



International
Council on Education for Teaching
*... Improving educational experiences
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2010-2012 UNESCO Participation Grant Final Report

Evaluation submitted by (name of Member State or INGO)

International Council on Education for Teaching

Number of request

Request #: 66517010040 ONG

Title of request

Inter-regional workshop on promoting gender equity and a sustainable future for Africa through Sustainable Science and Tech and Innovation Education (STIE) Camps in Ghana

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Evaluation of the project or activity implemented

Purpose and objectives, indicating the initial goals or expected outcomes as defined from the outset in the initial project.

Initial Goals

The initial goal of the initial project was to improve the quality of teacher preparation by strengthen the networks between Universities and Teacher Colleges in Ghana. This goal was to be achieved via the achievement of the following objectives:

- Supporting the registration, travel and DSA of representatives from each of the 10 regions
- Conducting a one day seminar on July 9 for 20 participants prior to the World Assembly of the International Council on Education for Teaching (ICET) at Cape Coast University in Ghana.

The project design included the integration of the Mobile Learning in Teacher Education meeting into the program of the ICET World Assembly to create a 20 participant group from a geographical coverage that represents regions across and beyond Africa. The integration of the project within an in international workshop aimed to promote greater diversity among African and international participants to increase the opportunities for intercultural and inter-ethnic dialogue around the issues of improving the quality of teacher preparation through the use of mobile technologies. The plan included the involvement of the UNESCO National Commission to raise the profile of UNESCO's role in teacher education and strengthen the partnership between UNESCO and its Member States.

Revised Goals and Outcomes

The timing of the release for funding resulted in the need to modify the program plan as the ICET World Assembly in Ghana had been completed by the time the funds were made available. The impacts of this change included a shift of focus and location for the workshop.

The Badges for Africa workshop took place prior to [an international GIS conference](#) conducted by the African Scientific Institute at Nigeria's National Office for Technology Acquisition and Promotion (NOTAP) in Abuja. This shift in location prompted a change emphasis from the mobile technologies to food security. The location of the and new focus for the workshop involved input form the recently opened regional office in Abuja. The Multi sectoral Regional Office for West Africa enabled the project team to retain the original links with Ghana as well expand the project reporting and potential benefits to Benin, Côte d'Ivoire, Guinea, Liberia, Nigeria, Sierra Leone and Togo. The following revised outcomes reflect the objectives and outcomes developed in collaboration with the new partners.

Revised Workshop Objectives

1. Facilitate the exchange of knowledge about the core needs of food security in the West African region;
2. Identify a list of badges that will form the basis of a classification system for the food security badging system; and
3. Prepare regional inputs for a youth focused post-2015 food security agenda focusing on quality learning through a competency based system reflecting a regionally relevant adaptation of the Scout personal progressive, badging scheme system.

Revised Expected Outcomes

The meeting will

1. yield recommendations a competency based on a relevant adaptation of the Scout personal progressive, badging scheme system to complement post-2015 education goals and targets.
2. feed into the Global Education First Conference GEFC planned to be held in Chicago in October 2014, and
3. eventually a Global STEM Assembly to be held in Mid- West USA in 2015 .

Benefits, major results obtained and impact of the project

- Were the expected results obtained?

1. *Facilitate the exchange of knowledge about the core needs of food security in the West African region;*

The Badging Africa Workshop took place on November 18 and 19 at Nigeria’s National Office for Technology Acquisition and Promotion (NOTAP) in Abuja.

This workshop occurred prior to an international GIS Seminar held at The National Space Research & Development Agency (NASRDA) – Obasanjo Space Center, Umar Musa Yar’Adua Expressway, Garki, Abuja. By end of the workshop participants were able to describe the following about the core needs of food security in the West African region.

Table 1 Core Needs of Food Security in West Africa

Core Needs	SA	A
describe the core needs of food security in the West African region	100	
explain the concept of Badges	67	33
discuss how badging relates to employment and the eradication of poverty	67	33
identify some core competencies related to agricultural resource management	84	16
identify some core competencies related to agricultural supply chains & markets	16	84
list the potential users of agricultural badges in West Africa	33	67
name two benefits for young people who make the effort to earn a badge	67	33
identify the potential endorsers and awarders of the Agricultural badges	33	67
lists the resources you will need to establish an Agricultural badging system in Africa	16	84

2. *Identify a list of badges that will form the basis of a classification system for the food security badging system;*

Participants did spend time meeting with Traditional Leaders and farm developers at Nigeria’s National Office for Technology Acquisition and Promotion (NOTAP) in Abuja. A list of participants is included in the ASI report. These discussions were complemented by site visits to Amadi family farmland and the College of Agriculture – Enugu. Photographs taken during this visit have been included in the ASI report. Participant feedback from the workshop indicates that as a result of the workshop that all participants at least agreed and/or strongly agreed on the following components of the badging system:

- the concept of Badges
- how badging relates to employment and the eradication of poverty
- some core competencies related to agricultural resource management
- some core competencies related to agricultural supply chains & markets
- potential users of agricultural badges in West Africa
- benefits for young people who make the effort to earn a badge
- potential endorsers and awarders of the Agricultural badges
- resources you will need to establish an Agricultural badging system in Africa

With respect to the classification system the group is still using the working titles of agricultural resource management and agricultural supply chains & markets. Comments from a representative of the College of Agriculture indicate the continued use of the current classification system could assist enhance the employability of graduates. Some work is still required to tailor the language of the system to promote engagement among the youth of the region as a way to reduce poverty levels among those who may not be in a position to complete a College Degree.

