, action, and reflection. Genuine knowledge and skills are situated within authentic contexts.	Practical action learning strategies are active, interactive, situated, authentic, and case-based. A case-based approach is an effective and common application of action learning.

Figure 1. A summary of the concept, theory, and practice of action learning.

Action learning essentially purport that learning is most effective when the teaching and learning strategies are predicated on reality. Action learning is an action-oriented process through which one learns with others and from others, collaboratively working on an authentic problem within a group context (McGill & Beaty, 1995). McGill and Beaty described action learning as “a continuous process of learning and reflection, supported by colleagues, with an intention of getting things done” (p. 21). There is a variety of action learning formats due to different interpretations and resultant applications caused by attempts for action learning to be a flexible instructional strategy (Dilworth, 1998). However, several fundamental principles remain inherent among the different forms of action learning, such as:

- a) People learn best when they work through authentic situations
- b) People learn best when they collaborate with others
- c) People learn best when they reflect on their actions

People learn best when they are working through real situations basically involve working to solve real problems. Brown, Collins, and Duguid (1989) noted that because knowledge is situated in nature and developed as a product of the community of practice, knowledge should not be taught in

isolation from the practice. Rather, “learning and acting are interestingly indistinct, learning being a continuous, life-long process resulting from acting in situations” (Brown et al., 1989, p. 33). Furthermore, learning is a process of enculturation, which, by means of working through authentic problems, enables students to become members of the community and understand the culture of the practice (Brown et al., 1989). Spiro and Jehng (1990) noted almost two decades ago that the goal of learning has changed from knowledge reproduction to knowledge application. Dixon (1998) stated, “Learning is a part of work, and work involves learning” (p. 47). Therefore, knowledge should be constructed with the expressed purpose of practicing the newly acquired knowledge and skills in real situations rather than focusing on merely the acquisition of knowledge.

Knowledge is constructed by reflecting on social interactions with others and the surrounding environments. Knowledge evolves through social negotiation based on different perspectives. The emphases on collaboration among students support the notion that working with others provides students with opportunities to discuss multiple perspectives and negotiate meaning (Land & Hannafin, 2000). Students are encouraged to interpret and reflect on a situation from multiple and diverse perspectives through collaborative learning experiences. Reflection is considered a characteristic of the professional (Schön, 1987). Action learning is basically learning through action where reflection is essential for learning from experiences. Action learning is distinguished from other instructional approaches because of its emphasis on questions and reflections. Students are prompted to a deeper level of analysis of a problem and their actions by questioning and reflecting on their experiences (Bannan-Ritland, 2001). “The better the questions, the better will be the solutions as well as the learning; the deeper the reflection, the greater the development of individual and team competencies” (Marquardt, 2004, p. 70). Action learning can provide learners with more authentic learning environments outside formal training sessions through action and reflection (Dilworth, 1998). Practice means applying procedures that reflect the concepts and theories related to a defined construct. The purpose of practice, within an action learning context, is to increase the maximum potential for success among students after they leave the classroom. Action learning practice simulates the reality outside the classroom. Action learning-based objectives should reflect the applicability outside the classroom. Figure 2 outlines a practical guide for promoting action learning strategies within the classroom.

Strategy	Avoid	Promote
Active	Avoid passive techniques	Promote mentally and physically stimulating activities
Interactive	Avoid individualism	Promote activities that requires interaction between Student and Content Peers Students and Media
Situated	Avoid activities that are unreal or unlikely	Promote activities that Simulate reality Stimulate metacognition
Authentic	Avoid low fidelity tasks	Promote tasks that Result in genuine artifacts Are immediately usable Resemble reality
Cased-based	Avoid un-related tasks	Promote tasks that provide opportunities for students to Sample Practice Act

Figure 2. A practical guide to promoting action learning, and facilitating the complexities associated with episodes of teaching and learning.

Action learning has been effectively adopted in professional preparation programs such as instructional design, engineering and medical education, and especially in high quality learning service organizations within successful businesses. Bannan-Ritland (2001), for example, incorporated action learning principles with project-based approaches to teaching instructional design as an alternative way to didactic approaches. Bannan-Ritland notes that the action learning model has “the potential to increase the complexity of teaching in the service of providing an enhanced learning environment for students in dealing with complex problems” (p. 41). We concur with Bannan-Ritland that an action learning approach to complex intentional learning situations is an effective approach for closing the gap between learning space and performance space.

Action learning strategies can also be applied to less formal instructional settings. Pun, Yam, and Sun (2003) implemented an action learning workshop alongside classroom lectures to achieve a balance between theory and practice in new product development. Pun et al. reported that the action learning approach enhanced students’ problem-solving, technical and managerial skills. Wilson and Fowler (2005) reported that action learning approaches encouraged students to use deeper approaches to their learning. Wilson and Fowler investigated the impact of learning environments on students’ approaches to learning and compared students’ approaches to learning in a conventional lecture-style classroom with those in an action learning-based course. Wilson and Fowler found that students who perceived themselves as surface learners adopted deeper processing strategies in the action learning environment, whereas those who considered themselves to be deep learners were consistent in both environments. This reinforces the point that the action learning features practicing genuine tasks in real situations.

High fidelity learning spaces

The problem, however, is that many classroom activities are de-contextualized, and incongruent with the realities outside the classroom. High fidelity exists when the classroom environment (learning space) is congruent with the authentic environment (performance space). Learning space refers to entities that comprise the intentional learning environment. Intentional learning spaces are distinctive, yet part of a larger scheme. All spaces committed to intentional learning include the student, the content, the media, the teacher, peers and the context, each

interacting within a discrete period of time, while moving toward a common goal. Figure 3 presents an image of intentional learning spaces.

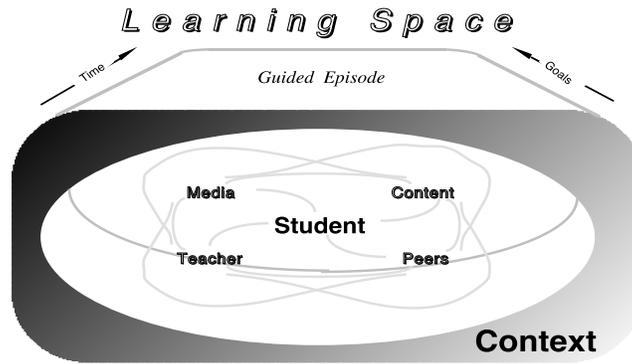


Figure 3. An image of intentional learning space.

Performance space refers to entities that form the environment outside the classroom where the student is expected to demonstrate her or his newly constructed knowledge and skills. Lessons based on action learning increase the potential for a student to immediately and effectively apply their newly constructed knowledge and skills to a real situation, retain the knowledge and skills constructed during training for extended periods of time, and generate solutions to problems as they emerge in realities outside the classroom. Effective courses of study simulate the reality outside the classroom. Lessons are most effective when strategies are used to move a student through learning space toward a corresponding performance space. Students engaged in an action learning strategy are guided from learning space into performance space. Figure 4 presents several characteristics of learning space and several characteristics of performance space.

Learning Space	Performance Space
Common Knowledge	Specialized Knowledge
Structured Problems	Ill-structured Problems
Familiar Cases	Unfamiliar Cases
Ideal Situations	Genuine Situations
Simple Scenarios	Complex Scenarios
Risk-free	Real Consequences
Known Solutions	Unknown Solutions
Intentional	Unintentional
Learning Objectives	Performance Goals

Figure 4. Several characteristics of Learning Space and Performance Space.

The action learning classroom

The common forum for formal education has been the classroom. The ‘*classroom*’ concept is re-defined as student-centered within the action learning context. The main purpose of an action learning classroom is to personalize spaces dedicated to intentional learning so as to develop each student’s capacity. Action learning re-defines many perceptions about spaces often associated with education. Action learning acknowledges the vast array of learning spaces in which people construct knowledge and develop skills. While a classroom is commonly defined as “a place where classes meet,” educational trends dictate that the term “classroom” be interpreted in the broadest sense. Classrooms are typically influenced by the prevailing societal paradigm, and until recently, classrooms were patterned after military models to replicate our desire to compartmentalize, consistent with the industrial age (Reigeluth & Nelson, 1997). Classrooms are now beginning to

reflect a societal shift to the information age where current educational ideology and technological capability encourage classrooms that are situated in authentic contexts. Mwaluko and Ryan (2000) contend that action learning programs that are systematically designed and implemented can be more effective than common didactic forms of instruction. Emerging philosophies about instruction, education and training, have re-defined the *classroom* to include a vast array of learning spaces.

