**Proceedings of the 2016 Annual Conference of the Association for International Agricultural and Extension Education**  
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Poster Abstracts from the 2016 Annual Conference of the Association for International Agricultural and Extension Education
A Digital Content Management System for Volunteer Mentors: Using *LiveBinders* to Support the Volunteer Mentorship of African Entrepreneur Fellows

**Lisa K. Taylor, M.A.**
Oklahoma State University  
Department of Agricultural Education, Communications, and Leadership  
460 Agricultural Hall  
Stillwater, Oklahoma 74078-6032  
Phone: (405) 744-5016  
Email: lisa.k.taylor@okstate.edu

**Jon W. Ramsey, Ph.D.**
Oklahoma State University

**M. Craig Edwards, Ph.D.**
Oklahoma State University

**Keywords:** Entrepreneurs, *LiveBinders*, mentoring, volunteers

**Introduction/Need/Rationale**

Today, “[t]he new breed of volunteer communicates faster and more efficiently, mobilizing the masses more than ever before” (McKee & McKee, 2012, p. 132). These volunteers are tech-savvy, have many responsibilities, and do not like being micro-managed. *LiveBinders* provides an easy way to post and update critical documents and multi-media content into a content management system (CMS) that addresses the information needs of volunteers (*LiveBinders*, n.d.).

The *LiveBinders* CMS served as an important conduit for developing, filing, and promoting mentorship activities as part of the “Empowering Aspiring Entrepreneurs for Economic Success: A Professional Fellows Program for Kenya, South Africa, and Uganda” conducted during 2014.

**Purpose and Objectives**

“Creating professional relationships and mentoring experiences among U.S. entrepreneurs and mid-level, up-and-coming entrepreneurs from Kenya, South Africa, and Uganda” (Oklahoma State University, n.d., para. 1) was the primary objective of the Fellows program. Attracting and informing volunteer mentors was the motivating factor for developing a resource that could be accessible to the volunteers.

**Methods**

The *LiveBinders* CMS was used to develop a portfolio specifically tailored to volunteer recruitment, training, and dissemination of information. An online template was uploaded and enhanced with photos, promotional items, and resource materials. The site was visible to developers, participants, volunteers, and other audiences via a uniform resource locator (URL). No charge was associated with using the *LiveBinders* site or its components.
Results
The Mentor Portfolio contained 15 unique elements:

- Fellowship Group
- Photograph
- Mentee-Mentor Contact Information
- Mentor Descriptions and Goals
- Mentor Evaluation Framework
- Mentor-Mentee Collaboration E-mail
- Mentor Orientation Training Agenda
- Mentorship Experience Goals
- Mentor Recruitment Brochure
- Mentor Thank You Letter
- Program Description
- Program Mission and Objectives
- Program Policies and Procedures
- Volunteer Certificate Sample
- Volunteer Mentor Application
- Volunteer Mentor Letter

Educational Importance, Implications, Recommendations, and/or Application
The LiveBinders CMS provided many potential applications for use in community, public, private, and school environments. Extension educators and other service providers could make extensive use of this tool with their volunteers. Consideration was given to the goals of the project and the outcomes to be achieved: Recruiting volunteers required applications, background information, and entrepreneurial goals and interests of the Fellows. Colorful templates and unique font styles created a package that represented the style and purpose of the program. Red was used to encase each aspect of the portfolio, drawing attention to the color that was prevalent in each of the flags of the Fellows’ countries. Program knowledge, volunteer qualities, time, and openness to experiment with digital capabilities are primary abilities needed to build a LiveBinders online portfolio.

The tool is beneficial for global communication, teaching, and volunteer management activities. This online resource also reflects the U.S. Congressional mandate of “increasing mutual understanding between people of the United States and other countries . . . and thus assisting in the development of friendly, sympathetic, and peaceful relations” (as cited in Harrison, Cecchini, Aabye, & Ettinger, 2014, p. 5), which guides the Fellows program.

References
A Process of Educating International Journalists: A Tour of Biotechnology in U.S. Agriculture

Holli R. Leggette
Texas A&M University
262 AGLS, 2116 TAMU
College Station, TX 77843–2116
Phone: (979) 458-3039
Fax: (979) 845-6296
Email: hollileggette@tamu.edu

Thomas Hall
International Agriculture, Borlaug Institute
Texas A&M AgriLife

Theresa Pesl Murphrey
Texas A&M University

Keywords: Capacity Building, Journalists, American Agriculture, Education

Introduction/Need
Agricultural literacy continues to be an issue as increasingly fewer individuals engage in production agriculture. Thus, the need for journalists to have access to factual information is apparent as they are societal gatekeepers and disseminators of information (Shoemaker, Vos, & Reese, 2009). However, journalists may shy away from complex science issues due to the lack of scientific information (Moualhi, Galhena, Maredia, & Weebadde, 2014). Perhaps, providing science journalism skills and fact-based information about United States agriculture to build capacity of journalists, specifically journalists from outside the United States, could fill the gap in scientific information. Therefore, this poster provides an example of capacity building (Ranson & Maredia, 2012; Toness, 2001) in the context of agricultural journalism.

Purpose
The purpose of this poster is to depict a two-week USDA/FAS Cochran Fellowship Program (CFP) to expose Indonesian journalists to biotechnology science and to the process of disseminating scientific information.

Methods
This innovative approach to on-site training was designed to enhance journalists’ ability to disseminate positive messages about biotechnology benefits. The program began with two days of classroom activities designed to familiarize participants with the basics of science journalism. These activities were followed by seven days of on-site visits throughout the mid-western and eastern United States. The visits exposed participants to the process of biotechnology through visits to corn and soybean farms, biotechnology companies, government entities, and communication organizations that focus their efforts on reporting science and agricultural news. Following on-site visits, participants drew from their notes and their experiences to develop a feature story conveying the benefits of biotechnology.
The CFP agreement allowed for Texas A&M University to secure and pay for participant’s lodging, domestic airfare, ground transportation, and per diem. The CFP provided the participants with J-1 visas, emergency medical insurance and ground transportation while in Washington, D.C. Duplication of this workshop approach would require funds to support travel costs for the participants and trainers and, in the case of this project, funds for trainer fees and/or salary support. All costs would vary depending on the location of the trainings, dates of the training, and topics covered. However, the costs and resources for an experience like this one should range from $7,000 to $10,000 per participant.

Results
Participants noted that the program was influential to their understanding of biotechnology, especially as it related to United States agriculture. This poster will provide a pictorial representation of the on-site visits, the process used to implement the workshop, and justification as to why identified visits and various exposures were critical. Lessons learned will also be shared.

Conclusions/Implications/Recommendations
Agricultural literacy is critical among journalists because of their influential status among consumers. Programs, such as this one, can be beneficial as journalists are the gateway to consumers. By sharing this integrated approach, others may be able to create similar workshops to provide journalists with access to content, context, and skill enhancement opportunities. Journalists could use this knowledge in their country to disseminate fact-based, scientific information about agriculture.

References
Acquisition of a Second Language: Thinking Outside the Box – Opportunities and Possibilities

Taya Brown
Texas A&M University
College Station, Texas 77843-2116
Phone: (206) 790-4850
Fax: (979) 862-7190
Email: tayabrown@tamu.edu

Theresa Pesl Murphrey
Texas A&M University

Keywords: Second Language Acquisition, International Experience

Introduction/Need

The topic of “language” is often addressed in studies related to international experiences designed for students. The literature describes language acquisition as both an opportunity (Briers, Shinn, & Nguyen, 2010) and a barrier (Andreasen, 2003) in regard to international experiences. Briers, et al. (2010) reported that learning another language as part of an international experience, “motivate[s] students more than a little” (p. 11). Bruening and Frick (2004) reported that students need ways to “improve language skills” (p. 89). Connors (2004) reported that “intensive study of the language” (p. 78) is needed to improve international experiences. Further, Starkey and Osler (2001) expressed how language is interconnected with experiencing culture. Thus, language acquisition is an important component of working in extension globally. However, many students and extension professionals may be unaware of the opportunities that exist for language immersion.

Purpose

This innovative idea focuses on the compilation of options that are available but not readily known in regard to language acquisition via immersion. Options are divided by varying levels of immersion, including: programs with and without homestays and with or without additional activities, one-on-one and group lessons and cultural activities. Costs, resources and depth of experience vary across these options.

Methods and Results

This poster provided a pictorial representation of the many options that are available for language acquisition via immersion. The lead author participated in a language immersion program during summer 2015, which was selected from an array of possible options. This experience will be highlighted in the poster as an example. Language immersion programs are by definition programs in which the second language is used as the instructional medium. There are both benefits and drawbacks to this process. Benefits abound: the second language is spoken, written and sung throughout the program; language is required for communication with those around you, which is a strong motivator; access to individuals with different accents and speech patterns allows for a more comprehensive learning process; cultural understanding becomes part of language acquisition; and, the variety of new experiences (i.e., food, history, natural
environment, etc.) is exciting. However, drawbacks such as not being able to ask questions, clarify, or make comparisons in English, and the brain exhaustion due to constant processing and translating, do exist.

**Recommendations, Educational Importance, and Implications**

The importance of language acquisition is not a new idea; however, individuals often focus on a limited list of options in order to accomplish this goal and may perceive that immersion would be too difficult or stressful. Based on the experience of the lead author, it was concluded that unique programs provide enhanced experiences that go beyond the more common options. It is recommended that research be conducted to collect further first-hand experiences with language acquisition via immersion in order to provide realistic descriptions of the options, resulting language proficiency and stress level/culture shock balance. It is through capturing and reporting first-hand experiences that ideas become reality for students seeking to gain second language skills to facilitate work in international extension.

**References**


An Assessment of Students’ Learning Experiences from a Study Abroad Community Development Project in Honduras

Suzanna Windon
Department of Agricultural Communication, Education, and Leadership
The Ohio State University,
208 Agricultural Administration Building
2120 Fyffe Road, Columbus, OH 43210
Phone: (614) 271-7442
Email: windon.9@osu.edu

Gary S. Straquadine
Utah State University

Graham R. Cochran
The Ohio State University

Keywords: study abroad, community development, students’ learning experience and outcomes; education tourism; learning-in-location.