3. Prepare regional inputs for a youth focused post-2015 food security agenda focusing on quality learning through a competency based system reflecting a regionally relevant adaptation of the Scout personal progressive, badging scheme system.

The positioning of the workshop as a pre-conference event enabled the project team to secure regional inputs on the relevance of badging to food security issues in West Africa. The diversity of participants also further emphasized the relevance of the system through the voices of Government officials, farm owners, community elders and local universities. The support for the system from the College of Agriculture provides promising signs for a post-2015 food security agenda focusing on quality learning through a progressive competency based system. The participants identified the following questions linked to the expansion of this system to include youth in primary, secondary and community based learning environments.

1. Determine what institution/organizations(s) will issue the “badges”.
2. Who within the institution/organization(s) are to validate issuance of the “badges”.
3. Who are eligible to receive the “badges”.
4. What ceremonial method should be used to celebrate people who have received “badges”?
5. How do we disseminate information about people who have received “badges”?

- Were modifications made to the initial objective(s)?

The following modifications were made to the original objectives

Teacher Preparation to Food Security

- Initial
 - *to improve the quality of teacher preparation by strengthen the networks between Universities and Teacher Colleges in Ghana.*
- Revised
 - *Facilitate the exchange of knowledge about the core needs of food security in the West African region;*
 - *Identify a list of badges that will form the basis of a classification system for the food security badging system; and*
- Initial
 - *Supporting the registration, travel and DSA of representatives from each of the 10 regions within Ghana*
- Revised
 - *Supporting the travel and DSA of representatives from Ghana, Benin and Nigeria*
- Initial
 - *Conducting a one day seminar on July 9 for 20 participants prior to the World Assembly of the International Council on Education for Teaching (ICET) at Cape Coast University in Ghana.*
- Revised
 - *Conducting a two day seminar between November 19-20 for 15 participants at the National Office for Technology Acquisition and Promotion (NOTAP) prior to the GIS training and educational seminar at the National Space Research & Development Agency (NASRDA) – Obasanjo Space Center, Umar Musa Yar’Adua Expressway, Garki, Abuja - Nigeria.*

- What factors made such modifications necessary?

There were three main factors contributing to these modifications

1. The timing of the release of the funds occurred after the ICET World Assembly had taken place.
2. The input of Dr. Ezin during a project planning meeting prior to the Global Education First Conference identified food security as a more pressing STEM priority for West Africa
3. Change in key personnel at the African Association of Universities and the University of Cape Coast in Ghana impacted on the capacity of the local networks identified in the original proposal.

What difficulties were encountered and what solutions were found?

The difficulties encountered shared common links to the three factors listed above as the causes of the required modifications.

1. The timing of the release of funds occurring. The response involved
 - a. using the next ICET forum to revisit and redesign the original project plan.
 - b. incorporating a grant planning meeting as a pre-conference activity
2. Promoting local relevance. The response involved
 - a. drawing on the expertise of the key note speaker Prof Ezin at the grant planning meeting to revise the plan to promote local relevance
 - b. using the [Regional Agricultural Policy for West Africa](#) to strengthen alignment between project and policy initiatives
3. Change in key project personnel
 - a. integrating the ASI into the project team to strengthen the STEM capacity of the project team
 - b. working with the BREDA office in Senegal to identify Abuja as the location for the workshop.
 - c. accessing the educational and curricula expertise of National Louis University to design a badging system and workshop format for the Badging Africa

UNESCO's visibility

- *Depending upon the nature of the project, did the Member State publicize the activity by means of announcements in the media/radio/ television and/or posters?*
 - Workshop publicity included event coverage by local television. The Nigerian Television Authority (NTA) covered the STEM Workshop both in Abuja and Enugu. Two radio stations also covered the STEM Workshop and aired the event the same day. NTA aired the event several days throughout Nigeria. U.S. based Nigerians reported viewing the NTA via cable television. In addition to this report the African Scientific Institute developed a report (included in the appendix) for circulation among ASI and ICET social media channels.
- *Was the general public invited to participate or be present?*



As project emphasized local relevance community participation was a priority. Invitees to the workshop included traditional Leaders and farm developers (left to right: Prince Ikechukwu Oloto and King H.R.H. Eze Anthony A. Wabara) to promote relevance and sustainability beyond the funding cycle. The following participant list provides an indication of the groups represented at the workshop.