A pattern for constructing a lesson plan based on action learning

Successful action learning strategies move the student through a learning space that increases its fidelity to a performance space. Lesson plans based on action learning features a series of cases represent movement from artificial situations to authentic situations. The series of cases can be categorized as *beginning cases*, *middle cases* and *ending cases*. *Beginning cases* are characterized by well-defined problems, simple situations, familiar contexts, prerequisite knowledge already possessed by the students, the desired outcome being evident, solution being derived in a relatively short time period, high involvement of the facilitator, and the presentation of one best solution. *Middle cases* are characterized by a less well-defined problem, a relatively simple solution, a somewhat familiar context, prerequisite knowledge already possessed by the student or easy to acquire necessary prerequisite knowledge to process the case, the desired outcome is revealed early in the problem solving process, a solution is always possible, a collaborative effort between the teacher and the student, and multiple, but relatively few, solutions are evident. *Ending cases* are characterized by ill-defined problems, relatively complex situations, unfamiliar context, students will likely need to acquire some prerequisite knowledge and skills, the desired outcome is negotiated, conducted in real time, student(s) takes the lead and typically a variety of solutions are appropriate with different sets of consequences for each solution. An effective lesson plan based on action learning will include all three types of cases, beginning, middle and ending.

Certain psychological conditions need to exist in order for various types of learning to occur. Gagne's 9 events of instruction (*adapted from Gagne, Wager, Golas & Keller, 2005*) define a sequence of learning activities so as to organize each lesson plan (Figure 5). The action learning lesson plan provides a framework in which the beginning, middle and ending cases can be strategically located.

Action Learning Lesson Guide	
1. Gain Attention	Actual instance from outside the classroom
2. Clarify Expectations	Explain what the student is expected to accomplish
3. Review	Students share existing knowledge and skills
4. Present the Content	Concepts, theories and concrete examples
5. Guided Practice	Sample case (Beginning)
6. Independent Practice	Practice case (Middle)
7. Share New Knowledge	Community assessment and feedback
8. Implementation	Plan to use new knowledge and skills
9. Closure	Action case (End)

Figure 5. An adaptation of Gagne's 9 events of instruction to an action learning format.

Conclusion

The fundamental premise is that teaching is effective when students can immediately apply newly constructed knowledge in an authentic setting or retain newly constructed knowledge for application in an authentic setting over time as a result of proper practice. Students beyond puberty learn best when the learning environment reflects the complexity of the space in which the student will be expected to perform. Action learning strategies feature activities that facilitate a student being able to move from being dependent upon well-defined, highly structured, predictable events to becoming an independent problem solver who utilizes her or his available resources as needed. Teacher education programs that produce independent thinkers and creative problem solvers are essential to the changing global perspectives on teacher education and leadership development. High fidelity learning through action learning feature activities that facilitate a student becoming an independent problem solver who utilizes her or his available resources as needed.

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THE ROLE OF AN EFFECTIVE ASSESSMENT SYSTEM IN ATTAINING ACCREDITATION (ANSAH)

The word accreditation is derived from the Latin *credito* which means “trust”. Its application to American post-secondary institutions denotes the institutions as “entrusted” with providing adequate preparation for university studies (Stoops & Parsons, 2012). American institutions with accreditation status assures the public that their graduates “entering the respective field have been suitably prepared to practice through assimilation of a body of knowledge and pre-service practice in the profession” (NCATE, 2012). The primary purpose of accreditation therefore is quality assurance (Holmberg, 1997).

The task of accrediting for quality assurance may be entrusted to the government or a non-governmental entity. A major difference in accreditation between American post-secondary institutions and accreditation in other countries in general, is the type of accrediting bodies used. In most countries centralized government’s conduct accreditation through their national education ministries. In the United States accreditation is performed by a non-governmental peer process of evaluation developed and administered by private educational associations and commissions of regional or national scope (National Association of Private Catholic and Independent Schools, 2012). The American process, which originated a little over a century ago, forms the context of this paper and NCATE, National Council for Accreditation of Teacher Education in America is the main reference throughout the paper.

Accreditation:

Accreditation is "certification that a school meets all formal official requirements of academic excellence, curriculum, facilities, etc." (Random House Dictionary of the English Language). American colleges and universities voluntarily seek accreditation status. Post –secondary institutions that have sought accreditation and reaccreditation have increased steadily, e.g., when NCATE assumed its responsibilities in 1954 it accredited 275 of 284 applicants (NCATE, 2012). Approximately sixty years later, 2012, the number of NCATE accredited colleges and universities, has increased to 669. The steady increase may be attributed to public interest and possibilities for reciprocity. The public expects that colleges of education should be professionally accredited. Eighty-two percent of the public favors requiring teachers to graduate from nationally accredited professional schools. (New Jersey Association of State Colleges and Universities, 2009). Many states have reciprocity agreements based on graduation from NCATE accredited schools, so graduates of NCATE-accredited schools will generally find it easier to apply for a teaching license when they move out of state (NCATE, 2008).

Post-secondary accreditation originated in the United States in the 1800s to protect the public and to serve public interest regionally. Regional accrediting agencies in that era focused on educational standards and admissions procedures. By the 1900s “the need to develop transfer of credit policies and equivalency of degrees between the United States and foreign countries drove the process towards national standards” (Accrediting Council for Independent Colleges & Schools, 2010). By the 1960’s, accreditation practices in the United States had evolved into a means for post-secondary educational institutions (colleges and universities) to demonstrate to the Federal government a basic level of quality in their institution and programs certifying their eligibility to receive Federal funds, loans, grants, and research monies (National Association of Private Catholic and Independent Schools, 2012).

By the turn of the 21st century, it was evident that accreditation practices included both cumulative historical trends together with current ones. For instance, both regional and national accrediting agencies exist. The United States Department of Education recognizes for the purpose of accrediting institutions of post-secondary education, six regional accrediting agencies, and one national accrediting agency (National Association of Private Catholic and Independent Schools, 2012). Accrediting practices in education focus on a range of educational standards of the state, the institution, and the national education associations. The emphasis is not only on student performance at admission but also at mid-program, program exit, and in the field as a follow-up on program completers. Table 1 illustrates transition points of a program.

Table 1. *Teacher Candidates’ & Master Teachers’ Assessments at Institutional Transition Points*

Unit Transition Points	Types of Assessment
Admission	Initial Programs SAT (or ACT) or Praxis I GPA Grammar Competency Exam (or Grammar for Educators or Grammar course) English course Math pass or Math course Dispositions satisfactory rating Approval of Teacher Education Committee

	<p><i>Entry Survey</i></p> <p>Advanced Programs</p> <p>Bachelor’s degree from accredited college or university</p> <p>Minimum GPA of 2.5 for undergraduate work or GPA of 3.0 for the last 60 hours or for all the major courses</p> <p>Minimum Miller Analogies Test (MAT) score of 380 or combined verbal and quantitative score of 800 on the Graduate Record Examinations (GRE) taken within the last five years</p> <p>A minimum one year of teaching experience (two years preferred)</p> <p>Recognized teaching license or commitment to achieving licensure</p> <p>Three letters of recommendation</p> <p>Minimum TOEFL score of 550 (paper-based tests) or 213 (computer-based examinations) for non-native English speakers</p>
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<p>Mid-Program</p>	<p>Initial Programs</p> <p>Course work grades</p> <p>Maintained minimum GPA of 2.5</p> <p>State required key assessments: content knowledge, comprehensive unit development, comprehensive assessment plan</p> <p>Cooperating Teacher evaluations</p> <p>Evaluation of clinical and internship experiences</p> <p>Dispositions</p> <p>Advanced Programs</p> <p>Admission to Candidacy</p> <p>Coursework grades</p> <p>Maintained minimum GPA of 3.0</p> <p>State required key assessments: curriculum development project & action research project</p>
<p>Program Completion</p>	<p>Initial Programs</p> <p>State required key assessments: impact on K-12 schools –professional learning community, pedagogical skill assessment , impact on K-12 student learning</p> <p>Exit surveys</p> <p>Course evaluations</p> <p>Dispositions scores</p> <p>Advanced Programs</p> <p>State required key assessment: leadership project</p> <p>Exit surveys</p> <p>Course evaluations</p>