Introduction
Study abroad programs can be powerful learning experiences that challenge learners, affect ways of thinking, and increase cultural intelligence, all preparing participants to be global citizens (Gilin & Young, 2009; Hutchins, Jackson, & McEllister, 2002; Passareli & Kolb, 2011; Sachau, Brasher & Fee, 2010). However, authors (Neppel, 1995; Passareli & Kolb, 2011) have critiqued short-term study abroad programs, characterizing them as lacking academic rigor and being a glorified vacation. When planned and implemented properly, short-term study abroad programs can be much more by providing transformative experiential learning opportunities. Passarelli and Kolb (2011) suggested that experiential learning theory “provides a model for educational interventions in study abroad program because of its holistic approach to human adaptation to the transformation of experience into knowledge” p.2. Dewey identified service learning as a form of experiential learning (Giles, 1987). This study examined undergraduate and graduate students’ experience and learning outcomes while engaged in a short-term study abroad rooted in experiential learning.

Purpose and Objectives
The purpose of this research was to describe what students learn from a study abroad experience conducting community development projects. Specific research questions were:
1. How did students describe their experiences in the study abroad program in Honduras?
2. What were the learning outcomes for students during the study abroad community development project in Honduras?

Methods
The two-week study abroad tour took place during the May session, 2014 in Honduras. A total of 17 students participated. All students were required to attend two pre-departure orientation programs, participate in blogging during their in-country experience. The 15-day in-
country experience included tours of agricultural production, community development projects, and cultural experiences. The research design combined qualitative and basic aspects of a descriptive quantitative approach. A content analysis procedure was utilized to analyze students’ experience and learning outcomes by examining the ACEL@Honduras –Summer, 2014 blog record. Open coding was used to generate themes and sub-themes. Attitudes and opinions as well as level of engagement were quantified by counting coded text.

**Results**

Based on the content analysis of the students’ blog entries during engaged community development projects in Honduras, students gained awareness about the Honduras cultural norms, religion, social diversity, family relationships, and working behavior through conducting community development projects. Two major themes were identified within the students’ blog comments: educational tourism and learning-in-location. Education tourism included three domains: travel experience, cultural experience, and adventure and enjoyment. Learning-in-location contained three domains as well: practical learning-in-location, academic aspects of learning-in-location, and instructor-faculty relationship.

**Recommendations and Implications**

While not all short-term study abroad programs are associated with projects in-location, the opportunity and outcomes documented here support Passarelli & Kolb (2011) who emphasized the importance of “designing a learning experience that helps students fully absorb and integrate their experiences at increasing levels of complexity” p. 3. Future researchers will want to focus on developing new instruments to measure student’s learning-in-location experience and intercultural sensitivity across geographical locations.

**References**


Introduction

Farm-to-fork is a phrase used to describe all phases of agriculture from production to a consumer’s fork (Golan et al., 2004). Paramount to farm-to-fork is food safety and consumers understanding and knowledge of the phases (Doménech, Escriche, & Martorell, 2007). Understanding the phases is complex and requires trustworthy communication and education between consumers, producers, vendors, governmental organizations, and trade organizations.

Sustainability education, agro-gastronomy, and technology have been recognized having potential in serving the necessities of small farmer holders in southern rural Italy (Cuinas, Catarinucci, & Trebar, 2011). In Apulia, organic cultivation is the result of complex iterations between a diversified landscape and the people living on it. The central sub-region of Apulia (Murgia) is a Karst landscape characterized by the presence of calcar. Intensive labor was needed to reclaim a rocky and semi-arid land and soil is irrigated by artesian wells. An ingenious systems of water collections irrigate the crop fields and plantations (Parise & Pascali, 2003). Food security is affected by overpopulation, climate change, and desertification. Agricultural educators and extension agents are needed to diffuse realistic measures needed to promote low environmental impact eating habits (López & Bruening, 2002). Education is key to helping people realize the benefits of local food production and local food consumption. Education will help also policy makers implement strategic programs for long-term food safety (Tilman, et al., 2002).

Introduction and diffusion of processed food in industrially developed Italy is the case of a cultural impoverishment, which is due to lack of food diversity on the table of Italians. This work will illustrate local strategies for diet diversification and links between local food production and kitchen table. Local food habits, agroecology competency and skills in organic farming in the sub-region of Murgia, in rural Italy (Boven & Morohashi, 2002).

Purpose

The purpose of this poster is to illustrate, in a naturalistic fashion, sustainable agriculture,
local knowledge, and transfer from producers to local buyers. Organic farming in southern Italy is driven by local consumers.

**Results/Implications**

Accessibility to industrially processed food and diffusion of convenient food threaten a rich food tradition (e.g. eating small plants, perennials herbs and green fibers). Practices in sustainable agriculture include avoidance of pesticides that are harmful for the health of humans and animals and advanced techniques of erosion control of the farmed land. Educational practices can be used to promote food safety through the introduction of local food supplies in the every-day live diet of the people of a sub-region of Apulia in southern Italy).

This illustrative example may be of use for policy makers, educators, and extension agents, interested in exploring food safety and sustainable agriculture with respect to current environmental issues and food regulation policies in the European Union (Van der Ploeg et al., 2000).

**References**


An Illustrative Model of Farm-to-School-Program: Advocating Food Safety in Light of Environmental Change in the Virgin Islands

Marco Giliberti
Auburn University
Department of Curriculum & Teaching
Auburn University
5060 Haley Center
Auburn, AL 36849-5212
Phone: (334) 844-4434
Fax: (334) 844-6789
Email: mzag0014@auburn.edu

James R. Lindner
Texas A&M University

Keywords: Farm-to-School, Sustainability Education, Food safety, Environmental Change, Virgin Islands

Introduction
Agricultural educators and extension agents are often called upon to promote eating habits that have a reduced impact on the land. Pelling and Uitto (2001) wrote that educators must adopt realistic measures that help policy makers implement strategic programs and inform local food production and local food consumption. Teaching to and learning how to effectively modify people’s food habits is a challenge for agricultural communications agents and sustainable agricultural education agents (Goff, Lindner, & Dolly, 2008; Mohammed, 2011). Farm-to-school programs define a set of innovative educational practices designed to strengthen connections between farmers and schools through education practices (Vallianatos, Gottlieb, & Haase, 2004). Self-containment is defined as a realistic strategy to mitigate the effect of climate change agriculture (decline in crop production, drought stress). Farm-to-school programs may be have a positive impact on strengthening connections and mitigating detrimental effects on agriculture while not negatively impacting food safety (Richardson, 2003.)

Purpose
Teachers involved with farm-to-school programs acquire a practical knowledge of farming techniques, food policy, and nutrition issues. The farm provides an educational opportunity to merge food safety contents into the traditional educational curriculum. Sustainable food systems are a way to detect sustainable school systems while involving the school staff with the multivariate experience of farming (Ganpat at al., 2014).

This poster will visually depict an instructive example of a sustainability curriculum development strategy in action of a program through the Virgin Island Good Food Coalition. The poster will describe the farm-to-school in the Virgin Islands (Larsen, 2014; Webster, Ganpat, & Banya, 2008).

Results/Conclusions
Farm-to-school initiatives are perceived as a priority for a variety of local stakeholders
and NGOs. Such initiatives, however, have not typically and successfully resulted in starting and maintaining food gardens. Major challenges are funding and teacher buy in. McElroy & de Albuquerque (1990) noted that most of the teachers are not agriculture or food literate so they have little or no idea of the impact of the project on sustainability.

Results show that there is a need to host agricultural education intensive programs for teachers and track the teachers who take part to the projects. Advocating food safety in light of environmental change could be the turning point for farm-to-school programs in the Virgin Islands. This poster will provide a pictorial report of the plan as well as best practices engaged for the development of the plan.

References


Assessment of Students’ Inter-Cultural Sensitivity after a Short-Term Study Abroad Program

Baleshka Brenes
Department of Agricultural Education and Communications
Texas Tech University
15th and Detroit Ave, Box 42131
Lubbock, TX 79409-2131
Phone: (806) 742-2816
Fax: (806) 742-2880
Email: baleshka.brenes@ttu.edu

Sarahi Morales
Texas Tech University

Rafael Quijada
Zamorano University

Todd Brashears
Texas Tech University

Amy Boren
Texas Tech University

Keywords: Inter-cultural sensitivity, Study abroad, Internship, Agriculture, Food safety

Introduction
In an effort to meet the demands of globalization, educational institutions are increasingly promoting study abroad programs to encourage students to experience the world firsthand and prepare them with intercultural knowledge (Clarke, Flaherty, Wright, & McMillan, 2009). Prior researcher have indicated students recognize study abroad as valuable; yet, their participation is limited by support, resources, and enthusiasm from professors and students (Brooks, Frick, & Bruening, 2006).

In October 2014, forty-three agricultural students from National Agriculture University (UNA) in Honduras participated in a short-term study abroad for two weeks hosted at Texas Tech University. The main purpose was to expose students to the U.S culture, technologies, and opportunities in their field (Spillane, personal communication, April 29, 2014).

Purpose and Objectives
The purpose of this study was to assess international students’ Inter-cultural Sensitivity Index (ISI) and Global Competency Scores (GCS) as a result of their study abroad experience in the U.S.

Objectives:
1. Determine if a significant difference existed in ISI and GCS before and after the study abroad.
2. Determine if there was a relationship between ISI and GCS.
3. Determine if a significant difference existed in students’ retrospective perceptions.
4. Assess qualitatively the students overall experience.

**Methods**

The research methodology was one-group pretest-posttest design. The instruments used for data collection were ISI and GCS by Olson and Kroeger (2001). Thirty four students ($n = 34$) completed the ISI and GCS instruments.

All students ($N = 43$) completed a retrospective pretest-posttest evaluation to measure changes in culture, agriculture, and food safety perceptions. As part of the evaluation process, a qualitative assessment was conducted on the overall experience.

**Results**

A dependent $t$-test was conducted to assess students’ ISI and GCS. Results indicated the construct of “Intercultural Communications” post-test ($M = 3.51$, $SD = .70$) was significantly greater than the pre-test ($M = 3.28$, $SD = .64$), $t (33) = -.17$, $p = .003$. A Pearson correlation was conducted to determine the relationship between ISI and GCS indicated a moderate positive correlation ($r = .37$, $p < .05$) (Davis, 1971). A dependent $t$-test was conducted to analyze students’ retrospective perceptions on culture, agriculture, and food safety. Findings indicated students’ significantly increased their perceptions. There were large effect size in all items, ranging from $d = .43$ to $d = 1.90$. From the qualitative assessment on overall experience seven themes emerged: quality, agricultural process, agricultural knowledge, friendly/courtesy, mind-opening, open doors, and technology.