Local NGO representation included FAMA-Alek Foundation/FAMA Farms. UNESCO BREDIA Directress Ndong Jatta and UNESCO Abuja Directress Dr Alidou assisted in the implementation of the project by identifying the location and offering Dr Jallow as the workshop representative. Although he was not able to keep this commitment, the involvement of the UNESCO regional was acknowledged at the event and included in all reports. A final copy of the report will be provided to the regional office to prompt consideration of similar badging systems in Benin, Côte d'Ivoire, Guinea, Liberia, Nigeria, Sierra Leone and Togo

Table 2 Participants

Name	Affiliation
Lee O. Cherry	African Scientific Institute (ASI)
Dr. Saidou Jallow	UNESCO Representative
Dr. DanAzumi Ibrahim	Director of Technology Promotion and Commercialization, NOTAP
Mr. Smart Tuedor	Principal Technology Officer, NOTAP
Hon. Eng. Mike C. C. Eneh	Enugu State Commissioner for Agriculture
Dr. Moses Okonkwo	Provost, Enugu State College of Agriculture, Iwollo, Enugu State
H.R.H. Igwe Tony Wabara	Ohambele Autonomous Community, Ukwu East LGA, Abia State
Mr. Osita Nwadei	St. Patrick's Farms in Anambra State
Uzo C. Amadi	FAMA-Alek Foundation/FAMA Farms
Dr. Isaac Ukwu	Abor Farms, Enugu State
Dr. Emmanuel Echiegu	Farms in Ebonyi State
Prince Ikechukwu Oloto	Nsukka Farms
Ifeyinwa Amadi-Davis	ASI
Representatives	FAMA-Alek Farms, Nsukka, Enugu State

Follow-up and long term plans

Meeting local needs for the coming years in the fields of education, culture, science and the human sciences

The linking of the the [Regional Agricultural Policy for West Africa](#) increased the degree of alignment between the workshop outcomes and the food security needs of the Member State's. The inclusion of representatives from the groups listed below increased the likelihood of the workshop laying a foundation to meet local needs for the coming years in the fields of education, culture, science and the human sciences: ASI will coordinate follow-up actions with:

- ICET
- NLU
- UNESCO
- NOTAP,
- PAU
- the State Commissioner for Agriculture,
- Enugu State College,
- Ohambele Autonomous Community,
- Farms (Abor, Enugu, Ebonyi, Nsukka)
- FAMA-Alek Foundation
- institutions and individuals in Nigeria, Republic of Benin, Ghana, and Senegal.

Longer Term Plans

The positive reaction to the workshop (see Table 3) highlights the level of support for extending the initiative. Possible next steps include:

- institutionalizing the system within the local organizations representing the employer, education, government, non-government and community sectors.
- alliancing with existing groups such as the African Virtual University to expand the concept of digital badges across the continent
- partnering with ESRI to draw on GIS technology to create rich maps that contain data rich illustrations of skill needs, skill concentrations to assist stakeholders plan new initiatives and evaluate the impact of previously funded initiatives
- finalizing an ASI proposal for collaborative efforts to assist farmers enhance their agricultural practices. ASI's proposal currently includes six(6) farm sites, with Advisorships from notable individuals from Nigeria, Republic of Benin, Ghana, and Senegal.
 - The ASI proposal includes plans to create North South collaborations between Africa and the United States as well as other countries working to increase food security in Africa.

Alternative funding sources

The planning phase of the revised project would not have been possible without the financial support of National Louis University (NLU) and the International Council on Education for Teaching.

- National Louis University hosted the Global Education First Conference hosted at (NLU) in Chicago, the venue for the project planning meeting. The Office of teaching at NLU sponsored all three days of the event including the planning meeting.
- The International Council on Education for Teaching sponsored the key note speaker Prof Ezin. The selection of Prof Ezin as the key note speaker created the opportunity for immediate past Director of the African Union to provide input into the education, science and human resources needs of West Africa

Additional observations

Participant Reaction

The following results highlight the impact of involving stakeholders with current knowledge of local needs. Every participant surveyed either agreed or strongly agreed on the relevance (#2), value (#3), practicality (#9) and the immediate application of the learnings to their context p

Table 3 Participant Reactions

#	Value Dimension	% Strongly Agree	% Agree	% Disagree	% Strongly Disagree
1	I liked and enjoyed the activities I participated in over the last two days	60	40		
2	The training program was relevant to the needs of myself and my colleagues	80	20		
3	Spending two days at this training program was good use of my time	60	40		
4	I liked the venue where the training was conducted	80	20		
5	I liked the style of the facilitator delivering the workshop	100			
6	The length of training was appropriate for what was covered	40	20	40	
7	I was satisfied with the level of participation that was required of me	60	40		
8	I found the activities the level of effort required from me to be reasonable	60	40		
9	The activities included in the program were very practical	80	20		
10	There is a high potential for applying what I have learnt in my country	80	20		