Post Graduation	Initial Programs
	State reports
	Educational Value Added Assessment System Reports
	Advanced Programs
	Follow up surveys
	Educational Value Added Assessment System Reports

Accrediting agencies are also concerned about the quality and qualifications of faculty; ongoing professional development of faculty; availability and access to resources which include but are not limited to facilities, technology, library books' recency and relevance; funding and finances; and university-wide administrative support of programs. In addition, accrediting agencies are interested in both student learning outcomes and the impact of students on learning in primary to secondary school pupils. The result is a motley of institutional components presented to accrediting agencies for review. To make the accreditation review efficient and accurate, accrediting agencies have required institutions to create a system of the various components, referred to as an "Assessment System".

Assessment

Accreditation means the systematic assessment of post-secondary institutions against accepted standards. In addition, an assessment system may form the framework of a systematic plan for institutions preparing for accreditation. The importance of awarding and attaining accreditation or reaccreditation status warrants a systematic approach for both accrediting agencies and post-secondary education programs seeking accredited status. An example of a systematic framework for a unit's assessment system is the Logic Model (See Figure 1).

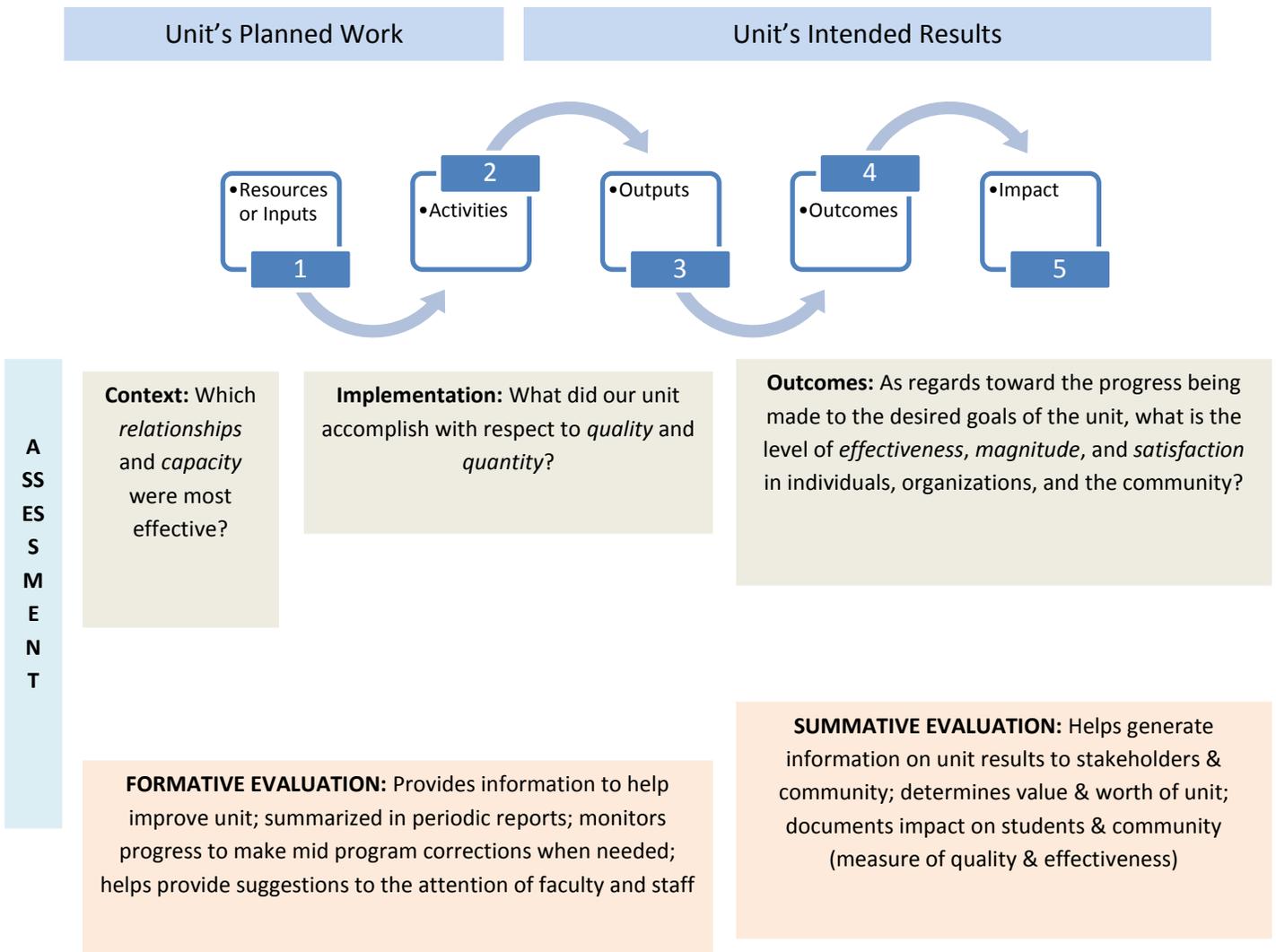


Figure 1. Logic Model Components for Unit Evaluation adapted from Kellogg 2004

A logic model provides a systematic approach to effective unit evaluation. It provides the unit a framework that does more than guide collection, analysis, and provision of data. It sets the frame for describing unit components over time as a sequence of related events. It traces the chain of reasoning which connects the planned program with the program's desired results. Consequently, the unit is able to explore and assess context, capacity, relationships, quality, satisfaction, and level of effectiveness.

According to Kellogg (2004), good evaluation reflects clear thinking, and the logic model facilitates thinking. In addition, it depicts the present and the future making it possible to identify outcomes and to anticipate ways to measure unit resources, activities, outputs, outcomes, and impact.

It supports formative measurements of planned & implemented work to inform unit improvement decisions. The summative measures assist communication about unit objectives and unit accomplishments. The resulting evaluation framework enables the unit to plan a detailed, comprehensive, and effective assessment management system.

Using the Logic Model fosters the systematic identification of the range of unit components, e.g. Table 2.

Table 2. Using a Logic Model to Delineate Range of Unit Components

Resource	Activities	Outputs	Outcomes	Impact
<p>Teacher candidate caliber (NCATE std. 1);</p> <p>Faculty qualifications; K-12 schools, cooperating teachers, and university supervisors (NCATE std. 5);</p> <p>Unit budget, leadership, facilities, library, technology & institutional unit resources (NCATE std. 6);</p> <p>Professional & state standards; unit's key elements and program goals (Unit's conceptual framework)</p>	<p>Faculty development (NCATE std. 5);</p> <p>Courses & practicum in content knowledge, pedagogical knowledge, pedagogical skill, diversity, technology, & professional dispositions (NCATE std. 1, 3, & 4) which... ... incorporate the professional & state standards; unit's key elements and program goals (Unit's conceptual framework)</p>	<p>Faculty performance (NCATE std. 5);</p> <p>Advising & instruction in content knowledge, pedagogical knowledge, pedagogical skill, diversity, technology, & professional dispositions (NCATE std. 1, 3, & 4) which... ... incorporate the professional & state standards; unit's key elements and program goals (Unit's conceptual framework)</p>	<p>Teacher candidates' learning outcomes in content knowledge, pedagogical knowledge, pedagogical skill, diversity, technology, & professional dispositions (NCATE std. 1, 3, & 4) which... ... incorporate the professional & state standards; unit's key elements and program goals (Unit's conceptual framework)</p>	<p>The impact of the teacher candidates, alumni, faculty, and programs on K-12 schools and the community and beyond (NCATE std. 2)</p>

Samples of Corresponding Assessments				
Alignment of standards with syllabi; ACT, SAT, GRE, etc.; Course evaluations; Certification of Teaching Capacity Form; Internship surveys	Program meeting discussions; Course evaluations	Student Perceptions of Instruction Survey; Internship Surveys	Coursework; Praxis; Projects; Examinations; GPA	Media; Focus groups; surveys; alumni local, state, regional, & national recognition

Once an institution delineates its components using the model or framework, it can focus on logical alignment across the model and an associated plan for assessment. For instance, one higher education institution or unit using this framework for system assessment and accreditation, consistently assesses the alignment of resources and outputs, such as institutional, state, and professional standards with curricula, syllabi, and program’s key assessments. The unit also assesses faculty development each year through self reporting and reviews by program chairs. Each semester, instructional performance of faculty ought to be assessed using “Student Perceptions of Course Instruction” questionnaires.