**Recommendations - Implications**

The short-term study abroad program conducted at Texas Tech University contributed to a self-perceived increase of culture, agriculture and food safety knowledge of the participants. An increase in “Intercultural Communications” suggests students improved their ability to socialize with people from other cultures. It is recommended to compare the ISI and GCS between students who participate and those who do not participate in study abroad programs, as well as the impact of short-term vs long-term study abroad programs. Due to the small size of the group results should be interpreted with caution.

**References**


Building a Community of Practice: Integrating International Content into U.S. Extension Programs and Collaborating on Projects that Support Efforts Abroad

Renee Pardello
University of Minnesota Extension
1420 Eckles Ave, St. Paul, MN 55108
Phone: 612-816-0878
Fax: 612-624-7779
Email: pard0017@umn.edu

Andrea Bohn
University of Illinois at Urbana-Champaign

Amy Harder
University of Florida

Mike McGirr
National Institute for Food and Agriculture (NIFA)

Denis Scott
West Virginia University

Colleen Taugher
Washington State University

Keywords: International, community of practice, immigrants, network

Introduction/Need/Rationale
For over a century, the U.S. Cooperative Extension System (CES) has adapted to change and responded to critical issues. Today's issues are increasingly influenced by the globalization of the financial, service, manufacturing, and agricultural sectors. Likewise the changing demographics in the U.S. are creating new opportunities and concerns that require new and/or adaptive programming. To be successful in the future the CES must integrate international dynamics into its programming to serve the changing needs of our communities.

Purpose/Objectives
The NIFA Center for International Programs approached a U.S. University to develop a Community of Practice (CoP) focusing on globalization, international development challenges, and intercultural skills with the ultimate goal of contributing to the internationalization of CES. The CoP is a forum and a resource to integrate international content into U.S. extension programs and to collaborate on projects that support extension efforts abroad.

Methods
A planning team representing differing Extension sectors, eXtension, and NIFA used an integrated approach to ensure the CoP design was useful and sustainable. In 2012 the team
revised the initial strategy to include a social network analysis (SNA) identifying potential CoP participants and contributors. This resulted in developing the Global Network Survey (GNS), which went through several rounds of development and review before testing with 90 people. A SNA was completed in August 2014 based on 273 completed GNS’s. Results were shared via a NIFA sponsored webinar to extension professionals and affiliates in September 2014. Of the initial 273 respondents who completed the GNS, 67 expressed interest in leadership roles and were highly networked, and/or bridgers between different social networks. Ultimately, a team of six created the CoP design in January 2015.

Results

GNS data collection is ongoing, extensive, and demonstrates the diverse and interdependent domestic and global efforts of CES personnel and their affiliates. To date over 350 people have completed the survey 100%, which has snowballed to over 874 people, providing data about: (a) work efforts abroad and immigrant groups in the U.S., (b) professional development needs and teaching expertise, (c) organization and position types, (d) subject area, and (e) networks.

In June 2015, Facebook and eXtension sites were created with 92 and 93 members respectively. An interface to search the global network database exists for those in the network to get data on: (a) country and recent immigrant groups identified by respondents, (b) subject area focus, and (c) contact information.

Recommendations

Next steps include: (a) building a Web interface and tools to allow eXtension and CoP members to use, and share the GNS data across CES to expand the scope of its global and domestic efforts; (b) provide workshops/trainings for CoP members to integrate global dynamics and cultural knowledge into programming; (c) identifying and coordinating those efforts for improved effectiveness, efficiency, and better use of limited resources; and (d) identifying the protocol for an annual in-depth social network analysis. This analysis ensures data is being used and shared by CES to coordinate efforts and identifies gaps and opportunities to address global and domestic challenges.
Cultural Enhancement for International Program Visitors from Ethiopia

Ronaldo L. Magtoto  
Graduate Student  
201 Curtiss Hall  
Department of Agricultural Education and Studies  
Iowa State University  
Ames, IA 50011  
Phone: (515) 294-3398  
Fax: (515) 294-3564  
Email: rmagtoto@iastate.edu

Robert A. Martin, Professor  
Department of Agricultural Education and Studies  
Iowa State University  
Ames, IA 50011

Keywords: International program, enhancement, culture, enrichment, participation

Introduction
Cultural enrichments edify individuals who are visiting unfamiliar grounds. The popular cultures observed in the places visited add to the enriching knowledge and appreciation of other customs. The US Agency for International Development (USAID) sponsored the training of veterinarians from the National Animal Health Diagnostics and Investigation Center (NAHDIC) in Sebeta, Ethiopia. This regional referral diagnostic laboratory has an impact on international trade of animals and animal products from Africa.

International exchange programs are very important in extending technical know-how's to other countries. While the main objective of each exchange program is more focused on the official purpose of the visits, other cultural enrichment opportunities can be incorporated to maximize the time and experience of visitors. The enrichment activities would prove to be meaningful as the participants share their positive experiences to their colleagues when they return to their countries.

Purpose/Objectives
The main objective of the enhancement activities was to provide recommendation on how to maximize the participation international program visitors in cultural enrichment activities. Specifically, it aims to document the experiences of participants by observation and interview based on structured questionnaires.

Methods
Three international visitors were hosted at the veterinary institution for diagnostic training. They were invited to participate in cultural enrichment activities. Time outside the official part of the program was used. Some of the activities that were done based on the preference of the visitors were:

a. Introduction to a U.S. families for dinner and social activities
b. Visit to parks, campus and landmarks, farms and the surrounding vicinities
c. Attendance in religious services and meeting individual with the same religious beliefs
d. Visited restaurants, malls, theaters and other shops

An open-ended questionnaire was used during the interview to evaluate the impact of the cultural enrichment activities after the program.

**Results**

The conduct of the activity provided a glimpse of the mindset of overseas visitors from a third world nation to a highly developed country specifically in acquiring knowledge and skills related to their trip. While international program activity sponsors like the USAID are strict in adhering to the official functions and activities stipulated in the program, some other learning opportunities like cultural enrichments are left to the discretion of the participants and the host individuals. In short visits, time is of the essence to maximize the acquisition and exposures to these enriching opportunities that can add to the positive experiences of the visitors.

**Implications**

The host faculty can help maximize the stay of their trainees by engaging them in cultural activities on top of the official program of activities. It is suggested that cultural experience is incorporated in the official program. Time should be devoted for visitors to help them achieve their goals in the program and should also be given the chance to visit places of interests such as landmark or popular destinations. The knowledge we learned will improve and build our capabilities in making for more successful international programs that are both productive and efficient.

**References**


Designing an International Experience Program for 4-H Youth

Shelli E. Danjean
Louisiana State University
268 E Knapp Hall, Baton Rouge, LA 70803
Telephone: 225.578.5850
Fax: 223.578.0777
Email: sdanje1@lsu.edu

Melissa Cater
Louisiana State University

J. C. Bunch
Louisiana State University

Keywords: International experiences (IEs), 4-H, youth, program design

Introduction

International experiences (IEs) employed by U.S Cooperative Extension and international partners, such as International 4-H Youth Exchange (IFYE), can be used to help students develop a global perspective from an early age (Boyd et al., 2001; Odell, Williams, Lawrence, Gartin, & Smith, 2002). In prior studies, 4-H youth who participated in an international experience (IE) (a) demonstrated increased awareness of world issues, (b) reported higher self-confidence, (c) were more willing to immerse themselves in another culture, (d) continued to travel abroad, and (e) were more likely to pursue an internationally focused career (Arnold, Davis, & Corliss, 2014; Boyd et al., 2001; Odell et al., 2002). Moreover, enhancing youths’ global perspective has been shown to generate a ripple effect and positively influence international awareness and cooperation among their family, friends and community (Boyd et al., 2001; Olberding & Olberding, 2010). Research to examine 4-H youths’ IE program preferences can aid U.S Extension professionals and cooperating international partners in designing programs that appeal to 4-H youth.

Purpose & Objectives

The purpose of this study was to examine Louisiana 4-H youths’ program preferences for an IE. The research objectives were to (1) describe 4-H youths’ preferred design of an IE program, including time of year to participate, program length, and activities to be included as part of the program; and (2) describe 4-H youths’ preferred location(s) of an IE program.

Methods

The target sample for this descriptive research study consisted of 4-H youth who attended a three-day 4-H conference (N = 798) at Louisiana State University. A hard copy questionnaire (Bunch, Lamm, Israel, & Edwards, 2013; Lamm & Harder, 2010; Rieger, n.d.), modified by the researchers, was used to collect data face-to-face. Responses were collected from 628 of the 789 4-H members for a response rate of 80%. Items on this instrument were used to measure 4-H youths’ preferred academic level, time of year, program length, activities, and location for an IE. A panel of experts with expertise in international development reviewed the questionnaire to
establish face and content validity. Data were analyzed using descriptive statistics.

**Results**

Regarding IE program structure, 4-H youth preferred to participate in a one to two week summer program during the 11th grade or post high school. 4-H youth perceived career interest courses and hands-on experience as the most important activities to include in an IE, while staying with a host family was least important. All locations were perceived as at least somewhat appealing, with Europe and Australia/New Zealand as the most appealing.

**Implications & Recommendations**

Based on the findings of this study, IE programs designed for Louisiana 4-H members should be one to two week long summer programs in Europe or Australia/New Zealand. Considering 4-H youth preferred to participate in an IE in 11th grade, program recruitment should be geared toward 9th and 10th grade students. Further, information distributed should highlight hands-on experiences and career benefits of the IE program. As IFYE and other programs are often designed to send youth to live with foreign host families, a qualitative study to examine why 4-H youth in Louisiana did not perceive staying with a host family as important could benefit U.S Extension agents and international partners when designing future programs.

**References**


Developing Skills for Life: A Historical View of the Essence of Early 4-S Clubs in Rural Communities in Nicaragua

Carla Andrea Millares Forno
Graduate student
Department of Agricultural Education and Communications
Texas Tech University
15th and Detroit Ave, Box 42131
Lubbock, TX 79409-2131
Phone: (806) 549-1528
Fax: (806) 742-2880
Email: Carla-andrea.millares@ttu.edu

Amy E. Boren
Assistant Professor
Texas Tech University

Keywords: Youth, 4-S Clubs, Agricultural Education, Development, Rural

Introduction
Since its introduction in the 1950s, the 4-S program (4-H in the United States) has played an important role in improving the lives of children in rural and semi-rural areas of Latin America (Inter-American Institute for Cooperation on Agriculture [IICA], 1997). In Nicaragua, the establishment of 4-S clubs was strategic as 62% of Nicaraguans were employed in agriculture at that time (Bataillon, 2003).