Project Sustainability

The design of the workshop incorporated several technologies to increase the sustainability of the initiative including:

1. drawing on existing open source instructional materials (you tube videos, policy documents, planning templates) to increase the quality of the presentation without exceeding the budget.
2. using social media (mailing lists, association websites and Facebook pages) to disseminate the resource materials and in doing so expand the potential reach of the project
3. securing support and building capacity among local leaders to increase the likelihood of project continuation beyond the funding cycle
4. including corporate partners within proposed future plans to encourage funding beyond the life cycle of the current project

Appendix 1: STEM Badges Concept Note

Africa has only 35 scientists and engineers per million inhabitants, compared with 168 for Brazil, 2,457 for Europe and 4,103 for the United States. Shortage of skills has been a major constraint to Africa's progress in science, technology and innovation. The Pan African University is the latest initiative put in place to address the skills shortage. Unfortunately only 5% of young people in Sub Saharan Africa attend university (Awuah, 2012). A challenge for this initiative will be finding students for the university on a continent where secondary education enrollment is 43 percent more than 21.6 million children of lower secondary school age may never spend a single day in school and for those who want to attend where there are enough school places for just 36% of children of age to enrol (UNESCO Institute for Statistics, 2012). There is a need for alternative pathways to develop STEM capacity in essential skill shortage areas. This pathways needs to recognizes the large number children who do not follow a path to University and involve building STEM capacity in Primary aged children before they stop attending school . The STEM Badges Workshop seeks to respond to this need through a workshop in Ghana that will focus on creating STEM badges for children aged 5-14 to earn as part of their basic Education. The workshop developed by the International Council on Education for Teaching will be facilitated by fellows from the African Scientific Institute a non-profit organization representing a network of scientists, engineers, technologists, and health professionals, as well as young people aspiring to enter the world of science and technology. The focus of the first wave of badges will reflect the PAU thematic area of Earth and Life Sciences (Pan African University, 2013) with a specific focus on the ADB priority of Food Security (African Development Bank Group, 2013)

Workshop Objectives

1. Facilitate the exchange of knowledge about the core needs of food security in the West African region;
2. Identify a list of badges that will form the basis of a classification system for the food security badging system; and
3. Prepare regional inputs for a youth focused post-2015 food security agenda focusing on quality learning through a competency based system reflecting a regionally relevant adaptation of the Scout personal progressive, badging scheme system.

Expected Outcomes

The meeting will

- yield recommendations a competency based on a relevant adaptation of the Scout personal progressive, badging scheme system to complement post-2015 education goals and targets.
- feed into the Global Education First Conference GEFC planned to be held in Chicago in October 2014, and
- eventually a Global STEM Assembly to be held in Cincinnati in 2015 .

Participants

Regional representation will include delegates from Ghana , Nigeria and Benin. Local delegates will include Government representatives, experts and researchers from universities and research institutions, key international/regional/national organizations and civil society and non-governmental organizations.

November 13, 2013: Food Security in West Africa ASI and NOTAP



1:30 – 2:00 pm Registration

2:00 – 2:30 pm Welcome and Self-Introductions

Welcome, introductions, and overview

2:30 – 3:30 pm The core needs of food security in the West African region;

Key Document [Regional Agricultural Policy for West Africa](#)

3:30 – 4:30 pm Concurrent Break-Out Sessions (See P.10 of the File)

Session A: Resource management

Key Docs:

- [Agriculture, Food and Natural Resources](#)
- [Agricultural Science](#)

Session B: *Agricultural supply chains and promoting markets*

Key Doc:

- [Horticulture](#)
- [Agricultural Mechanics and Technology](#)

5:00 – 6:30 pm Networking Reception

November 14, 2013: STEM Basics Badges ICET



**8:00 – 8:30 am Continental Breakfast Available in Meeting Room;
Informal Networking**

8:30 – 9:30 pm Reporting Out by Session Chairs and Open Discussion on Food Security in West Africa

Session A: Resource management

Key Docs:

- [Agriculture, Food and Natural Resources](#)
- [Agricultural Science](#)

Chair:

Session B: *Agricultural supply chains and promoting markets*

Key Doc:

- [Horticulture](#)
- [Agricultural Mechanics and Technology](#)

9:30 – 10 am Team Discussions 1 on Badges and Badging (Users)

Key Document [Badge Generation Canvas](#)

Support Material: [Badge generation 'How To' slides](#)

Presenters:

1. Tim Riches (Digital ME)

[The Badge Generation Canvas](#) (voice over / explanation James O'Meara)

2. Former President Clinton

[2,000, Better Futures](#)

Key Question: Based on what you just saw, use the users section to identify who will have a better future if Food Security Badges were introduced into West Africa

- 15 minutes for the activity
- 15 minutes to report back (5 mins per group)

10:00 – 10:30 am Team Discussions 2 on Badges and Badging (Value Proposition)

Key Document [Badge Generation Canvas](#)

