

Poster Type (Innovative Idea)

Cultivating Sustainable Agricultural Change in Ghana

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Introduction

The alleviation of global hunger continues to be a focal point for many agriculture-based non-profit organizations in the United States. The non-profit organization AgriCorps aims to address these challenges by connecting American agriculture professionals to the demand for experiential, school-based agriculture education in developing countries (AgriCorps, 2016). While efforts to address global food security issues often include enhancing education of the youth in developing countries (UNESCO, 2004), few projects have sought to educate native in-service agriculture teachers about positive benefits of agriculture education programs. Developing coursework to be delivered directly to Ghanaian agriculture teachers can aid in delivering content to communities that may typically be unserved. In addition, these practicing agriculture teachers have the ability to exponentially influence the lives of farmers and aid in creating sustainable change. While educational workshops for agriculture teachers are rare, the authors and AgriCorps Fellows set out to develop a three-day teacher training curriculum to be used to train in-service agriculture teachers in Ghana about experiential teaching and learning.

Methodology - Establishing the Innovation

We initiated change by developing a seven-session curriculum which identified topics, processes, and teaching strategies that the teachers, in their local schools, needed most. Together, the group identified five main topics needed for professional development: the importance of being a teacher, experiential learning theory, how to engage students in a classroom, problem-based learning, and modern classroom management strategies. These five topics were used to create seven workshop sessions. One session was created for each main topic, one for participants to practice implementing new techniques, and one summative session for participants to work in small groups to create and present a mock lesson utilizing new teaching strategies. As AgriCorps Fellows, we used our own agriculture knowledge as well as topics from USAID's School Garden Curriculum to develop each session. Once the curriculum was developed, a series of five, three-day trainings were hosted in the Eastern, Northern, and Ashanti regions of Ghana, West Africa. Participants included agriculture teachers from schools which housed an onsite AgriCorps Fellow as well as several non-agriculture teachers, school administrators, and 4-H Ghana staff.

Results to date

We developed a 28-page curriculum handbook complete with lesson plans and supplemental materials for the training. The project was successfully implemented in five, three-day trainings which included 81 participants from 14 secondary schools in Ghana. Each participant was given a complete handbook of the curriculum and was encouraged to not only implement the concepts taught at the training, but spread their new knowledge to their colleagues. Pre and post training surveys were administered to participants and demographic data, prior knowledge of the session topics, current teaching techniques, likelihood of adopting new strategies, and general comments on the training were collected. Survey data, observations,

and anecdotal evidence provided valuable insight into the success of the program and how it can be improved for future participants.

Future plans

The authors plan to continue to develop the teacher training curriculum as well as assist current AgriCorps Fellows with hosting teacher trainings in Ghana and Liberia during 2017. Authors are also open to sharing the tools with other educators, Ghanaian schools, and organizations that seek to provide professional development opportunities to teachers in West Africa. Through our research and experience, we recommend hosting the trainings at each school site rather than invite participants to a conference center or hotel banquet room so as to reduce costs and reach a larger audience. We also recommend condensing trainings to two days to increase participant numbers, host follow-up in-service trainings, and develop strategies to follow up with participants and determine if they have implemented the new strategies.

Costs

The use of time and internet credit was the main cost in developing the curriculum. The cost to implementing the teacher trainings included costs for transportation, lodging for participants and AgriCorps Fellows, catered meals for participants, rental fees for facilities, and printing and supplies costs. Table 1 shows total expenditures for each training. Fluctuations in expenses varied depending on training site, participant numbers, travel expenses, and cost of catering.

Table 1: Total expenditures for five teacher trainings during Spring, 2016

<i>Training</i>	<i>Total Expenses</i>
Odumase Krobo, Eastern Region	3,307 GHC*
Tamale, Northern Region	1,804.50 GHC
Pong-Tamale, Northern Region	191 GHC
Ejisu & Kumasi, Ashanti Region	1,574 GHC
Alma Mater, Ashanti Region	1,630 GHC
Total	8,506.50 GHC = appx. \$2200.00 ^a

^aGHC stands for Ghana Cedi. 8,506 GHC is equivalent to approximately \$2,200

References

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