While participation in 4-S dwindled and disappeared due to civil war, a renaissance of youth engagement in agriculture is underway in Nicaragua. To nurture this growth, research must be developed to understand the lessons learned, the struggles, the triumphs, and the essence of these programs in Nicaragua. Exploring the program’s history (Uricchio, Moore, & Coley, 2013) can serve as a baseline for future programs to empower youth in Latin America.

Purpose
The purpose of this historical research was to examine the essence of the 4-S clubs in Nicaragua before the 2000s.

Methods
Historical research methods were implemented in this study, including document primary sources analysis and semi-structured interviews with former members. Eight ex-members of 4-S Nicaragua were identified through the snowball technique. Five participants were interviewed individually; the remaining were interviewed as a group. Credibility, transferability, dependability, and confirmability were used in order to achieve rigor (Ary et.al. 2010).

Results
Ex-members recalled that rural youth hungered for participation in 4-S projects, seeing it as a way to acquire skills that would have been otherwise unattainable. The opportunity to come together with other youth to dream and create value had a positive effect. Participants remember
the intense enthusiasm of club members—someone was taking an interest in their development and they jumped at the chance.

Camaraderie was formed among the members as they tackled different activities that spanned social and economic boundaries. Pedro, an ex-member, Pedro recalled the clubs as being a great equalizer— all could participate. He stressed the important role the clubs played in instilling positive values in the club members, which helped them overcome different barriers to developing socially, mentally, and economically.

**Conclusions and recommendations**

While 4-S clubs were established in Nicaragua in order to increase agricultural production, health, and living standards of rural communities, the former club members remember most the life skills they gained in the program. Creative problem-solving, overcoming prejudice, and developing teamwork are just a few of the life lessons learned that have endured the test of time. They emphasized the importance of a good extension agent who can help the clubs to create a structure and provide students with technical as well as life skills. These elements were essential for the success of the 4-S club.

Understanding the history of 4-S clubs in Nicaragua will be important for the newly established 4-S clubs in the region so they can learn from past experiences. Further studies need to be developed in other areas of Latin America to gain a more complete understanding of the history of 4-S in the region and apply the lessons learned.

**References**


Development of an Outcomes-Based Extension Framework to Allow Farmer-Centered Extension in Afghanistan

Christopher A. Thomas
Department of Agricultural Education, Leadership and Communications
Oklahoma State University
Stillwater, OK 74078
Phone: 1 (405) 744-8136
Fax: 1 (405) 744-8036
E-mail: christopher.a.thomas@okstate.edu

Amanullah Alamzai
Deputy Chief of Party
AGRED
Roots of Peace
Kabul, Afghanistan

Keywords: Extension Program Development, Extension Program Evaluation, Logic Model, Post-Conflict, small-holder farmers

Introduction

Agriculture is by far the most important sector of the Afghan economy, generating one-half of the country’s GDP. However, a large proportion of its agriculture is subsistence-based (United States Agency for International Development, 2007). Therefore, a major challenge for improving the economy is to increase agricultural production of small-holder farmers and to help small-holder farmers bring a greater share of their production to market. Afghan farmers, however, face challenges to increasing production including lack of modern technology and outdated agronomic practices. Furthermore, extension educators face challenges such as limited resources and limited training that inhibit their ability to assist farmers.

Objectives

The Afghanistan Agriculture Research and Extension Development (AGRED) program, a USAID project, was tasked to work with Afghanistan’s Ministry of Agriculture Irrigation and Livestock (MAIL) to address the challenges faced by extension educators. As a part of this effort, AGRED together with MAIL determined that extension educators needed capacity improvement in identifying farmer’s needs. It was also determined that a mechanism to allow district extension educators to request and receive funding from MAIL was needed.

Methods

To meet these objectives, MAIL, with AGRED assistance, have developed a framework published as the Provincial Development Projects Planning Manual (PDPPM). This manual uses the logic model for extension program planning (Arnold, 2002; Bennett, 1975) and:

1. Provides a mechanism for extension staff at the district level to receive funding from the Afghan government for extension activities designed to address farmer determined needs (Swanson, 2011).
2. Allows needs identification to be determined at the farmer level and extension activities
to be designed around those needs (Bayles, 1998; Radhakrishna 2001).

3. Enables the district level extension educators to develop short-, medium-, and long-term outcomes which will allow them and the MAIL’s monitoring and evaluation staff to accurately assess the outcomes and impacts of extension activities carried out (Arnold, 2002; Bennett, 1975).

Results
The development of the PDPPM has provided a framework to allow district extension staffs to develop farmer-centered needs assessments and receive funding, via the AGRED program, for MAIL-approved extension activities. Through the second year of the AGRED program, funding for extension activities was provided exclusively through funding AGRED made available to MAIL. Training in administrative tasks and technical trainings and extension methods was planned over the remaining three years of the program to build on the improvements made, and to enable MAIL to have the confidence to apply its own funding in the future.

Implications and Recommendations
Developing the PDPPM has shown indicators of helping to overcome two major challenges common in developing countries: providing a mechanism for extension educators at the local level to request funding for extension activities, and allowing extension educators at the local level to develop extension activities with the outcomes in mind during project planning. Development of the PDPPM should also allow better synchronization between MAIL’s separate monitoring and evaluation and extension directorates at the district level. Development of similar frameworks may help in other countries that also have separate monitoring and evaluation entities.

References
Dryland Agroecology: Opportunities for Horticultural Production in Turkana County, Kenya

Kyle Tengler  
County Extension Agent  
Room 116, Smith Co Cotton Belt Bldg  
1517 W Front St  
Tyler, TX 75702-7854  
Phone: (903) 590-2980  
Fax: (903) 590-2984  
Email: kyle.tengler@ag.tamu.edu

Daniel Cunningham  
Texas A&M AgriLife Research

Cynthia McKenney  
Texas Tech University

Matt Baker  
Texas Tech University

Brent Pape  
Texas Tech University

Thayne Montague  
Texas Tech University

Keywords: International agriculture, teaching sustainable horticulture, agroecology

Throughout history, the Turkana people of Kenya have been nomadic pastoralists. Civil wars in the region have limited access to grazing lands. Concurrently, the stress of prolonged drought has reduced the available forage to such an extent in recent years that many of the pastoralist’s livestock began dying of starvation (Gufu, 1992). In response, 40 families from Nadapal village acquired land with the intent of growing crops.

The purpose of this poster is to document the technical trail used in the design and implementation of the community garden in this arid land by a Texas Tech team consisting of a community nutritionist, horticulturalists, and an agricultural educator. The Texas Tech team partnered with Share International, a non-governmental organization which employees a field staff in nearby Lodwar, the capital of Turkana state. The poster’s objective is to make known our team’s experiences with like-minded development professionals.

The best biophysical research approach was the ecological mimicry and the decision-making logic system provided by the Holistic Management Model (Savory & Butterfield, 1999). This model contends there are four cornerstones to holistic management consisting of community dynamics (biotic and human), the water and mineral cycles, and energy flow. The
model includes a feedback loop where planning is followed by monitoring, control, and re-planning when incorrect decisions are made by a planning team.

Keyline design was implemented to create water holding swales. A fence was erected to protect the garden from foraging animals. Passive rainwater harvesting land structures were created. Double-reach garden beds were created for production of vegetable crops. Native/adapted tree species were raised and transplanted between the crop beds to provide for alley cropping of fruit. Two-story metal stands were erected to hold water storage tanks, thus providing head pressure for drip irrigation to the crops. To increase soil fertility, compost was made from palm fronds and other locally available materials using goat manure to increase the nitrogen content. Mulch was created from locally available materials.

The short-term project results included practical lessons and hands-on experiences to demonstrate how to implement an alley cropping system which integrated perennial tree crops and annual vegetables for both short and long-term yields. The drought stress on the crops was mitigated by the creation of land swales to hold and store the infrequent rainfall in the soil along with the installation of an efficient drip irrigation system. The community produced their own compost using available waste streams and utilized it to fertilize tree crops. They also prepared mulch from locally available palm fronds.

In conclusion, these findings have informed the community participants, Share staff, and the Texas Tech team that continued surveillance of the project output and outcomes is important to the long-term success of the project. If long-term sustainability is achieved, the community garden and new horticultural knowledge and skills will provide these pastoralists with a way to supplement their nutritional needs and their incomes.

References
Excellence in Higher Education for Liberian Development: A USAID-funded Higher Education Program in Liberia, West Africa

Dennis W. Eaton, PhD
Contract Faculty, Rutgers University serving at Cuttington University
Suakoko, Liberia
Phone: +231 770 478 409 and +1-603-313-7004
Email: dwe03601@gmail.com

John K. Ahiakpa
Rutgers University serving at Cuttington University

The College of Agriculture and Sustainable Development (CASD) offers four-year degree programs under three separate departments: Animal Science and Health, Plant and Soil Sciences, and Natural Resources Management. Each of these Bachelor of Science degree programs incorporates key issues to develop agriculture and natural resources management in an economically, environmentally, and socially sustainable manner.

The Excellence in Higher Education for Liberian Development (EHELD) is a project funded by USAID and implemented by RTI International through Rutgers University, North Carolina State University and the University of Michigan. The capacity building program is aimed at equipping young Liberian women and men for careers as leaders, entrepreneurs, and valued professionals in Agriculture.

CASD is being developed as a center of excellence with improved teaching curricula, facilities, and best practices in teaching methodology. Students’ involvement in various crops and animal research are preparing them for careers in the agricultural sector for Liberia. Each graduating senior undertakes a scientific investigation that will advance knowledge about local and exotic crops and animals as part of their graduation requirements. The abstracts below are examples of scientific investigations undertaken by the 2015 seniors of CASD.

Comparing the growth and yield of NERICA L19 & Suakoko-8 rice with the application of NPK at equal rate.

The study was conducted at the Central Agricultural Research Institute (CARI) experimental farm, Suakoko District, Bong County. The objective of the study was to examine the performance of growth and yield parameters of NERICA L19 and Suakoko-8 varieties of rice under different rates of NKP application.

Acceptability of Cynodon dactylon and Chromelina odorata by West African Dwarf Goats.

The most important use of Cynodon dactylon (Durva/Cow grass) and Chromelina odorata (Siam weed) is that they are mostly grown as medicinal and ornamental plants. They are used in part of the world as a feed source for small ruminants. The objective of the study therefore was to assess the acceptability these feeds by West African Dwarf Goats.