Support Material: [Badge generation 'How To' slides](#)

Presenter:

Chicago Art Department

[What is a Badge](#)

Key Question: Based on what you just saw, answer the two value propositions about who would bother and what opportunities it would create

- 15 minutes for the activity
- 15 minutes to report back (5 mins per group)

10: 30- 11:00 am Coffee Break

11:00 – 11:30 am Team Discussions 3 on Badges and Badging (Endorsers, Channels & Awarders)

Key Document [Badge Generation Canvas](#)

Presenters

Badging UK

[Lord Jim Knight](#)

Key Question: Based on what you just saw, identify potential endorsers, channels and Awarders for your badge

- 15 minutes for the activity
- 15 minutes to report back (5 mins per group)

11:30 – Noon Team Discussions 3 on Badges and Badging (Resources and Sustainability)

Support Material: [Badge generation 'How To' slides](#)

Review the supports material to identify what resources your team will need

- 15 minutes for the activity
- 15 minutes to report back (5 mins per group)

Noon – 1 pm Networking Lunch

1:00 – 2:00 pm Designing a Badge

Support Material: [Badge generation 'How To' slides](#)

Sustainable Agriculture Concepts

Resource management Badge Options

- Farming and Natural Resources
- Plant Production
- Animal Production
- [Agriculture, Food and Natural Resources](#)
- [Agricultural Science](#)

Agricultural supply and markets Badge Options

- Communications
- Business management
- Mechanics and Construction
- [Horticulture](#)
- [Agricultural Mechanics and Technology](#)
- 15 minutes for the activity
- 15 minutes to report back (5 mins per group)

2:00 – 3:30 pm Working Groups to discuss Next Steps

Drafting regional input for a youth focused post-2015 food security agenda focusing on quality learning through a competency based system reflecting a regionally relevant adaptation of the Scout personal progressive, badging scheme system.

3:00 – 3:00 pm Wrap-Up and Conclusions



Appendix 2: ASI Report



Science, Technology, Engineering, Math (S.T.E.M.) Badges in Africa

REPORT

Presented by the African Scientific Institute (ASI),
ICET, National Louis University, Nigeria's NOTAP,
Republic of Benin's Dr. Ezin, University of Ghana
Location: Abuja, Nigeria
Date: November 18 & 19, 2013

The need for African competent Science, Technology, Engineering and Mathematics (STEM) professionals has been expounded upon repeatedly. Today's world is rapidly changing. Economic and social scenarios evolve in the blink of an eye, and scientific progress and technological innovations set the pace for the rest of the planet. Therefore, science is the major key to Africa's revival. Where should we start?

The presenters of this workshop presented our services to support educators to change the course of the future and meet the need for integrating science, technology, engineering, and math content into their current instruction as a mechanism for economic growth, job creation and food security.



Background

Africa has only 35 scientists and engineers per million inhabitants, compared with 168 for Brazil, 2,457 for Europe and 4,103 for the United States. Shortage of skills has been a major constraint to Africa's progress in science, technology and innovation. The Pan African University (PAU) is the latest initiative put in place to address the skills shortage.



left to right: Past AUC Science and Technology Commissioner and instrumental in developing PAU, H.E. Ezin; O. Cherry, ASI President and CEO; Provost Christine Quinn Provost National Louis University(NLU) and project coordinator Prof. James O'Meara NLU and President International Council on Education for Teaching .

The agricultural sector plays a key role in promoting food security in West Africa. This role includes providing both social and economic benefits to the people of the West African Region We believe the need to recognize skills, achievements and qualities of local learners working to improve their quality of life.

To this end, ASI presented its STEM Badges Workshop to focus on providing STEM badges for children and adults who work in

agriculture to earn as part of a Basic Education (UNESCO, 2013), which includes options involving technical and vocational education (UNESCO, 2013). The initial planning for this workshop took

place during the Global Education First Conference hosted by National Louis University in Chicago. The workshop developed at this conference by representatives from the International Council on Education for Teaching (ICET), National Louis University (Chicago, IL) and the University of Benin was facilitated by Fellows from the African Scientific Institute (ASI), a non-profit organization representing a network of scientists, engineers, technologists, and health professionals, as well as young people aspiring to enter the world of science and technology. The delivery of this workshop in Abuja was prompted by input from the UNESCO Office in Abuja, a multi sectoral Regional Office for West Africa Benin, Côte d'Ivoire, Ghana, Guinea, Liberia, Nigeria, Sierra Leone, Togo. The workshop was hosted by the National Office for Technology Acquisition and Promotion (NOTAP)

Project Partners



International Council on Education for Teaching (ICET)



African Scientific Institute (ASI)



University of Benin



NATIONAL LOUIS UNIVERSITY
National Louis University



National Office for Technology Acquisition and Promotion (NOTAP)

Workshop Objectives



left to right: Lee O. Cherry, ASI President and CEO; Hon. Dr. Umar Bindir, NOTAP Director General; ASI Fellow, Ifeyinwa Amadi-Davis

The Open Badges program seeks to recognize Science Technology Engineering and Mathematics (STEM) and 21st century skills like collaboration and teamwork — to allow local learners in and out a school to tell their story through the badges they have earned We expect that these stories told through the universal language of badges can lead to jobs, community recognition, alternative professional pathways, and new learning opportunities.