Every five years, as part of the unit’s five year strategic plan, the unit assesses the level of attainment of its mission, goals and it considers factors which affect the achievement of its mission. These factors may include but are not limited to capacity of faculty, facilities, and technology. The unit assesses short term and long term outcomes of teacher candidates and master teachers. The unit uses multiple assessments and multiple transition points to assess teacher candidates and master teachers’ preparedness and mastery of teaching. Outcomes are expressed in multiple forms reflecting the unit’s conceptual framework.

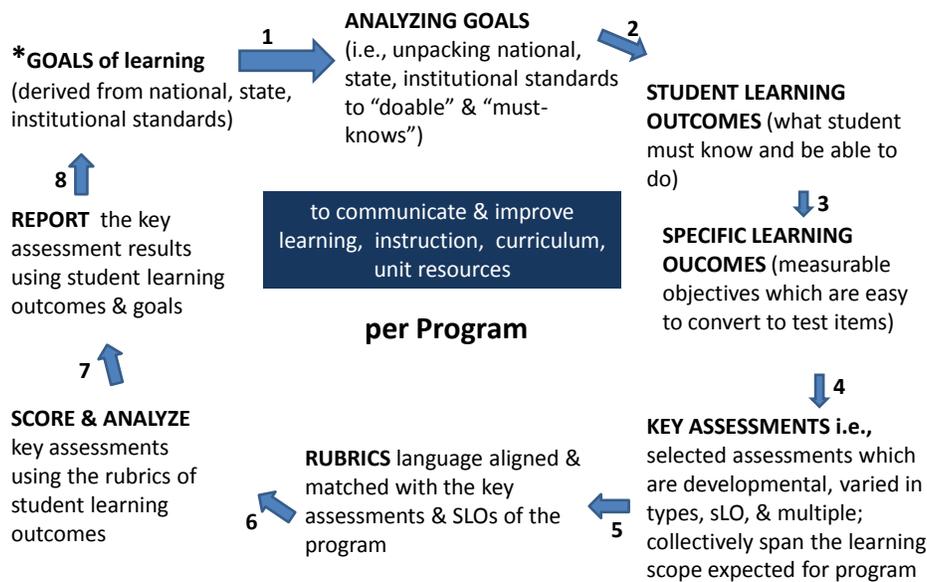
The unit also assesses its external components, such as the effectiveness of cooperating teachers as models and mentors to teacher candidates. In addition, the unit uses external examiners to enhance the reliability of assessment outcomes of teacher candidates and master teachers. The measure of quality and effectiveness of the program are assessed using data on percentage of graduates who qualify for licensure; exit and follow-up surveys; external awards and recognition of graduates and faculty; and state-Educational Value Added Assessment System reports. The results of the assessments

are used to improve the program on a regular basis. Every five to seven years, the unit assesses and realigns its assessment system to reflect changes in its conceptual framework, state requirements, and national trends to ensure its continued effectiveness. Consequently, the assessment systems have provided a systematic means for institutions to improve. The purpose of accreditation has become twofold: quality assurance and improvement of institutional programs.

Then, Now, and the Future

An aspect of higher education institutional assessment systems that is constantly evolving is the process of measuring student learning outcomes with accuracy and reliability. The cyclical process of institutional student assessment begins with the end in mind, i.e., the learning goals. (See Figure 2)

Identifying, Measuring & Reporting Student Learning Outcomes



The national, state, and/or institutional standards associated with each discipline are identified and categorized per program. Then, for every program, each related standard or learning goal (GLO) is analyzed and unpacked to delineate specific, measurable student learning outcomes (sLO), e.g.,

Goal 2.0 : The student will examine the causes for revolution, trace the course of the war, and evaluate the results.

GLO 2.0.1 Examine the status of European rivalries in the New World and the causes for revolution among the American colonies.

sLO 2.0.1.1 Examine the status of European rivalries in the New World

sLO 2.0.1.2 Examine the causes for revolution among the American colonies

GLO 2.0.2 Trace the events leading up to the revolution and through the course of the war and assess the impact that each had on the outcome.

sLO 2.0.2.1 Trace the events leading up to the revolution

sLO 2.0.2.2 Trace the events through the course of the war and

sLO 2.0.2.3 Assess the impact that each had on the outcome

GLO 2.0.3 Evaluate the social, political, and economic results of the Revolution.

The unpacked standards are easily converted to test items, e.g., “Examine the status of European rivalries in the New World” as a test item on a key assessment (Klein et al. 2005). Six to eight key assessments per program are selected by faculty to collectively and developmentally represent the learning that occurs in the program, i.e., the assessments are developmental because they span the years in the program, i.e., sophomore/2nd year, junior/3rd year, etc. Multiple assessment types are used, e.g., informal checks, dialog, journal, observations, performance tasks, presentations, tests, internships, research, and content paper. A variety of knowledge types are assessed, e.g., factual, procedural, contextual, and metacognitive. In addition, a variety in types of learning are incorporated and explored, e.g., cognitive (remember, understand, analyze, apply, evaluate, create) affective (professional dispositions, values, attitudes on diversity) performance (internship, practicum, response). The selected key assessments are aligned to the learning goals which in turn form the basis of the rubrics used to assess it.

Key Assessment	Developmental Level	sLO. 2.0.1.1	sLO2.0.1.2	sLO2.0.2.1
1. Metacognitive Journal	1 st year	X		
2. Content Paper	2 nd year		X	
3. Performance Task	2 nd year	X		X
4. Written Test	3 rd year			X
5. Internship	3 rd year	X	X	X
6. Research Project	3 rd year	X	X	X

Using this fictional example, the rubric for key assessments 1 and 3 would be as follows:

Rubric for Key Assessment 1-Metacognitive Journal			
	Score =1	Score =3	Score = 5
sLO 2.0.1.1 Examine the status of European rivalries in the New World	Demonstrates a limited ability to examine the status of European rivalries in the New World	Demonstrates a moderate ability to examine the status of European rivalries in the New World	Demonstrates the ability to examine the status of European rivalries in the New World

Rubric for Key Assessment 3-Performance Task			
	Score =1	Score =3	Score = 5
sLO 2.0.1.1 Examine the status of European rivalries in the New World	Demonstrates a limited ability to examine the status of European rivalries in the New World	Demonstrates a moderate ability to examine the status of European rivalries in the New World	Demonstrates the ability to examine the status of European rivalries in the New World
sLO 2.0.2.1 Trace the events leading up to the revolution	Presents a non-sequential narration of some essential and non-essential events leading up to the revolution	Presents a sequential narration of most of the essential and non-essential events leading up to the revolution	Presents a sequential narration of the essential and non-essential events leading up to the revolution with a rationale

By aligning assessments to standards and standards to the rubric or measuring tool, it is possible to measure student learning outcomes and the validity of the measure is increased. Corrected assessments are in turn marked according to the specific learning outcomes associated with each standard. This enables us to determine student learning outcomes by calculating the percentage of students in the program who have mastered the specific learning outcome, the goal learning outcome and the overarching learning goal. Faculty pre determine criterion levels of mastery per learning goal and acceptable differences from criterion. Where feasible, cut-scores are determined. To further enhance the validity, item analysis is used to determine defective items and each test item is carefully developed to reduce bias, guessing, ambiguity, etc. This approach is applicable to all manner of scored assessments, e.g., essays, multiple choice, etc.