Assessment of the impact of climate change on livestock (cattle, goats, pigs, and sheep) production in Jorquelleh District, Bong County: A case study of Taylor’s farm and Kwetarwola Town, Liberia.
Climate change (CC) has become topical in both international and public discourse as a result of the dire consequences it imposes on the environment. The objective of the study was to assess impacts of CC variability on livestock production in Jorquelleh District and identify mitigation strategies for adaptation.

**Determining the effect of phosphorus (TSP) on two eggplant cultivars in Suakoko, Bong County, Liberia.**

Soils in Suakoko and Liberia in general are usually leached of important macronutrients. The objective of the study was to determine the performance of two varieties of eggplant (Black Beauty, V1 and Dwarf variety, V2) and assess their growth and yield under phosphorus supplementation at different rates of application.

**Reference**

Exploring Opportunities to Create a Hemispheric Youth Development Network in Agriculture

Gipsy Bocanegra
Graduate Student
Department of Agricultural Education and Communications
Texas Tech University
15th and Detroit Ave, Box 42131
Lubbock, TX 79409-2131
Phone: (806) 742-2816
Fax: (806) 742-2880
Email: gipsy.bocanegra@ttu.edu

Sandro Lopes
Texas Tech University

Dr. Todd Brashears
Texas Tech University

Keywords: Youth, Development, Education, Research, Extension

Introduction
Agriculture plays an important role in global food security. Food demand is expected to increase as the world population is projected to be of 9.1 billion of people by 2050. It is imperative to find ways of supplying the required increase in food production to meet the demand, taking into consideration the global market trends and that most of the food in the world is produced by smallholder farmers in developing countries (FAO, 2009). As part of the solution, youth involvement and engagement in agriculture is needed for an evolving sector. However, few young people see their future in agriculture or rural areas (FAO, 2014). Youth engagement in agriculture is important as they promote fresh ideas and innovations in the sector (Paisley, 2014).

Purpose and Objectives
The purpose of this project was to examine youth involvement in the Americas’ agricultural systems. The main objectives were: (a) explore opportunities to create an international collaboration network promoting and strengthening youth development; (b) address innovative initiatives which will engage youth in agriculture; and (c) identify mechanisms for a positive generational succession in agriculture.

Methods
The Inter-American Institute for Cooperation on Agriculture (IICA) held a two-day round table meeting to discuss innovations for youth development in agriculture, in Costa Rica. An introductory presentation was given by the host organization regarding the challenges and opportunities to engage youth in agriculture. A total of 31 people participated in the international meeting, representing eight countries in the region from multidisciplinary areas related to
agriculture and other organizations. A road map was developed to highlight common areas and build a participatory agenda. See Figure 1.

![Conceptual Framework](image)

**Figure 1.** Road map “Engaging Youth in Agriculture”

**Results**

The round table results were structured into three pillars: (a) education; (b) research; and (c) extension. Eight key challenges were identified through the dialogue: (a) family farming and food security; (b) rural and youth policies; (c) education and leadership; (d) natural resources and climate change; (e) rural development; (f) funding and financial services access; (g) investment and entrepreneurship projects; and (h) institutional linkages. Three concrete proposals were prioritized: (a) academic networks, such as a web platform to share good practices and information; (b) networks of researchers, young people and extension workers; and (c) effective mechanisms for dialogue.

**Conclusions and Recommendations**

Participants agreed to enhance efforts in four areas: (a) the creation of mechanisms for interaction (web page); (b) the identification and exchange of good practices; (c) the creation of opportunities for dialogue with young people to providing input for a hemispheric policy agenda; and (d) to facilitate links with other networks and the private sector. Metrics need to be developed in order to measure the efficacy of the joint work to support youth and agriculture in the Americas. Also, it is recommended to promote continuous meetings with the participation of more countries in the region to have a better understanding of youth needs and being able to take joint actions.

**References**


Growing Greener Communities: How Does Urban Agriculture Build Community Resilience?

Kelly Henderson
The Ohio State University
250 Agricultural Administration Building
2120 Fyffe Road, Columbus, OH 43210
Phone: (440) 476-3564
Email: henderson.432@osu.edu

Mary T. Rodriguez, Ph.D.
The Ohio State University

Keywords: Community resilience, urban agriculture, social cohesion

Introduction
Community resilience can be defined as “the existence, development, and engagement of community resources by community members to thrive in an environment characterized by change, uncertainty, unpredictability, and surprise” (Magis, 2010, p. 402). Resilience suggests that a community has the ability to respond adequately to adverse and stressful life occurrences (Sonn & Fisher, 1998). Communities lacking resilience experience negative social, economic, and environmental conditions, such as stress, lack of adequate financial and social support, poor diet, environmental exposures, and disparities in health (Smedley & Syme, 2000). Counteracting risk factors by cultivating community resilience is one method of influencing direct change (Davis, Cook, &Cohen, 2005). Historically, urban agriculture, categorized by community gardens, school gardens, entrepreneurial gardens, and intercultural gardens (Moulin-Doos, 2014), has been used to increase food security, combat poverty, raise environmental stewardship, and establish a sense of neighborhood pride (Brown & Jameton, 2000). While gardens may not solve all social and community problems individually, urban agriculture can develop longer-term community resilience by building multiple forms of social capital (Tidball & Krasny, 2007).

Purpose and Objectives
The purpose of this poster is to present a theoretical framework that connects urban agriculture and community resilience. The theoretical framework identifies three pathways that urban agriculture influences community resiliency:

- Social cohesion
- Community cooperation
- Civic participation

Methods
A literature review was conducted to identify themes that emerged between urban agriculture and community resilience. The literature was synthesized to investigate three pathways that urban agriculture leads to community resilience. Urban gardens were seen to develop social cohesion, community cooperation and civic participation, all of which are important aspects of community resilience (Sealy, 2001; Patel, 1991; Golden, 2013; Poortinga, 2012). Examples of each theme were identified.
Results

In Cuba, urban agriculture has played an essential role in developing social cohesion through stabilizing the economy and food security after changes to international trade in 1989 (Altieri et al., 1999). Likewise, entrepreneurial urban farms throughout the United States have revitalized vacant lots that formerly hosted criminal behavior by building bridges between different social divisions and fostering community cooperation (Kauffman & Bailkey, 2000; Kawachi & Berkman, 2000; Schukoske, 2000). While urban agriculture has served a diversity of purposes, gardens across the United Kingdom have a commonality of civic participation and empowerment (Holland, 2004). Additionally, intercultural gardens have functioned as places for shared experiences and collective action (Moulin-Doos, 2014). Research indicates a wide array of positive influences that urban agriculture may have on building components of community resilience. Although urban agriculture is represented differently among communities internationally, there are opportunities for communities to build resilience through cooperative engagement in gardening.

Implications

Communities lacking sufficient resources, healthy food, and stability have an opportunity to build community resiliency through developing urban agriculture programs. Community resilience builds social capacity, enables communities to transform themselves, and helps individuals cope during major disturbances (Berkes & Ross, 2012). Community resilience empowers struggling communities all over the world to mobilize, solve problems equitably, and improve the quality of life for all members (Wallerstein, 1993; Wallerstein, 1992).

References


Low Input – High Return: Personal and Professional Benefits Experienced by Farmer-to-Farmer Volunteers

David E. Lawver
Professor
Texas Tech University
Box 42131, Lubbock, TX 79409
Phone: (806)742-2816
Email: david.lawver@ttu.edu

Matt Baker
Professor
Texas Tech University

Mike Bassey
Country Director
Farmer to Farmer - Nigeria
WINROCK International

Keywords: Volunteer benefits, Farmer-to-farmer, Winrock International

Farmer-to-Farmer (F2F) is a USAID funded program aimed at promoting sustainable economic growth, food security and agricultural development worldwide (USAID, n.d.). F2F utilizes volunteers consisting of US farmers, agribusinessmen, cooperatives, and universities to work in developing countries to increase food production and rural incomes, expand economic growth, and address environmental and natural resource management challenges. Little literature can be found concerning benefits realized by F2F volunteers.

Adults volunteer for both personal enrichment and professional development. 4-H volunteers are motivated by affiliation, achievement, and altruism (Boz & Verma, 2001). Individuals active in their career may volunteer for professional enrichment. Faculty who volunteer may model the way for undergraduates to volunteer, and volunteer service participation persists beyond college (Astin, Sax, & Avalos, 1999).

Professional development is important to the success of an organization’s personnel (Kante, Edwards, & Blackwell, 2013). Professional benefits of volunteering internationally are numerous. In 2005, Place, Vergot, and Lillis, reported that an international extension training program influenced participants’ worldview and many participants remained engaged internationally.

Purpose/Objective
The purpose of this poster is to highlight personal and professional benefits realized from volunteer experiences with F2F programs. The specific objective is to present benefits reported by former F2F Volunteers.

Findings
When WINROCK International asked one volunteer how US universities can benefit from participating in F2F assignments he said, “It gives opportunities for our students in the US
to learn about international opportunities. We are bringing back photos and experiences and sharing those with our students. Volunteering with F2F benefits our university, brings visibility, and helps recruit students”.

Another volunteer in a personal email conversation said, “The experience of working with the wonderful people of Nigeria created a new dimension to my soul. The poem of my journey through life now reads many more lines -- a tale of more friends, fellow educators and a land of people working very hard for a better future. The same sun shines on all of us”. A WINROCK International volunteer said, “Successfully completing an overseas assignment provides a professional experience and confidence not obtainable from domestic experience. You feel that you have truly reached the upper ranks of your profession”.

Reflecting on his volunteer assignment, a university professor said, “Professionally, the assignment has contributed to my knowledge on post-secondary education in Nigeria. I am teaching a graduate online program evaluation course, and I have used the contexts of this trip to teach principles and concepts to my students. Personally, I have grown and developed as well. It has been a great growth opportunity”.

Conclusions

F2F Projects provide many benefits to developing countries but there are also benefits, both personally and professionally, for the volunteers. Several F2F volunteer opportunities exist with WINROCK International, Partners of the Americas, Catholic Relief Services, ACDI/VOCA, CNFA, and Volunteers for Economic Growth Alliance. Although assignments are voluntary in nature, F2F pays all expenses associated with the assignment.