The focus of the first wave of badges will reflect the PAU thematic area of Earth and Life Sciences (Pan African University, 2013) with a specific focus on the ADB priority of Food Security (African Development Bank Group, 2013).

Increasing food security and recognizing relevant skills and achievements

Today learning happens everywhere, not just in classrooms, this is especially true for children in Africa who never attend school or fail to complete a Basic Education of 8 years of uninterrupted schooling. These children who learn things out of the formal school system find it difficult to get formal recognition for the things they know and can do. Open Badges solve this problem by providing public recognition for learning regardless of where or how it happens, showcasing new skills and achievements across the web to open doors and unlock employment opportunities within and beyond the agricultural sector.

Recognizing new skills and achievements ...

Badges provide pathways for learners in and out of school to contribute to food security by earning STEM badges, which will be recognized by potential employers, schools, colleagues and their community. The Open Badges for Africa Project is a recognition that “learning looks very different in Africa compared to more traditional contexts. Learning in Africa is occurring through a multitude of channels outside of formal education, and yet much of that learning does not “count” in today’s world. Currently for those children out of the school system there is no real way to demonstrate that learning and transfer it across contexts or use it for improving food security in Africa.

Workshop Objectives

1. Facilitate the exchange of knowledge about the core needs of food security in the West African region;
2. Discuss the concept of using “Badges” and identify a list of badges that will form the basis of a classification system for the food security badging system; and

-
3. Prepare regional inputs for people focused post-2015 food security agenda. Special focus will be on quality learning through a competency based system reflecting a regionally relevant adaptation of the Scout personal progressive, badging scheme system.
 4. ASI also plans to use this badging system as we work with institutions and farmers in Nigeria.

Expected Outcomes

The meeting was expected to:

- provide recommendations on a competency based on a relevant adaptation of the Scout personal progressive, badging scheme system to complement post-2015 education goals and targets.
- feed into the Global Education First Conference GEFC planned to be held in Chicago in October 2014, and
- eventually a Global STEM Assembly to be held in Cincinnati in 2015 .

Participants

Regional representation included farmers and agriculture experts in Nigeria. We anticipated the attendance of an UNESCO Representative, who at the last moment could not attend the Workshop.



(left to right) Provost Prof. Moses M. Okonkwo, Osita Nwadei, Lee O. Cherry, Ifeyinwa Amadi-Davis





Traditional Leaders and farm developers (left to right: Prince Ikechukwu Oloto and King H.R.H. Eze Anthony A. Wabara)



NOTAP's Dr. DanAzumi Mohammed Ibrahim



Participants discuss STEM Badging among farm workers.



NOTAP DG Hon. ENgr. Prof. Umar Bindir visits members of the STEM Badging in Africa Workshop





ASI Team meet with the Commissioner of Agriculture in Enugu. (left to right: Ifeyinwa, Lee, Commissioner Hon. Engr. M.C.C. Eneh and members of his staff.



ASI Team visits College of Agriculture in Enugu.



left to right: Lee, Ifeyinwa, College of Agriculture - Enugu Provost Prof. Moses M. Okonkwo



ASI Team tours College of Agriculture - Enugu.



ASI Team continues touring College of Agriculture - Enugu.





ASI Team continue tours College of Agriculture - Enugu aqua farm project.



ASI Team continues touring College of Agriculture - Enugu.



ASI Team finishes touring College of Agriculture - Enugu.



ASI Team tours Amadi family farmland, one of the farms in which ASI proposes to work.

Follow up Actions

The African Scientific Institute and its Team members plan to issue “badges” to agricultural workers in the following phases:

1. Determine what institution(s) will issue the “badges”.
2. Who in the institution(s) are to validate issuance of the “badges”.
3. Who receive the “badges”.
4. What ceremonial method should be used to celebrate people who have received “badges”?
5. How do we disseminate information about people who have received “badges”?

