

Advancing Agriculture: The Impact of an American Fellowship Program on Ghanaian Teachers

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Introduction

Africa is currently experiencing a “youth bulge,” perpetuating a cyclical issue of lack of employment opportunities, causing financial barriers for the continent’s youth (International Labour Organization [ILO], 2020; UN Economic Commission for Africa, 2017) Additionally, 27.4% of Africa’s population experiences food insecurity, according to the UN FAO. This economic and food security crisis requires innovative solutions to both engage and educate youth on successful agricultural practices and create job opportunities (Roberts, et al., 2016). Additionally, Ghana’s food insecurity remains an urgent human development challenge (Mohammed, 2021).

For Ghana’s economy to move forward and prosper, education reform needs to occur (Osei, 2006). Holistic education reform of any kind involves understanding relevant issues and educator beliefs towards those issues (Newcomb et al. 2004). Student motivation can be leveraged through authenticity of those beliefs (Mendes, 2003; Schraw & Olafson, 2015).

School-based agricultural education poses a double-barreled solution to these issues, by both addressing food insecurity through the promotion of agricultural excitement and knowledge and facilitating social change through educators. Therefore, the Borlaug Institute partnered with 4H Ghana for The International Agricultural Education Fellowship Program (IAEFP) to bring pedagogically trained U.S. agriculture-degree holding graduates to Ghana to implement 4H Ghana programming into Ghanaian junior and high schools. The objective was to both promote and model student-centered learning and provide an opportunity for teachers to adopt 4H Ghana’s agricultural practices and begin or continue a chapter at their school.

The purpose of this study was to assess the impact of IAEFP and 4H Ghana on the Ghanaian educators involved in the program. The research questions guiding this study were:

1. What is the impact of IAEFP on the teachers?
2. How do participant teachers view the impact of IAEFP on their students?

Methods

This study reports on the qualitative analysis of open-ended items about the impact of the [Program] included in a feedback survey as part of a broader study on the program.

Participants were recruited during a national 4H Ghana event in Koforidua, Ghana. All participants had been working with an IAEFP volunteer in their schools for at least nine months. Participants were asked to complete the survey on a physical copy. There was no direct incentive to complete the survey.

Participants were n=14, ages ranging from 27-42, with 8 identifying as male and 6 identifying as female. Qualitative data was analyzed using constant comparative analysis (Lincoln & Guba, 1985).

Results

This survey resulted in two major themes, *personal improvement* and *student improvement*, with three sub themes under personal improvement, and four sub themes under student improvement. Subthemes under personal improvement were: *increased agricultural competencies, improved teaching methods, advanced leadership skills*. Within the student improvement theme, subthemes were: *increased public speaking abilities, advanced leadership skills, improved agricultural competencies, and enhanced confidence*.

Participants in the study discussed their personal improvements by detailing their *increased agricultural competencies* due to their involvement in the program. Participants said they learned practical skills, such as fertilizer application where a participant said, “I have learnt [sic] that agriculture is a time bound activity because the crops should be planted at the right time, right place and at the right rate.” Participants also detailed increasing their teaching abilities, within the *improved teaching methods* subtheme, including a participant who said they, “Upgraded myself as a teacher through teacher training organized by 4H Ghana/IAEFP.” Lastly, participants explained their *advanced leadership skills*, with one participant who said the program, “Also helped in [me] having some leadership competencies.”

Participants commented on the impact of the program with their students, more than any other theme, with the *increased agricultural competencies* sub theme within the *student improvement* theme. It is described by participant stating the program has, “built their passion, skills and attitude towards farming and agriculture as a whole.” Additionally, participants commented on their students' *increased public speaking abilities*, stating that due to the program students now, “are able to speak in public.” The subtheme, *advanced leadership skills*, was detailed greatly, with one participant stating, “4H Ghana has really opened their eyes in terms of leadership.” Lastly the theme *enhanced confidence* was widely commented on, with one participant stating, “students have built self-dependence attitudes working on their own with little or no supervision.”

Conclusions and Recommendations

From the perspective of teachers involved in [Program], both their personal and their students' improvement is evident. Skills such as public speaking, leadership, confidence, and teaching abilities are all social skills with the potential to amplify the improved agricultural knowledge, competencies, and attitudes described within this study. These improvements, especially if expanded upon, can make an improvement within Ghana's agricultural sector by impacting students, via supported teachers, to have greater skills in agriculture, and soft skills to support their practical abilities. This change is vital as Africa's population increases, remains holistically youthful by comparison to other global regions, and food insecure.

Based on these findings, we recommend an increase in 4H Ghana's activity's implementation throughout Ghana, and increased support for teachers to become involved with the organization. Based on the direct positive feedback on the [American Organization's] teacher training associated with IAEFP, we strongly recommend increasing the amount of teacher training by qualified and skilled trainers made available. Lastly, we recommend increased research be done from the student perspective on the impact of this program to gain further insight into its reach.

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