References


Prerequisites for a Successful Community Garden and Urban Agriculture Program: A Case Study of City Sprouts in Omaha, Nebraska

Timothy Kerkhove
203 Barton Anders
Iowa State University
Ames, IA 50013
Phone: (402) 659-2880
Email: kerkhove@iastate.edu

David Acker
Iowa State University

Keywords: Urban agriculture, community gardens, urban agriculture education

Introduction

Urban gardens and urban agriculture have tremendous potential for strengthening local food systems in cities around the world. They also have the potential to grow stronger communities through improved nutrition, greater civic engagement, remediation of abandoned or under-utilized land, and acquisition of job-related skills.

Purpose

The purpose of this poster is to present the necessary components of a successful community garden and urban agriculture program. While considerable amounts of information exist detailing the positive impacts of such programs – including nutritional benefits, economic development, and a heightened sense of community – far less is available explaining how to arrive at those outcomes. As urban agriculture grows in popularity it is critical that local governments be able to provide guidance to those interested in developing a community garden or urban farm on the economic, social, and bureaucratic elements of such an endeavor.

Methods

This project relied on a review of relevant literature, interviews, and participant observation to develop a case study of a community garden and urban agriculture program in a US city.

Case

City Sprouts in Omaha, Nebraska provides an interesting case study in the resources necessary to maintain a long term community garden and urban agriculture program. Since its inception in 1995, City Sprouts has provided the Orchard Hill neighborhood located in North Omaha with the opportunity to access fresh produce in an otherwise food insecure area. Initially, the organization was a small-scale community garden run by neighborhood residents located on a single lot. However, the organization has since expanded to include a house adjacent to the lot used for teaching, storage, and administrative functions as well as an urban farm on three lots a half-block north of the garden. On top of this considerable growth, City Sprouts is partnering with other local NGOs in order to redevelop a park located in South Omaha. Furthermore, they hope to purchase another vacant lot adjacent to the north side of the community garden in the
coming years. Perhaps City Sprout’s greatest program is its paid summer internships in which underserved high school and younger college students work in the garden and farm. In addition to receiving payment, the interns also gain knowledge in financial planning, culinary arts, and nutrition. City Sprouts is an excellent example of a model community garden/urban agriculture organization both in its management and outcomes. They have identified and maintained access to key resources including water, equipment, leadership, and land, while producing positive results such as strengthening neighborhood engagement, effectively advocating for an improved urban food system, and providing economic opportunities.

Implications and Applications

Some American cities have embraced urban agriculture more wholeheartedly than others. However, on the whole there has been an inadequate response by local governments to the increased demand for community gardens and other such programs. Equipped with a successful model for maintaining these types of projects, municipal officials can feel secure in investing resources into a beneficial link of the larger food system. These models have application in both developing and developed economies.

References

Public-Private Partnerships and their Affect on Costa Rican Communities: Opinions of Short-Term Study Abroad Program Participants

Amber Lynn Beseli
North Carolina State University
Crop Science
2004 Trexler Court
Raleigh, North Carolina 27606
Phone: (704) 472-6960
Fax: (919) 515-7959
Emails: alwillis@ncsu.edu

Dr. Lori Unruh Snyder
North Carolina State University

Keywords: Study Abroad, Short-Term Study Abroad, Public-Private Partnership, Community Development, Crop Science

Introduction

This short-term study abroad program was designed in a way to give student participants high levels of interactions with locals while exposing them to food security issues in Costa Rica. When the program began, a key partner was Chiquita and students planned to have field and lab field trips on their farms and facilities while in Costa Rica. During this course, Chiquita went through a large buy-out and was longer to serve as a partner of the short-term study abroad program. While in Costa Rica, students also heard about how large fruit industries affect the community way of life and work.

Purpose and Objectives

The purpose of this study was to gain a better understanding of how student participants of the North Carolina State University Crop Science Short-Term Study Abroad Program view public-private partnerships within the banana industry, with a relation to local communities. The specific objective of this research study was to:

1. Explore student participants’ opinions of public-private partnerships in the banana industry, in direct relation to local communities in Costa Rica.

Methods

North Carolina State University Crop Science 2015 Short-Term Study Abroad Program in Costa Rica was the focus of this qualitative research study. This census study included twelve students (N = 12), all whom were introduced to public-private partnerships through participation in this short-term study abroad program.

To see how these experiences impacted the student participants and their way of viewing public-private partnerships, as related to community lifestyles, students were asked to respond to a reflective blog post. The blog prompt asked open ended questions about their opinions of the Chiquita buy-out, public-private partnerships, and their impacts on local communities. The students’ responses were analyzed by a coding process, breaking the data into themes and subthemes (Merriam, 2009).
Results
Within the student participants, there were some shared feelings and some differing opinions. Some students focused more on the industry side of the topic, and others more on the community aspect. Themes that arose within their responses were: employment, investment, helping communities, and importance of understanding of agricultural systems.

Educational Importance
If students participate in a short-term study abroad program that is very interactive with the community, it is important that the students reflect on the factors affecting their community lifestyle. Having students who attempt to understand the local culture issues creates a stronger, more effective short-term study abroad program.

References
Social Media as a Tool to Promote Agriculture and Exchange Information among Youth: YPARD Case Study

Gipsy Bocanegra
Graduate Student
Department of Agricultural Education and Communications
Texas Tech University
15th and Detroit Ave, Box 42131
Lubbock, TX 79409-2131
Phone: (806) 742-2816
Fax: (806) 742-2880
Email: gipsy.bocanegra@ttu.edu

Dr. Todd Brashears
Texas Tech University

Keywords: Social Media, Youth, Development, Information Exchange, Case Study

Introduction
Web 2.0 is generally known as the next developmental phase of the World Wide Web (WWW), usually called the “social web” due to embedded user accessibility to generate and publish information (Kamel Boulos & Wheeler, 2007). Social media websites are among the most common activities of youth offering entertainment and communication portals. The usage of these websites has grown at a high rate in recent years (Schurging & Clarke-Pearson, 2011). Baruah (2012) indicated that social media can potentially change social interactions between individuals and communities. Agricultural media professionals are beginning to understand the importance of using social media and utilize Web 2.0 technologies for their audiences (Rhoades & Aue, 2011).

Youth play an important role in facing many world challenges, including agricultural issues. Due to the constant increase of social media usage by youth, it is becoming an important tool to engage and empower youth in agriculture. The global network Young Professionals for Agricultural Research for Development (YPARD) is a success story of how social media can be used with youth for engagement in the discussion of agricultural issues. The actions used by YPARD to accomplish its goals are to: (a) connect people through the online community ypard.net; (b) disseminate information about funding, jobs, events and other news for young professionals in Agricultural Research for Development (ARD) through the website and social networks; (c) disseminate newsletters and funding news bulletins twice a month via email; (d) organize on-line events for generating experience sharing and debates, series of blogs and e-discussions; (e) organize and promote capacity building opportunities at the local level; (f) integrate and ensure youth have a voice in key discussions and debates in ARD; and (g) promote agriculture through curricula development and as a career path (YPARD, 2014).

Purpose and Objectives
This case study had two objectives: (a) Describe how YPARD uses social media to promote agriculture and exchange information; and (b) determine to what extent YPARD engages youth in issues related to agriculture.
Methods
YPARD experiences using social media was analyzed through a case study approach. Data collection procedures included: observations, interviews, audiovisual material, documents and reports (Creswell, 2013).

Results
YPARD was officially launched in November 2006 at the Global Forum for Agricultural Research (GFAR) conference in New Delhi. After almost nine years of development and promotion, YPARD has 10,500 members, more than 15,200 visits a month, and 182,608 total visits to http://ypard.net. Regarding social networks, 10,650 members have joined the Facebook group, 7,600 follow on Twitter and 3,300 joined to the Linkedin group. Also, several international organizations on the five continents where YPARD has presence seek YPARD’s input in developing youth strategies and programs (YPARD, 2015).

Recommendations
The usefulness and extent of social media are visible in communicating agricultural issues by using different contents on internet and disseminating information beyond the local areas. It is recommended to promote the usage of online platforms among all agricultural institutions as a strategy to improve information and knowledge exchange.

References
Socio-Economic Factors Associated with the Adoption of Conservation Agriculture Among Women Farmers in Balaka District, Malawi

B. Allen Talbert
Department of Youth Development and Agricultural Education
Purdue University
615 W. State Street
West Lafayette, IN 47907
Phone: (765) 494-8423
Fax: (765) 496-1152
Email: btalbert@purdue.edu

Chimwemwe M. Chisenga
Ministry of Agriculture and Food Security

Jerry L. Peters
Purdue University

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Keywords: Women farmers, conservation agriculture, Malawi

Introduction/Need/Rationale
Malawi is a landlocked country that relies on agriculture to drive its economy. Therefore, increasing agricultural incomes is key to poverty reduction (Chirwa, 2005). The agriculture sector in Malawi faces environmental challenges: soil erosion, low soil organic matter, nutrient deficiency, and water shortage (Mlamba, 2012). The Malawian Government has promoted conservation agriculture (CA) as a method to enhance productivity and conserve soil and water. In Malawi, women provide 70% of the agricultural workforce and produce 80% of food for home consumption. However, there is disparity between men and women in access to and control over agriculture production resources (Malawi, 2012).

Purpose and Objectives
This study used Gender and Development Theory (Malawi, 2012) and Diffusion of Innovation Theory (Rogers, 2003) to identify socio-economic factors associated with adoption rate of CA among women farmers in Balaka District, Malawi, Africa. Research questions were:
What socio-economic factors are associated with rate of adoption of CA?
What are levels of adoption of CA?
What are main sources of information for CA?

Methods
The sampling frame was all female-headed households in Balaka District, Malawi. Sixty women farmers were sampled. The instrument was researcher-developed with reference to Bonabana-wabbi’s (2002) questionnaire. Chi-square test and descriptive statistics were used to analyze quantitative data. Five interviews were conducted with verbal data transcribed for
Results

Of the 60 women farmers, 59 were aware of CA. Less than half (28) had adopted CA practices.
Regarding primary source for learning about CA, 30% sourced from Extension with 72% adopting CA. Next largest was 28% learning from a village meeting with 52% adopting CA. Although only 8% learned about CA from a field day, 80% adopted CA.

Agricultural periods were rainy/growing season (December-February), harvest (March-May), after harvest (June-August), and land preparation (September-November). A majority of women farmers during each period received one to three Extension visits. Sixty-seven percent, who received three visits during the rainy/growing season and after harvest adopted CA.