Appendices

Workshop Agenda

November 18, 2013: Food Security in West Africa

8:00 – 9:00 am Registration and Networking

9:00 – 9:30 am Welcome and Self-Introductions

Welcome, introductions, and overview

9:30 – 10:30 am The core needs of food security in the West African region;

- Key Document [Regional Agricultural Policy for West Africa](#)

10:30 – 10:45 am Break

10:45 – 11:45 am Introduction of the badging system

Noon – 1 pm Networking Lunch

1:00 – 2:30 pm General Discussions

<p><i>Resource management</i></p> <p>Key Docs:</p> <ol style="list-style-type: none"> 1. Agriculture, Food and Natural Resources 2. Agricultural Science 	<p><i>Agricultural supply chains and promoting markets</i></p> <p>Key Doc:</p> <ol style="list-style-type: none"> 1. Horticulture 2. Agricultural Mechanics and Technology
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2:00 – 2:30 pm Reporting Out for draft report

2:30 – 2:45 pm Break

2:45 – 3:30 pm Continued Discussion on Badges and Building the Badging Program

Key Document <http://www.sarep.ucdavis.edu/about/def#concept-themes>

Presenters: ASI

Designing a Badge

Support Material: Badge generation ‘How To’ slides

Sustainable Agriculture Concepts

Resource management Badge Options

- | | |
|--|---|
| <ul style="list-style-type: none"> • Farming and Natural Resources • Plant Production • Animal Production | <ul style="list-style-type: none"> • Agriculture, Food and Natural Resources • Agricultural Science |
|--|---|

<p><i>Agricultural supply and markets Badge Options</i></p> <ul style="list-style-type: none"> • Communications • Business management • Mechanics and Construction • <i>Horticulture</i> • <i>Agricultural Mechanics and Technology</i> 	<p>Team B: <i>Agricultural supply and markets Badges</i></p> <p>Key Doc:</p> <ul style="list-style-type: none"> • Communications • Business management • Mechanics and Construction
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3:45 – 4:15 pm Discussion and Networking

November 19, 2013: STEM Basics Badges

8:30 – 9:00 am Networking

9:00 – 10:30 am Reporting Out on possible next Steps

Resource management Badges

Key Docs: <http://www.sarep.ucdavis.edu/about/def#concept-themes>

- Farming and Natural Resources
- Plant Production
- Animal Production

1. [Agriculture, Food and Natural Resources](#)
2. [Agricultural Science](#)

Agricultural Badges and farm activities

Key Doc:

- Communications
 - Business management
 - Mechanics and Construction
3. [Horticulture](#)
 4. [Agricultural Mechanics and Technology](#)

Drafting regional input for a youth focused post-2015 food security agenda focusing on quality learning through a competency based system reflecting a regionally relevant adaptation of the Scout personal progressive, badging scheme system.

10:30 – 10:45 am Break

10:45 – 11:30 am Wrap-Up and Conclusions

Invitees

List of invitees to the S.T.E.M. Workshop in Nigeria, November 18 and 19th morning, 2013.

Venue:

National Office for Technology Acquisition and Promotion (NOTAP)

No 4. Blantyre Street, Wuse II

Abuja, FCT

Name	Affiliation
Lee O. Cherry	African Scientific Institute (ASI)
Dr. Saidou Jallow	UNESCO Representative
Dr. DanAzumi Ibrahim	Director of Technology Promotion and Commercialization, NOTAP
Mr. Smart Tuedor	Principal Technology Officer, NOTAP
Hon. Eng. Mike C. C. Eneh	Enugu State Commissioner for Agriculture
Dr. Moses Okonkwo	Provost, Enugu State College of Agriculture, Iwollo, Enugu State
H.R.H. Igwe Tony Wabara	Ohambele Autonomous Community, Ukwa East LGA, Abia State
Mr. Osita Nwadei	St. Patrick's Farms in Anambra State
Uzo C. Amadi	FAMA-Alek Foundation/FAMA Farms
Dr. Isaac Ukwu	Abor Farms, Enugu State
Dr. Emmanuel Echiegu	Farms in Ebonyi State
Prince Ikechukwu Oloto	Nsukka Farms
Ifeyinwa Amadi-Davis	ASI
Representatives	FAMA-Alek Farms, Nsukka, Enugu State

Participants

Participants at the S.T.E.M. WORKSHOP

Date: 18 – 19 November, 2013

Venue:

Conference Room

National Office of for Technology Acquisition and Promotion (NOTAP)

No. 4 Blantyre Street

Wuse II, Abuja

Nigeria

S/N	Name	Address
1	Okonkwo Moses M.	Provost, Enugu State College of Agriculture and Agro-entrepreneurship, Iwollo, Enugu State
2	Osita Nwadei	Managing Director, St. Patrick Farms Ltd. Ossomala, Anambra State
3	Lee O. Cherry	President and CEO, African Scientific Institute (ASI)
4	Ifeyinwa Amadi-Davis	ASI Fellow, USA
5	Uzo Amadi	FAMA-Alek Foundation, Nsukka, Enugu State
6	Prince Ikechukwu Oloto	Nsukka Farms Incorporated, Nsukka, Enugu State
7	H.R.H. Eze Anthony A. Wabara	Ohambele Ukwa East, Abia State
8	Obianamma Madubuegwu	Enugu State Liaison Office, Abuja. Representing Enugu State Commissioner for Agriculture
9	Dr. DanAzumi Mohammed Ibrahim	Ag. Director, Technology Promotion and Commercialization, NOTAP
10	Mr. Smart Tuedor	Principal Technology Officer, NOTAP
11	Ms. Chibugo Amadi	FAMA-Alek Farms
12	Ms. Chiadikobi Amadi	FAMA-Alek Farms
13	Engr. (Dr.) Umar Bindir	Director General and CEO, NOTAP