Reporting the results of students' mastery of learning outcomes occurs at several levels. The results reported at the specific - learning -outcomes level informs instruction of faculty and student learning, e.g., A report may state that "Students enrolled in the History Social Studies Program met the criterion on 2 out of the 4 sLOs of a goal-learning outcome. The criterion was set at .80 and faculty had decided that an attainment difference of -.03 would warrant instructional change. An improvement target is to raise sLO 2.0.1.1 attainment difference by .10 (student average was .70) and sLO 2.0.2.1 attainment difference by .04 (student average was .76)

Results reported at the goal-learning -outcome level informs curricular options and modifications. And reports at the learning goals or standards level, informs program improvement and accreditation decisions. Consequently, a key component to attaining or maintaining accreditation status is an effective measure of student learning outcomes in the assessment system. Overall, a comprehensive, functioning assessment system contributes to the assurance of quality in accrediting processes.

Quality Assurance

The services of accrediting agencies of education provide the assurance that an institution's "educator program has met national standards and received the profession's seal of approval" (NCATE, 2008). Accreditation informs the public that the accredited college or university operates at a high level of educational quality and integrity. Evidence that accrediting agencies such as NCATE assure or enhance the quality of graduates was demonstrated in a study conducted by the Educational Testing Service. The results of the study which analyzed over 270,000 teachers on teaching mastery revealed the following: Graduates of NCATE-accredited colleges of education pass ETS content examinations for teacher licensing at a higher rate than do graduates of unaccredited colleges. The results show that NCATE institutions produce a higher percentage of candidates who can pass state licensing exams. In fact, teacher candidates who attend NCATE colleges boost their chances of passing the examination by nearly 10 percent. NCATE-accredited institutions produce proportionally more qualified teachers than unaccredited institutions (NCATE, 2008).

Arthur E. Wise, former NCATE president, says, "The study shows that NCATE institutions add value to their candidates' education. NCATE institutions start with candidates with similar qualifications to those in unaccredited institutions, but produce better results. This study provides an impetus to those

institutions seeking NCATE accreditation, provides an additional mark of distinction for those that have achieved accreditation, and provides additional information for state policymakers interested in improving the quality of teacher preparation in their states.”

In sum, accrediting agencies of Education Programs are interested in the quality of three main areas of Teacher Educators’ Preparation (1) the level of student mastery of content knowledge, pedagogical skills, and professional dispositions; (2) the regular and consistent collection, analysis, and use of program data for the purposes of program communication and improvement; and (3) the evaluation of the appropriateness of resources available for program effectiveness. Accrediting agencies serve as control systems that provide guidance, intermittent inspection, and encourage the use of assessment systems to determine whether or not an educational institution has attained an acceptable level of effectiveness or quality in all three areas. Assessment details of the three areas provide accrediting agencies with data and scores on the level of quality assurance. The assertions made about an educational institution by an accrediting agency, is an accepted way to publicly ascertain the level of quality assurance of an education program. The assessment system provides data to support accrediting assertions. Consequently, the purpose of accreditation has grown to include program improvement, student learning, communication on the institution, assessment systems, and quality assurance.

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Introduction

Interest in the development and award of a specialist teaching qualification for teachers in the Post-compulsory education sector (Now referred to as Life-long learning and Skills sector: LLS) began gathering pace from the turn of the century. The earlier adventure into this zone culminated in the production of standards for teaching and learning in further education (FENTO) in 1999. Following this were a series of initiatives including policies such as the introduction of compulsory teaching qualifications for all new Further Education (FE) teachers (2001) and Success for all, which claim to present a blueprint for the reform of education in the sector (2002). On the face of it, these initiatives were all focused on the singular goal of professionalising the workforce in the sector (Ingleby, 2011, Orr and Simmons, 2010). This is particularly significant because FE teachers have traditionally located their professionalism in the context of their subject area know-how, and as such, 'subject expertise rather than knowledge and skills in education would be the chief determinant of the quality of teaching and learning' (Orr and Simmons, 2010:78, Harkin, 2005:166).

Resultant upon the policy context of Further Education Workforce Reforms (2007) which was 'integral to a policy thrust intended both to improve teaching and learning and to professionalise the PCET workforce' (Orr and Simmons, 2010:78), FE teacher education, assumed what many have described as 'standard driven' (Ingleby, 2011:25) and 'prescribed' (Orr and Simmons, 2010:79, Lucas, 2004b and Nasta, 2007). This prescriptive and standard-driven feature of PCET teacher education is manifested in the structure of the training programme with the demand for a 'professional element' and a specific requirement that all such programmes must meet a specific standard prescribed and monitored jointly by the now outgoing agency named Lifelong Learning, UK (LLUK), Standard verification, UK (SVUK). The main source of evidence of professionalism is tagged on to a specific module which can be generically labelled the professional development module with its actual name varying from provider to provider. Consequently, the development of professional competence and provision of evidence of such a development is generally located within the professional development module of teacher education programmes.

As might be expected of such a standard-driven and prescribed programme, there have been evidence of unease from both trainees and trainers on Post Compulsory Education and Training (PCET) teacher education programmes. While this element of unease has been variously isolated and related to specific elements of the programmes, there is no doubt that the perceived central anchor for these problem areas has been the demand for professionalism (Bryan and Carpenter, 2008, Hale, 2008 and Lieberman, 2009). Illustrating these individualised elements, Ingleby, (2011) explored the nature and structure of mentoring in the professional development journey of trainees, Orr and Simmons (2010) review the duality of trainees' identities, while Bryan and Carpenter (2009) dwelled on the effect of standards-driven requirements on the social processes influencing professional behaviour. In the context of the mono-dimensional foci of these studies, there are two clear issues that need to be addressed. First, there has been little exploration of the role that the structure of training programmes play in reinforcing these elements of tension for PCET teachers and trainee teachers. What is it about the nature of the programmes that contribute to the emergence of these areas of tension? In this respect, the focus, in my view, needs to be placed on the content and processes stipulated within the framework of the programmes. Second and also deriving from the perceived importance of the training stage, very little has been offered in terms of the perceptions of trainees engaged on these programmes. For example,

very little has been offered in terms of trainees' views on the elements of their professionalism module that has been the source of much of their problem. Finally, these studies have not comprehensively responded to this problem area through an exploration and theorization of the differing perceptions of what constitutes professionalism. Central to

this is the question; can we justifiably classify what we demand of our trainees through the imposed structure of our programmes as genuine elements of professionalism? Have we, for instance, been imposing the elements of what, for instance, has often been classified as 'performativity' (Ball, 2003) as a false discourse of professionalism?

Developing from the ongoing, this paper is anchored onto two central goals. First, the desire to introduce the element of trainee voice and second, the desire to re-evaluate the structure of PCET teacher education in terms of content and process so that a clear proposal could be made in terms of remedying the seemingly inevitable tension that the demand for professionalism appears to be imposing on both the PCET teacher education programmes and the trainees who study on them. In order to achieve these goals, this study will carry out the following. It will draw from an original empirical research to identify trainees' views on the nature, sources and structure of the problems they face in respect of the demand for professionalism. In explaining the findings of the research, it will revisit and re-theorise the concept of professionalism and drawing on the two initial foci above, will offer suggestions on how the concept of professionalism can be deconstructed and reconstructed in the context of PCET teacher education.

Research design: Sample, methods of data collection and analysis.