A Chi-Square test showed significant (p < 0.05) differences within groups. Women farmers 40 to 49 years old adopted CA at a higher rate. Those with household size 7 to 9 adopted CA at a higher rate. Households with 1-3 members working on-farm were less likely to adopt CA. Those with less than 1 hectare were less likely to adopt CA.

The interviews yielded several themes. Participants viewed CA as adapting to climate change. Participants viewed CA as a labor saving technology; however, they viewed CA as favoring men over women. They perceived an inadequate number of Extension workers leading to insufficient knowledge about CA. Farmers who owned livestock view conflict between using crop residue to feed and using it as mulch. They viewed inadequate resources and expense as major challenges.

Recommendations

Extension workers should make three visits to women farmers. Visits will have the most impact during the rainy/growing season and after harvest. The Malawi government should train and place more Extension workers to assist women farmers to adopt new agricultural technologies.

References


Introduction and Theoretical Framework

Global demand for seafood has increased and likely originates from population growth, rising domestic incomes and urbanization, and enabled by globalization and the associated increased fluency of international trade (FAO, 2014). The increase in demand for seafood can be attributed to substantial growth in per capita consumption throughout developing regions (from 5.2kg to 17.8kg between 1961-2010) and low-income-food-deficit countries (up 6kg over the same period).

Despite this surge, developed regions remain the more frequent consumers of seafood products. Concepts from the (Fishbein & Ajzen, 1975) theory of reasoned action and theory of planned behavior (Ajzen, 1991) are often drawn upon in consumer-oriented market research (Birch, Lawley & Hamblin, 2012; Birch & Lawley, 2010; Honkanen, Olsen & Verplanken, 2005; Verbeke & Vackier, 2005).

Purpose and Objectives

The purpose of this study was to define demand preferences for seafood products, which exported to developed economies offer potential market expansion for developing regions that can export seafood products.

Methodology

In February of 2015, an online survey was developed that resulted in 1,038 responses. According to Godden’s (2004), is a sample population that is representative of a larger market and valuable in describing large markets, which in this case is a summary of U.S. Demand for seafood products. Davis (1971) provides the significance of correlational values.

Results and Conclusions

Price was moderately important (46%) in purchasing and only 7% reported that price was not a factor. Most respondents seek wild-caught products (54%) with the secondly farm-raised (27%). The knowledge of buying local product was revealed to an important attribute, but familiarity and health benefits are the least important attribute.

Considering respondent’s frequency of purchasing and coastal travel experience, there is
a substantial association ($r = .50$) in those traveling the coast and purchasing shrimp or other seafood products. This may be an environmental factor, but does offer regional marketing opportunities for developing regions. A negative moderate association ($r = -.31$) was found for those traveling the coastal regions and availability, which identifies that those traveling have little issues in purchasing.

In considering barriers to purchase, consumers that report quality as a barrier of price ($r = .32$). This may indicate that consumers are not willing to pay more because they perceive a low quality product. A moderate significant value ($r = .34$) was also found that respondents recognizing quality as a barrier also reported lack of familiarity with shrimp. An additional substantial correlation ($r = .51$) also was found as a barrier in cooking knowledge and familiarity, which offers a potential education topic to reduce barriers to purchasing.

**Recommendations/Implications/Educational Importance/Impact on the Profession**

Recommendations from this study include defining seafood product production practices that align to developed markets demand for seafood products in order to gain maximum economic value. Additional research is likely necessary to define regional potential and value. Implications for this study are how extension leaders may use results to educate producers aid them in production practices and branding that can offer increases in marketing and pricing for exporting products to developed regions. This study could also serve to develop regional markets and serve local economies through developing marketing cooperatives and other collaborative efforts or extension education.

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Study Abroad Partnerships and Food Security: What Can We Learn?

Wash A. Jones  
Prairie View A&M University  
P.O. Box 519  
Mail Stop 2008  
Prairie View, Texas 77446  
Phone: (936) 261-2538  
Fax: (936) 261-9975  
Email: wajones@pvamu.edu

Gary Wingenbach  
Texas A&M University

Tracy Rutherford  
Texas A&M University

Tobin Redwine  
Texas A&M University

Erica Bobbitt  
Texas A&M University

Keywords: CBNRM, food security, hunger, partnerships

Introduction
Consumer demand for local foods has increased despite a more interconnected, global community. A local food network involves collaboration between various entities to increase food security and ensure economic, ecological and social sustainability of a community (Dunne, Chambers, Giombolini & Schlegel, 2011). The proliferating world population has heightened concern for food security worldwide. Researchers provide evidence of positive food security benefits and increased food security in areas where Community-Based Natural Resource Management (CBNRM) strategies are practiced as opposed to non-CBNRM areas (Arntzen, Setlhogile & Barnes, 2007; Pailler, Naidoo, Burgess, Freeman & Fisher, 2015). As with CBNRM, a community’s food security is impacted by participants within that food system; community food security may be increased if participants understand the relationships shaping their food systems (Dunne et al., 2011).

Study abroad programs, a valuable component of agricultural education (Zhai & Scheer, 2002), provide opportunities to learn about CBNRM and its impact on food security and local food systems while increasing intercultural competence. The researchers predict that participation in a study abroad program enhances students’ understanding of CBNRM and food security.

Purpose and Objectives
The purpose of this proposal is to describe a study abroad partnership based, in part, on CBNRM and food security issues. Research objectives were to determine participants’ changes
in perceptions of CBNRM and food security as a result of participating in the study abroad partnership.

**Methods**

This qualitative phenomenology study involved content analysis of 30 students’ responses to open-ended questions. Students attended U.S. sister institutions (a predominately white institution and a Historically Black University) with a study abroad partnership, including an international research entity and a university in Namibia. The questions sought participants’ perceptions of their understanding of CBNRM strategies and food security. Participants responded to the questions before and after the study abroad program. Data analysis was conducted using content analysis software, NVIVO. Preliminary results yielded themes related to CBNRM.

**Results**

Although some participants indicated no change in their perceptions from pre- to post-experience responses, most noted positive change in CBNRM knowledge. Pre-experience data suggested that many of the participants had minimal or no knowledge of CBNRM strategies. Post-experience data showed substantial increase in most participants’ knowledge and understanding of CBNRM strategies, hunger and food security. Interaction with native cultures enhanced participants’ cultural competence. Results revealed that participants perceived this study abroad program had positive impacts on areas studied, which could lead to positive impact in food security and local food systems.

**Recommendations, Educational Importance, Implications, and/or Application**

This partnership engaged students in a valuable study abroad experience which enhanced participants’ knowledge of CBNRM. Researchers recommend that practitioners further adopt international educational experiences as a means to enhance knowledge in CBNRM. Additionally, study abroad initiatives should be continued to promote intercultural competence and institutional collaboration. To address the need for college students to enhance their intercultural competence, and promote the potential to impact food security and local food systems worldwide, study abroad experiences should be mandated and supported so that every student may have that opportunity.

**References**


Sustainable School Feeding: Managing and Funding through a Multi-Stakeholder Approach

Austin Schott
Iowa State University
College of Agriculture and Life Sciences
105 Horticulture Hall,
Ames, IA 50011-1100.
Telephone: (715) 295-4074
Fax: (515) 294-0730
Email: austinschott@gmail.com

David Acker
Iowa State University

Gail Nonnecke
Iowa State University

Keywords: School feeding, phase over, external aid, nutrition, sustainable funding

Introduction
As developing countries seek to provide universal primary education and eradicate extreme poverty and hunger, school feeding programs (SFPs) contribute to progress. SFPs have consistently demonstrated their effectiveness in contributing to children’s health and cognitive abilities through nutritious meals as well as increasing school attendance rates. However, funding and managing SFPs sustainably remains a critical issue in development (Molinas and de la Mothe, 2010). Stakeholders such as local communities, external aid, or national governments can support SFPs but long term continuity can be a challenge.

Purpose and Objectives
This poster examines the benefits and difficulties of each actor involved in SFPs. It also explores transitions toward sustainability as SFPs transfer from international agencies to local management. Finally, the poster includes recommendations for stakeholders on sustainable SFP practices.

Methods
This research was comprised of a literature review focusing on school feeding programs funded through various stakeholders. Local communities, international agencies, and national governments each were analyzed as potential stakeholders in the process and were assessed for their strengths and restrictions.

Results
The first SFP stakeholder is comprised of the local community. If the community is connected to the program, members of the community tend to be passionate about the program’s success (Bogart et al., 2009) and the program creates a sentiment of community solidarity.
Despite these benefits, community members often are restricted by a limited financial supply to support SFPs (Bundy et al., 2009). International agencies form the second primary stakeholder and may offer benefits primarily in the form of much-needed financial contributions to SFPs. Organizations such as WFP has access to a wider financial base to initiate programs than areas where the local economy is not yet developed enough to function these programs on its own (Bundy et al., 2009). However, extensive reliance from foreign lenders leaves SFPs susceptible to unreliable and conditional funding, depleting a program’s effectiveness (Langinger, 2011).

The third stakeholder, national governments direct SFPs to reach those most in need, allowing the vulnerable to receive the full benefits of program meals. Varied amounts of government commitment, often observed through financial means, are determining factors in allowing a SFP to succeed or fail (Spearman, 2003). As such, the major hurdle faced by national governments is a persistent unreliability of funding.

Most developing countries begin with SFPs funded by foreign donors (Bundy et al., 2009; Mitchell, 2009). An eventual transition often occurs where the outside entity phases over the program primarily to the government and the community while it continues to provide technical support and emergency assistance (Bundy et al., 2009). In this scenario, communities are allowed time to gain experience and finances necessary for managing programs (Rogers and Macias, 2004; Mitchell, 2009).

**Recommendations**

It is recommended that utilizing a combination of stakeholders poses the most effective strategy to sustainably support SFPs with the least amount of risk. Such collaboration creates a safety net in volatile areas and increases the likelihood that programs remain in place even if a single party cannot appropriately contribute.

**References**


The Local Food Ambassador Program: Strengthening Local Food Systems with Collaborative Student, Extension, and University Food Service Teams

Robyn Stout
North Carolina State University
Box 7606
Raleigh, NC 27695
Email: Rebecca_dunning@ncsu.edu

Rebecca Dunning
North Carolina State University

Emma Hutchens
North Carolina A&T University

Keywords: University food service, students, local food, local food systems, extension

As more researchers and practitioners engage in on-the-ground collaborative projects to build local and community-based food systems, project organizers recognize the need to fine-tune both the substance and process of engagement to particular local contexts (Godette, Beratan, & Nowell 2015; Hinrichs 2000). Plans and methods that work in one context may fail in another. A second recognized prerequisite for project success is shepherding local partners to meet particular time-limited project objectives while institutionalizing processes that live after the particular initiative comes to an end (Dunning et al. 2012; Schmidt et al. 2011).