Evaluations

Participant Learning

The following results represent participant feedback about the learning that took place during the STEM Workshop

Competency	% Strongly Agree	% Agree	% Disagree	% Strongly Disagree
describe the core needs of food security in the West African region	100			
explain the concept of Badges	67	33		
discuss how badging relates to employment and the eradication of poverty	67	33		
identify some core competencies related to agricultural resource management	84	16		
identify some core competencies related to agricultural supply chains & markets	16	84		
list the potential users of agricultural badges in West Africa	33	67		
name two benefits for young people who make the effort to earn a badge	67	33		
identify the potential endorsers and awarders of the Agricultural badges	33	67		
lists the resources you will need to establish an Agricultural badging system in Africa	16	84		

Participant Reaction

The following results represent participant feedback about their perceptions of the value of the STEM Workshop

Value Dimension	% Strongly Agree	% Agree	% Disagree	% Strongly Disagree
I liked and enjoyed the activities I participated in over the last two days	60	40		
The training program was relevant to the needs of myself and my colleagues	80	20		
Spending two days at this training program was good use of my time	60	40		
I liked the venue where the training was conducted	80	20		
I liked the style of the facilitator delivering the workshop	100			
The length of training was appropriate for what was covered	40	20	40	
I was satisfied with the level of participation that was required of me	60	40		
I found the activities the level of effort required from me to be reasonable	60	40		
The activities included in the program were very practical	80	20		
There is a high potential for applying what I have learnt in my country	80	20		

Participant Comments

Comments (optional)

There is every need to extend the time of program to a minimum of ~~(one)~~ two weeks to enable participants put into practical terms at the venue of workshop before resource persons facilitate acquired knowledge down to lower ~~end~~. I was able to acquire new skills, information, knowledge and new technology relevant to my farm needs



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Comments (optional)

Though the concept of badging is not new, I have never known it could be applied as it was described in the programme. The badging concept as described could be used to enhance the employability of our graduates.

Appendix 3: Works Cited

African Development Bank Group. (2013, October 15 Tuesday). *African Development Bank Group*. Retrieved from AfDB's Strategy for 2013–2022: <http://www.afdb.org/en/about-us/afdb-strategy/>

Awuah, P. (2012, Summer). *Stanford Social Innovation Review*. Retrieved from Path to a New Africa: http://www.ssireview.org/articles/entry/path_to_a_new_africa

Pan African University. (2013, October 15 Tuesday). *Life and Earth Sciences Institute* . Retrieved from Life and Earth Sciences Programs: <http://elspau.ui.edu.ng/>

UNESCO. (2013, October 15). *Basic Education in Africa Programme*. Retrieved from UNESCO OFFICE IN DAKAR: <http://www.unesco.org/new/en/dakar/education/basic-education-in-africa-programme/>

UNESCO. (2013, October 15). *Technical and Vocational Education and Training*. Retrieved from UNESCO Office in Dakar: <http://www.unesco.org/new/en/dakar/education/technical-and-vocational-education-and-training/>

UNESCO Institute for Statistics. (2012). *Global Education Digest 2011 – Focus on Secondary Education*. Retrieved from UNESCO Institute for Statistics: <http://www.uis.unesco.org/Education/Pages/ged-2011.aspx>

Appendix 4: Financial Report

Which must be sent to UNESCO, ERI/NCS/PPE Section
(Fax: +33 1 45 68 55 34) on completion of the project

Country (or INGO): *International Council on Education for Teaching*

Number and title of the request:

- Request # : 66517010040 ONG
- Title Inter-regional workshop on promoting gender equity and a sustainable future for Africa through Sustainable Science and Tech and Innovation Education (STIE) Camps in Ghana

In pursuance of 36 C/Resolution 69 adopted by the General Conference concerning the principles and conditions governing the Participation Programme:

1. I hereby certify that the financial contribution of **US \$15,000** received from UNESCO for the above request has been fully/partially () spent, in accordance with the purposes for which it was granted, as follows:

	US \$
(a) Chicago Seminar planning meeting with AU Commissioner including travel costs	3,000
(b) ASI STEM Specialists travel to (Nigeria)	2600
(c) STEM Seminar and site visits (Nigeria)	9,400
TOTAL	\$15,000
Unspent balance to be returned to UNESCO	\$ 0

2. I undertake to keep **all supporting documents (receipts, contracts, invoices, etc.)** in respect of the use made of this financial contribution for a period of five years after the end of the biennium concerned and to provide them to UNESCO when it or its External Auditor so requests, failing which unsupported amounts will be reimbursed to UNESCO.

Date

Stamp and signature (**) (of the financial officer)

Stamp and signature (**) (name of the Secretary-General of the National Commission or of the international non-governmental organization)

* Delete as appropriate.

** Both signatures are required.