Sample The participants all study on a Professional Graduate Certificate (PGCE) programme offered by one university in the UK, although they study in different local colleges. This means that they are all exposed to the same programme content and processes as dictated by the awarding body, the University of Greenwich. The sample group was made up of fifty four (54) trainee teachers who are also employed in the PCET sector. This means they are open to the demand of what is generally termed dual professionalism (IFL, 2009, Orr and Simmons, 2010) and subject to an examination of the impact of emergent issues in the two contexts of work and training. Although the number of subjects in the sample group might be considered small, it was felt that this number was adequate for a number of reasons: In the first instance, the group formed a 'typical and convenient sample' (Kerr 2009: 280). Convenient because the researcher's management role on the programme delivered by a Network of colleges, makes access to the sample of trainees quick, easy and available (Anderson, 1998, p124) and typical because it represented the expected 'norm' of PCET teachers (Anderson, 1996, p124) in terms of career aspiration, age range and work history. Furthermore, the sample group was reasonably representative of PCET provision in the UK, as most provider types in the spectrum were represented. Twenty six members of the group taught in mainstream further education colleges, twelve taught in services education including the Prison, the Police and the Fire services, nine in adult community education centres, while the remaining seven taught with private training providers. Although there was a form of uneven distribution in terms of gender with only nineteen members of the group being males, this was considered representative of the gender distribution pattern in the FE sector where teachers are predominantly female (Cara, Litster, Swain, and Vorhaus 2008, Ade-Ojo 2011).

Data collection methods: Survey questionnaire and focus group interview:

The data for this study was collected through a combination of survey questionnaire and focus group interview methods. The focus group interview was used as a supplement to the survey, as it provided the opportunity to further explore issues raised through responses to the questionnaire. The questionnaire was designed around three main foci namely: trainees' understanding of professionalism, impact of the drive towards professionalism and their perceptions of the sources of disharmony in their training programmes. Around each of these foci, a few simple questions were asked. In using these two data collection methods, cognisance was taken of their limitations. In the case of the questionnaire survey, the established problems of low survey return rates and high item non-response rates (Atteslander 2000, Churchill & Iacobucci 2005) were considered. However, because the subject group was a 'convenience group', this problem had limited significance, as all members of the sample group responded to the questionnaire. The focus group interview was employed in this study in spite of limitations such as the 'unnaturalness of setting' and the loss of focus (Cohen, Manion and Morrison 2000: 288, Ade-Ojo, 2009 and Ade-Ojo and Sowe, 2011), In the context of this study, this method was chosen in recognition of the fact that group interaction is one of the prominent features of the learning culture into which the participants have been socialised. As such, the interaction was effectively among the participants rather than with the interviewer, thus leaving room for the views of the participants to emerge.

Research approach and data analysis methods

The orientation of the research is essentially iterative (Lucas, Nasta and Rogers, 2011). This orientation facilitated a synergy between the paradigmatic allegiance to a mixed method approach and the method of data analysis. Drawing from the principles of mixed method approach (Cresswell, 2003), the study employed a mixture of quantitative and qualitative methods of data analysis. Data collected through the use of a questionnaire were subjected to simple statistical analysis through the SPSS tool, in order to identify patterns of distribution and their significance. The initial findings were then used as the springboard for iteration as they informed the development of key themes which were then tested out and revised during the focus group interviews. The subsequent findings were then subjected to a simple form of content and discourse analysis. In both cases, the responses presented by the subjects were examined to see how notions were constructed by the choice of words and language forms used. This method was chosen for two reasons. First, in addition to providing the opportunity for the researcher to 'discover, and describe the focus of individual, group, institutional, or social attention' (Webber 1990, Stemler 2001:1), it also allowed 'inferences to be made' using the inherent tool of conceptual analysis (CSU 1993-2009). Given that the focus of the present research involves the identification of individual perceptions from which inferences about groups and institutions are expected to be made, this method was considered to be highly suitable. The data collected through focus group interviews were first codified using simple semantic signification. Following this, the data was then analysed in order to establish the semantic import of the range of responses which then formed the basis for analysis. The result is that the data in this study is presented through a combination of statistical and textual media.

Theorising professionalism: a de-construction

The debate around the concept of professionalism has endured in academic discourse and has consequently thrown up a variation of perceptions. However, a lot of the contemporary studies in this area have tended to focus on the implication of professionalism in various contexts and have been silent on the crucial issue of what constitutes professionalism. Illustrating this contextualised dimension of engagement with professionalism, Lucas and Nasta (2009, 2010) offer us a model of theorising the mediation of 'state-imposed professionalism'. A similar theme is explored in Lucas, Nasta and Rogers,

(2011) with a focus on how standards for teachers are translated as they move between the context of policy makers, regulators and practitioners' (p.5). Consequently, the crucial question of the real nature of professionalism has remained largely unanswered in relatively current engagements with professionalism.

Historically, the concept of professionalism has been presented in a most elusive form. Indeed, that element of elusiveness is reflected in the twenty three traits (and counting) that have been included in its various definitions (Millerson, 1964 and Hughes, 2000). Nonetheless, the definitions and characterisations of professionalism can be summed up within the framework of two general thematic headings. First, professionalism reflects a lengthy period of training in the subject matter, that is, training in a body of abstract knowledge (Goode, 1960, Hughes, 2000). The second, which is often referred to as the trait perception of professionalism, focuses on the establishment of a particular way of delivering services which reflects a mode of functional relevance for the relationship between professionals and their clients (Barber, 1978, Hughes, 2000).

In the context of the deconstruction I propose here, particularly in the context of teacher education, I offer two terms, content professionalism and pedagogical professionalism to represent the two typologies identified above. With the former, the emphasis is on the degree of knowledge that the 'professional' has acquired in their specialist subject area before (s)he can qualify to be classified as a professional. But, as Hughes (2000) points out, that knowledge base alone is not sufficient for the execution of the role that an engineering tutor, for example, has to carry out. With the latter, the emphasis is on the professional's competence in the productive procedures of their profession. The combination of the two accounts for what the IFL UK (2009) refer to as dual professionalism. A tutor in the context of the PCET sector in the UK, therefore, is not considered a complete professional unless (s)he is able to demonstrate an appropriate level of competence in the two areas. This may be one of the reasons why there has been so much demand on trainees and practitioners in the field in terms of professionalism.

While most constructs of professionalism appear to take into account the two elements identified above, I argue that there is a third element which is often either overlooked or conveniently subsumed under the second typology highlighted above. For this strand of professionalism, I use the term 'procedural professionalism. Although several studies in the literature have verged on some of the features of this strand of professionalism, none has really integrated it as an independent variable in their construct of professionalism. That, in my view, is one of the reasons why professionalism in PCET teacher training has been so vulnerable to the dictates of standard-driven regulatory quasi-government agencies. Within this strand of professionalism, I identify competences in a range of routine activities in the execution of the professional's roles which serve as an evidence base for meeting various elements of standard demanded by policy. This element of so-called professionalism is, therefore, an instrument through which what Ball, (2003) calls 'performativity' can be monitored.

Drawing from anecdotal and empirical evidence (Phillips and Harper-Jones, 2003, Maxwell, 2004), it is evident that this strand of professionalism is most held responsible for the problems encountered by trainee teachers, teachers and teacher educators in the process of developing professionalism. There are two possible explanations for this. First, because this element is subject to mediating regulatory bodies (Orr and Simmons, 2009), there is no standard expectation which can be developed in the same way as content and pedagogical professionalism can be. The second factor hinges on the fact that this element of professionalism relies mostly on professionals being able to provide evidence of instances of performance. This again echoes the discourse of performativity and shrouds professionalism with the

cloak of subjectivity. Decisions as to the quality and adequacy of evidence of instances of performance is often subject to the views of individuals and, therefore never really has a standard form against which it can be objectively valued. As a result, there are myriads of evidence types in various context of practice that are imposed on trainee teachers.

Developing from the de-construction above, there are two key points to acknowledge here. First, it is important that we recognise that there are three strands of professionalism in the development of teachers: content, pedagogical and procedural The second follows; once we recognise the existence of the thir strand, we must have a dialogue on where this strand fits in within the framework of teacher education. **Data findings and discussion**

The first set of data presented was generated from the quantitative analysis of findings from the questionnaire. The questionnaire, in addition to mapping out general distributional patterns of gender, experience and nature of provision in which participants practise, is focused on three key issues: the most difficult components of training, perceived reasons why the components are considered difficult, and the impact of the difficult components on trainees. The findings are then analysed through the use of the SPSS statistical tool in order to get a straightforward distributional pattern and in some cases, a comparative configuration of the patterns. The findings presented statistically were then used as drivers for emergent themes which were then explored through focus group interviews. The findings from interviews together with the statistical data are subsequently discussed with existing theoretical paradigms and frameworks utilised to explain some of the emergent patterns and themes.