This poster presents the work of a North Carolina initiative supporting teams of university students, university staff, agricultural producers, and agricultural educators working collaboratively to localize campus community food systems. The Local Food Ambassador Program, funded by the Sustainable Agriculture Research & Education program, builds on a pilot 2014 program, and is working with five Historically Black Colleges and Universities and one Tribal University in North Carolina from 2015 to 2017. Local Food Teams are recruited from each university community, and are comprised of the following: a paid student food ambassador, university partners including personnel from dining services and the campus sustainability office, other interested faculty and staff, one or more local agricultural producers, and one or more county Cooperative Extension educators. Localization efforts can take many forms, dependent on the composition of the team and the current status of the food system components, including those components related to procurement through dining services, production on campus farms, and distribution of product via farmers markets, food pantries, and CSA/box programs.

Our presentation will outline the processes organizers have used to: (1) recruit team members (2) facilitate discussions that result in clear objectives and roles for team members (3) provide effective support and follow-up to team members and (4) document the initiatives so that all team members feel connected in a learning community within and across the participating universities. Organizers will also compare and contrast the membership of the teams across the six universities, the initiative(s) that each team selected to focus upon for the 2015-2016 academic year, and the status of the initiative(s) as of March 2016. We hope to share lessons and
challenges with conference attendees seeking to engage diverse stakeholders to localize food supply chains in their own university communities.

References
Understanding the Impact of Narrative Video Content Depicting Gender Issues in the Learning and the Uptake of Agricultural Technology

Tian Cai  
Michigan State University  
Dept. of Media and Information  
College of Communication Arts & Sciences  
404 Wilson Road, Room 441  
East Lansing, MI 48823  
Email: caitian@msu.edu

Hastings Chiwasa  
Lilongwe University of Agricultural and Natural Resource

Charles Steinfield  
Michigan State University

Keywords: agricultural information, video, narrative, gender, social norm

Introduction

Video-based training is increasingly favored among develop practitioners and researchers (Van Mele, 2011, Cai et al., 2014). In general, attention has been focused on the impact of video as a means to deliver information on agricultural technology and to eliminate certain gender-based problems that might influence learning.

In this study, we examine the impact of a video that address gender issues directly within the content of a technical message concerning the adoption of compost manure. The video including both the technical steps and narrative elements related to two gender issues relevant to the techniques: traditional gender division in agricultural labor and lack of group collaboration, which were identified by the farmers as potential barriers to learning and uptake prior to the video production.

Purpose and Objectives

The core purpose of this study is to understand how men and women perceive and response to the gender issues in the video. The objectives were to:
1. Describe men and women’s perception of the gender-related narratives depicted in the video
2. Explore whether the perception of these gender issues relate to the men and women’s uptake of compost manure

Results

Field observations, focus groups and in-depth interviews were used in this study. Both men and women perceived that the two gender issues narrated in the video could inhibit learning and uptake of compost manure. The narrative depicting successful collaboration produced both cognitive and affective responses. The women perceived strong social connections with the female actors in the video and were motived by the lead actor when she encouraged her women peers to make mud or cut branches, which are normally considered as men’s activities in their
villages. The men, on the other hand, showed less connection with the actors. Nonetheless, they appeared convinced by the video that more women in the community should be able to participate in compost making activities.

Around one third of the farmers started making compost manure 5-7 days after the training. Group collaboration, a key gender theme narrated in the video, was more likely to be found among the women than the men’s group. The incentives for women to form and participate in compost manure making groups include knowledge reinforcement, peer encouragement and labor sharing. Most of the men who started trying the practice either worked alone or asked for help from their wife, especially for tasks like fetching water or transporting animal dung.

**Implications and Recommendations**

Video should be considered more than just a simple information delivery channel. This study suggests the importance to consider the impact of depicting social practices, including practices that embody social constructions of gender roles and norms that may influence the farmers’ perceptions of the suitability of new agricultural techniques, their learning and adoption decisions.

**References**


Using Guided Journal Prompts to Elicit Desired Learning Outcomes for Global Education Experiences

T. Grady Roberts
University of Florida
PO Box 112060
Gainesville, FL 32611
Email: groberts@ufl.edu

Amy Harder
University of Florida

Nicole L. P. Stedman
University of Florida

Keywords: Global education, journal, reflection, outcomes

Introduction
High quality educational programs should be planned, delivered, and evaluated using underlying theoretical and philosophical assumptions. In 2013 a group of researchers (Roberts, Stedman, Harder, Gouldthorpe, & Coers, 2013) used experiential learning theory (Kolb, 1984; Roberts, 2006), outcomes frameworks (Rockwell & Bennett, 2004), intercultural competence theory (Deardorff, 2009; Delaney, 2011), and critical thinking theory (Facione, 1990) to develop a conceptual model for this very purpose (see Figure 1).

Figure 1. Conceptual model for studying globally integrated education activities.

Purpose
The purpose of this abstract/poster is to share a practical approach for applying this framework to facilitate global education experiences through the use of a set of guided reflection questions. Ultimately, we hope educators and researchers will adopt this conceptual model and guided reflection questions to allow for broader testing and a more holistic examination of the conceptual model.

**Methods**

Using reflection activities (e.g., preflection, journaling, group debriefing sessions) is widely documented in the *Journal of International Agricultural and Extension Education* literature. We used the conceptual model to develop a set of six journal prompts to guide students’ reflection. The prompts focus on culture, technical learning, and critical thinking while encouraging reflection, generalization, and application. The prompts are outlined below.

1. What were your observations about the culture today?
2. Did your perceptions change today? How?
3. Which activity from today had the greatest significance to you? Why?
4. What did you learn today? How will it affect you professionally?
5. What did you see or learn today that challenged or changed your previous thinking? Why did it challenge or change your thinking?
6. What do you hope to learn tomorrow?

**Results**

The purpose of this abstract is to share the methodology (as opposed to research results), providing results pertaining to implementation of the method. To date, these questions have been used on four different study abroad programs varying in length from one week ($n = 1$), two weeks ($n = 2$), and 6 weeks ($n = 1$). Students journaled daily during the shorter programs while students journaled weekly for the longer program. Educators from all programs reported students responded favorably to the journal prompts. Analysis of student responses is being undertaken for different research purposes (e.g. Stedman, Rodriguez, Harder, & Mott, 2014) and results show the journal prompts are having the desired effect of allowing students to reflect on all three outcomes from the conceptual model through critical thinking.

**Recommendations, Educational Importance, Implications, and/or Application**

We recommend other researchers and educators adopt and test this conceptual model and the six guided journal prompts. Implementing this methodology with a broader set of programs and a more diverse set of students will help the AIAEE community better understand the outcomes and impacts from global education experiences. It will also allow for more cross-case comparisons, thus providing a more holistic look at eliciting desired results from global education experiences.

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Weather Index-Based Crop Insurance: Implications for Community-Based Extension

Joanna King  
Graduate Assistant  
Texas Tech University  
Department of Agricultural Education & Communications  
Box 42131  
Lubbock, TX 79409  
Phone: (806) 742-2816  
Email: joanna.king@ttu.edu

Matt Baker  
Professor  
Texas Tech University  
Department of Agricultural Education & Communications

Courtney Meyers  
Associate Professor  
Texas Tech University  
Department of Agricultural Education & Communications

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Introduction

Unpredictable weather patterns are a production risk in agriculture leaving farmers exposed to natural disasters and their consequences. Small-scale farmers, who account for 72% of the world’s farms (Food and Agriculture Organization, 2014), often diversify risk through strategies that reduce productivity and trap the farmer in poverty (Matul, Harms, McCord, & Phily, 2010). Crop insurance serves as a safeguard against risk (Turkamani, 1998) and has been used as a potential solution for several developing economies (Bryla & Syrokam, 2007).

Purpose

This study presents scalable models and discusses the role that community-based extension can play in the adoption process. Community-based extension is a participatory approach to extension where the services of Non-Governmental Organizations, Farmer-Based Organization (FBOs), and/or public sector extension are contracted at a community level to provide a service that can be renewable over time (Feder, Anderson, Birner, & Deininger, 2010).

Methods

With the philosophical lens of program impact theory, the authors identified three model programs that demonstrated successful application of weather index-based crop insurance (WIBCI) pilot programs. These programs were identified by their impact on the agricultural economy and their sustainability potential. Figure 1 presents program impact theory as applied to the context of this study (Chen, 1990; Lipsey, 1993; Martin & Kettner, 1996).
Figure 1: *Program theory in the context of crop insurance for small-scale and subsistence farmers.*

**Results**

In 2003, an Indian-based micro-finance institution, an insurance company, and a technical firm joined to launch the first pilot program for WIBCI to 200 groundnut and castor farmers. After including farmer feedback in the design and loan officers as customer service agents, the program has expanded rapidly to include four insurance companies, coverage for multiple products, international risk reinsurance markets, over 100,000 farmers insured, and bundled options through seed companies (Bryla & Syroka, 2007).

In Malawi, a joint partnership with a FBO, a local insurance agency, and world developmental organizations made WIBCI available to 892 groundnut farmers in 2005 (Bryla & Syroka, 2007). While providing training and marketing service to farmers, the program has allowed banks to safely expand their rural lending portfolios, growing the groundnut market both domestically and for export (Bryla & Syroka, 2007).

A 2009 pilot program for Kenyan maize and wheat farmers funded through donations and developmental organizations (“Innovative,” 2011) has now evolved into a for-profit business including sorghum, beans, potatoes, coffee, and livestock products with more than 89,000 farmers insured (Ruhangariyo, 2015). Participating producers have increased access to financial credit, 19% higher investment in agricultural products, and 16% greater earnings compared to local uninsured farmers (International Finance Corporation, 2013).

**Educational Importance**

These scalable pilot programs are natural conduits for diffusion at the village level through community-based extension. An increased focus on technical training for participants in the insurance and finance sector, farmer education about risk management products and crop production strategies, and strengthening relationships between farmers and the public sector is critical in order for insurance products to be self-sustaining and marketable at the local level.

**References**


Feder, G., Anderson, J. R., Birner, R., & Deininger, K. (2010). *Promises and realities of*