General distributional pattern of participant

Table 1:VAR00002 Gender distribution

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid male	19	35.2	35.2	35.2
female	35	64.8	64.8	100.0
Total	54	100.0	100.0	

As indicated in table 1 above, the distributional pattern of participants indicate 64.8 percent female and 35.2percent male. This is not significant for this study because it falls within the range of expected pattern of gender distribution in the FE sector in the UK (Ade-Ojo, 2011, Hamilton and Hillier, 2006). As such, the researcher can rely on the views provided by the participants as representative of the general workforce in the FE sector

Table 2: VAR00003 Experience of participants

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid less than 5 years experience	43	79.6	79.6	79.6
more than 5 years experience	11	20.4	20.4	100.0
Total	54	100.0	100.0	

Table 2 above shows the distribution pattern in terms of experience of participants. This is considered significant because pre-research postulations suggests that experience might be significant in terms of

Table 3: VAR00006 Type of provision

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid mainstream FE college	26	48.1	48.1	48.1
services	12	22.2	22.2	70.4
adult and community centres	9	16.7	16.7	87.0
private trainers	7	13.0	13.0	100.0
Total	54	100.0	100.0	

how trainees cope with the demands of their training and the ways in which they respond to it. As such, this variable is central to the paired sample tests carried out in this analysis.

Table 3 above shows the various types of provisions within which participants work. This is considered significant because it is conceivable that the nature of their work location might inform the way in which they respond to the demands of training. As such, this variable will be subjected to a paired sample test for correlation. The distribution pattern conforms with the general distribution pattern of FE provision in the UK with mainstream FE colleges representing close to 50%.

The difficult components of teacher training programmes

Table 4: Difficult components of teacher education

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid CPPD module	41	75.9	75.9	75.9
Theory related courses	7	13.0	13.0	88.9
pedagogy related courses	3	5.6	5.6	94.4
a mixture	3	5.6	5.6	100.0
Total	54	100.0	100.0	

As indicated in the table above, 76 percent of participants reported that they find the CPPD component of their training most tedious. CPPD is a module that is specifically designed to help trainees provide evidence of their professional development. More importantly, the module is used to account for the range of LLUK demands in terms of professionalism. Some of the criteria demanded by LLUK as evidence of trainees meeting the professional values and practice include; 'encourage the development and progression of all learners through recognising (AP 1.1), valuing and responding to individual motivation, experience and aspirations, use opportunities to highlight the potential for learning to positively transform lives and contribute effectively to citizenship (AP 2.1), apply principles to evaluate and develop own practice in promoting equality and inclusive learning and engaging with professional standards (AP 3.1), implement appropriate ways to enthuse and motivate learners about own specialist area (CP 2.1)' (LLUK, 2007:14-15), and a range of eleven other criteria. On the teacher education programme under investigation here, trainees are expected to provide evidence of these rather verbose criteria through the CPPD module. This naturally attracts a range of paperwork, use of specialist meta-

language and endless hours of brainstorming. More importantly, evidence of achievement is often subjective, as the views of the tutor are supreme regardless of the trainee’s rationales and intentions. As indicated in the table, a minority of participants identified other modules including the theory based module, pedagogy based modules and a mixture of modules as the more difficult aspects of their training. It is significant to note that the combination of participants with this view is less than 25%. As such, it was considered this theme was worthy of further exploration during the interview.

The main focus in respect of this theme during the focus group interviews was why so many participants considered the CPPD module as the most difficult. A number of points emerged from the interviews in

Table 5: Paired Samples Test

	Paired Differences					t	df	Sig. (2-tailed)
	Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference				
				Lower	Upper			
Pair 1 VAR00003 - VAR00007	-.204	.683	.093	-.390	-.017	-2.190	53	.033
Pair 2 VAR00006 - VAR00007	.537	1.463	.199	.138	.936	2.698	53	.009
Pair 3 VAR00003 - VAR00005	-1.111	.861	.117	-1.346	-.876	-9.478	53	.000
Pair 4 VAR00006 - VAR00004	-1.593	1.743	.237	-2.068	-1.117	-6.714	53	

this respect. First, many trainees felt that it was so demanding because of the ‘bittiness’ of the criteria. One participant said ‘there are so many bitty parts to this module. You never really know what is being demanded of you. It just hangs around your neck forever’. Another point emerging from the interviews was the distance between the theoretical demands and the reality of practice: ‘How on earth are you ever going to demonstrate these in the reality of your class?’ Another view was the fact that some participants see the module as a tool for managerialism: ‘Your managers, who cannot really teach these classes go around with clipboards looking for evidence that you have met these criteria. It is just killing. They forget that you are actually training’. The last comment is very insightful in that it draws attention to two central issues in the theorisation of professionalism. First is Ball’s (2003) concept of performativity in which he decries the terror of performativity and its impact on the teacher’s soul. According to Ball (2003:1, abstract) performativity ‘requires individual practitioners to organize themselves as a response to targets, indicators and evaluations. To set aside personal beliefs and commitments and live an existence of calculation’ It would seem that this trend that Ball describes in the context of practising teachers is seen as replicated on trainees and as such, elicits similar responses from them. Similarly, the allusion to managerialism echoes the argument of Ingleby, (2010: 15) that standards-driven education has become imposed on aspects of PCET teacher education. One could

argue that the response of participants in this regards is a bye-product of that imposition. A final point offered by participants in respect of the choice of CPPD as the most difficult component of their programme is its seemingly non-defined structure. One participant who typified this view said ' you just don't know what they are asking for. You simply jump through the hoop whenever any demand is made of you. You cannot on your own identify what these demands are'

Because of some of the views expressed by participants in these interviews, particularly the suggestion that it is a replication of the imposed principle of performativity, it was felt that it was necessary to see if there was a correlation between the findings in terms of difficulty of modules and years of experience. If indeed, we could justifiably claim that the view on CPPD was informed by the translation of work routine to the training setting, there is a possibility that the years of experience of participants might be significant. This was tested through the use of a paired sample T- test between years of experience and the difficult component of their training. The finding is presented below in table 5 below which also contains other paired sample T-test between variables that were considered significant.

Table five below presents the overall result of four pairs of variables which have been subjected to a paired sample T-test because of the view that some of the variables might significant in terms of their impact on other variables. The first line which reports the result of the Paired sample T-test between variable 003, years of experience and variable 007, modules found most difficult, indicates that the relationship between the two variables is significant with a 2-tailed significant figure of .033. In effect, this suggests that trainees who have had over 5 years experience before embarking on their training do not generally find the CPPD module as difficult as their colleagues with less than five years experience. This can be seen as an affirmation of the argument that part of the problem that trainees face in respect of this module is the fact that it is structured to replicate the tedium of performativity at work, and so, the more experienced trainees are already familiar with.

What makes CPPD difficult?

Table 6: VAR00004 difficult elements of CPPD

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid documentation	7	13.0	13.0	13.0
finding evidence	9	16.7	16.7	29.6
time	11	20.4	20.4	50.0
meta language	11	20.4	20.4	70.4
overbearing	7	13.0	13.0	83.3
management				
combinations	9	16.7	16.7	100.0
Total	54	100.0	100.0	

As indicated in table 6 above, there are a wide range of reasons from documentation through attitudes, to meta-language for considering the CPPD module as difficult. One conclusion that can be drawn from this is the fact that none of the reasons provided relate to actual pedagogical or subject area knowledge. In effect, this lends some credibility to the argument offered earlier in this work on de-constructing

professionalism, that there is a need to acknowledge three elements of professionalism, particularly the need to acknowledge an imposed element of procedural professionalism. It would seem that what participants were acknowledging here was the demands of procedural professionalism. This again formed a basis for identifying a theme that was explored through the focus group interview with the findings presented below.

Central to the contributions of participants in respect of the feature of CPPD they most resent was the issue of imposed form of presenting evidence. This tied in with the issue of paperwork and time spent on creating evidence. It would seem that one of the major problems for trainees is the fact that there is a demand that their evidence is provided in a particular form using a specific language form. One participant said, 'Even when you have tried and done all these things, you have to write your evidence using a million and one different forms and you must write your reports and documents in a particular way'. Another said 'you cannot use your own language. It must be written in a particular way and if you don't, forget it'.

Another explanation emerging from the focus group interviews was the issue of seeing the relevance of these activities in practice. Linked to this is the issue of different perceptions of what should be prioritised. In the view of participants, many of the demanded elements of CPPD are mere exercises in ticking the box, as they do not see the real importance of doing them to their learners. This was linked to the notion of time being wasted on irrelevances rather than spending time on actual teaching and learning. One participant said, 'why do I have to write out an ILP. Is it not sufficient that my students and I know what we want to address. The time we spend writing out these useless ILPs could be better spent with students or even creating resources. The problem is that your tutors want to see these in your folder, just like your managers do too'. Again, this echoes the argument around the replication of work ethos in training setting which is driven by the nature and structure of LLUK criteria.

Impact of the demands of CPPD on trainees

Table 7: VAR00005 Impact of demands on trainees

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid overworked	15	27.8	27.8	27.8
helpless	16	29.6	29.6	57.4
lost	14	25.9	25.9	83.3
not unduly worried	9	16.7	16.7	100.0
Total	54	100.0	100.0	

This focus sought to establish the impact of the tedium of the demands of the CPPD module on trainees. As indicated in table 7 above, participants offered a range of impacts, most of which have psychological manifestations. It is interesting, however, to note that some participants (16.7%) did not feel unduly worried. This provided a theme to be explored during the focus group interviews. Was there something peculiar to trainees who reported that they were not unduly worried? In addition, it triggered the quest

to carry out another comparative analysis to see if any of the other variables was significant in this respect.

Opinions emanating from the interviews were focused on two broad themes. For those who felt that the CPPD module had a negative impact on them, arguments revolved around psychological wariness, fear of failure and a seeming never ending demand on their time. One respondent said 'it just wears you down, doesn't it' while another said, 'it just goes on and on forever'. More instructive, however, was the view that the timing was simply wrong. Many participants felt that at the time that they were just getting their heads around the principles and theories, the demands of professionalism in the CPPD module is not only at the wrong time, but also lacking significant context. One such participant said 'you are only learning about differentiation and other such things, but they immediately want you to demonstrate how you have planned it out in a lesson and how it affected your learners. Is not enough to talk about it? but you've got to provide documentary evidence. That is what is killing'.

For participants who did not feel unduly worried, the emergent theme was familiarisation with the process. In essence, many felt that it was something they had done for many years and are, therefore, no longer wary of it: 'you just get on with it don't you?' and 'it is not any different from what your managers get you to do all the time'. This again introduces the element of replication of work culture into training through a standard-driven curriculum. The differences in opinion reported above prompted a comparative analysis of variables and as indicated in table 6 pair 3 above, variable 0003, years of experience was found to be significant for variable 0005, impact on trainees, as it has a two-tailed significant figure of .000.

Other paired tests.

The result of a paired sample testing to see if there is a reciprocal significance between variables is worth reporting, as it is considered as significant to the context of this study.. Variable 00006, type of provision and Variable 0007, modules that participants find difficult, were subjected to a paired sample T-test. The result indicated that there is a significant relationship between the two with a two-tailed significance figure of .009. Participants who work in mainstream FE colleges have a sizable representation amongst those who found modules other than CPPD difficult. This might suggest that the nature of mainstream colleges is such that these participants have become more familiar with the procedural elements of professionalism than their colleagues from non-mainstream provisions.

Through the combination of statistical pattern and qualitative data from the focus group interviews, it was evident that the CPPD module could be seen as the more difficult and demanding part of FE teachers' training programmes. This on its own is perhaps not a cause for concern. What rings alarm bells is the perception that the elements of this module are not particularly useful and are simply a way of replicating work ethos in training, responding to what Ingleby (2010) refers to as 'bureaucratic education' and standards driven education. Do we go to these lengths because we are convinced that a module like this on the teacher education programme is beneficial to trainees?

The alarm raised by participants in this study about the usefulness of LLUK imposed standard is not in isolation. In a recent study, Lucas, Nasta and Rogers (2011) explored the views of teacher educators on whether the state-dictated standards evident in the teacher training programme have the 'desired effect'. They conclude on the basis of the evidence provided by teacher educators that 'there is little evidence of the enriching of the experience of trainees on ITT courses' (p1). Based on findings such as the one reported by Lucas et al (2011) and the current study, it becomes imperative that the structure

of the so called professionalism-driven teacher education programmes be review. An attempt at doing that will be offered in the next section as a recommendation from this study.

Conclusions and recommendation

The findings from this study established two central points: the CPPD module constitutes the most problematic module for trainee teachers in the PCET and the vast majority of trainees experience negative impacts from their engagement with this module. Given that the goal of professionalism is desired by all stakeholders, teacher educators, trainees and policy makers, it is crucial that we explore the reason why the module within which teacher professionalism is developed carries so much negative ambience. I offer two potential explanations for this; the structure and expectations of the module. As suggested in the analysis of data, the structure of the module in terms of its content can be described as standard-driven. This means that the module itself is designed to respond to policy standards rather than actual professional standards. While there is nothing particularly wrong with responding to the requirements of a policy-driven set of standards, there is a valid question about the context in which such requirements are imposed. Drawing from the metaphor of the choice between Asclepius and Hippocrates invoked by Downie and Randall (1999) and further reinforced in Ingleby (2011), the question to be asked is whether it is desirable to entertain the audit driven philosophy embodied by Hippocrates or the alternative reflection-driven philosophy embodied by Asclepius. The answer to this question must reside with all stakeholders including trainees, policy makers and trainers. Nonetheless, it is plausible to argue that the standard-driven nature of the CPPD module in particular echoes the misgivings and apprehensions that have been chronicled in the analysis of other elements of the PCET teacher education programme (See e.g. Coffield, 2004, Lieberman, 2009, Lucas et al, 2011 and Ingleby, 2011). These studies have all concluded in part by questioning the legitimacy of imposing education as an 'aspect of bureaucracy' (Ingleby,2011:15).

The bureaucratically imposed structure also makes a demand on the expectations on the CPPD module. In this regards, I make recourse to theory for explanation. I draw from Ball's concept of performativity to account for this situation. . Drawing from Ball's construct in the analysis of the expectations on school teachers, Boxley, (2003) offers the argument that performativity reigns supreme when the personal characteristics of teachers are embedded into professionalism. According to him, 'Evidencing capability in this regard rests upon claiming personal qualities which include such immeasurable descriptors as 'Respect for Others', 'Conceptual Thinking', 'Initiative', 'Holding People Accountable' and 'Understanding Others'. This has necessitated the construction of a relationship between '*personal characteristics*' and performativity. It is a similar attempt to relate training to performativity that has raised the expectations imposed on trainees in PCET teacher training and which is responsible for the negative impact on trainees.

How then do we resolve this problem? I argue that many elements of what is demanded by this culture of performativity are essential for professional teachers. However, the crucial question is whether these are characteristics that can and should be developed in the context of training. This brings to the fore the argument offered earlier in this work about the need to deconstruct the concept of professionalism

into three. In my view, many of the characteristics demanded of trainees under the general classification of professionalism should really be classified as procedural professionalism. If we accepted this deconstruction, where and when do we cater for the development of these elements? I argue that this is something that is better addressed post-ITT. In the current framework for professionalism of PCET teachers, there is a requirement to achieve the Qualified Teacher in the Lifelong Learning and Skills sector (QTLS). Achieving this status requires applicants to provide evidence from their practice. This is distinctly different from the imposed situation in which trainees are required to provide evidence about issues they sometimes have very limited understanding of. In essence, I argue for a reconstruction of the structure of PCET teacher education such that evidence of what I call procedural professionalism to be relocated within the framework of QTLS. Such a reconstruction will achieve three things. First, it would allow trainees the space to internalise the theories they have learned, it would allow them to contextualise the theories in the reality of practice and also enable them to provide evidence for their QTLS status. Adopting this structure has more merit than the half way house approach which in addition to reducing the time available to spend on developing subject and pedagogical professionalism never really provides suitable opportunities for developing procedural professionalism.

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