

Establishing Technical Internship Programs for Agricultural Technical School Students in Egypt

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Abstract

The Agricultural Technical Schools (ATS) of Egypt were designed to prepare skilled workers for the agricultural economy of the country. A project funded by USAID through MUCIA was designed to prepare ATS instructors for incorporating supervised agricultural internships into their curricula. Workshops were presented, with assistance from university faculty in Egypt, on topics including the need for internships, examples that were relevant to ATS programs, planning and conducting suitable internships, and establishing internship programs and technical internship centers in each school. Workshop participants rated the workshops and materials very highly. The ATS instructors also indicated that their competency in nine areas related to internship programs had increased as a result of the workshop. The instructors indicated that future workshops and materials would be helpful to them in the areas of working with employers and working with the students' families in planning and conducting supervised agricultural internships.

Key words: Internships, Vocational Education, Egypt, Train-the-Trainer, Institutional Change

Introduction

The Agricultural Technical School (ATS) system in Egypt includes 130 secondary schools throughout the country. The schools, with average enrollments of more than 2,750 students and about 154 instructors each, were originally designed to prepare skilled workers for the agricultural economy of the country (Swanson, Cano, Samy, Hynes, & Swan, 2007). A dearth of suitable teaching materials, insufficient training of the teachers in student-centered instruction, and a lack of linkages with the agricultural industry led to a major project funded by the U. S. Agency for International Development (USAID) through the Midwest Consortium for International Activities (MUCIA), designed to improve the connection between ATS programs and the agricultural businesses and industries that the schools were designed to serve. The hoped-for end result is an increase in the employability of ATS graduates through providing students with suitable internship experiences (MUCIA, n.d.).

Experiential learning, including activities such as supervised agricultural internships, focuses initially on the learner (Roberts, 2006) and follows the widely-accepted problem-solving approach to teaching and learning found in agricultural education (Phipps & Osborne, 1988). Dyer and Williams (1997), in a synthesis of research on supervised agricultural experience in the United States, concluded that the secondary school teacher is central to the success of experience programs, and that employers can effectively help with programs such as internships. Preparing teachers to supervise programs and to work with potential employers to develop and enhance supervised experience programs in ATS's seems appropriate. Conducting further research in the area of preparing students for career success is a national priority in agricultural education in the U.S. and can be broadened to include international settings (Osborne, n.d.).

Swanson, et.al. (2007) indicated that engaging ATS students in various practical training activities has not been a priority in Egypt. In addition, ATS instructors often lacked the practical skills and experience that are needed by their students. If teachers can be better prepared to involve business and industry in providing hands-on experiences for students, both students and agricultural business will gain.

The MUCIA project for ATS instructors (MUCIA, n.d.) provided for workshops to be offered to ATS instructors in Upper Egypt. Workshop leaders from the MUCIA team prepare the workshop materials and activities and then teach the workshop to university faculty. Those faculty, in turn, teach the ATS instructors throughout the region. In order to provide evaluation feedback to the funding agency and to identify changes to be made in subsequent workshops, workshops should be evaluated (Ayers, 1989). Workshop evaluations should provide short-term learning experiences for the participants, encourage and utilize active learning, and meet the needs of the learners (Myers & Roberts, 2004).

If the Agricultural Technical Schools are designed to prepare society-ready graduates, then students must be prepared with cognitive skills that include real-world experiences. Teachers must be prepared to develop, coordinate and supervise those experiences in conjunction with agribusiness. Workshops can be developed that will assist in providing the needed skills for teachers by preparing in-country faculty to offer educational experiences for ATS instructors beyond the scope of the funded project.

Purpose and Objectives

The purpose of this paper is to describe the strategies and activities that are being implemented under the MUCIA Capacity Building project to establish supervised agricultural experience (SAE) programs, mainly through internships, in each of the ATS programs of Upper Egypt. The paper outlines how the strategies were developed and then describes the steps taken to implement SAE programs of internships in the schools. A summary of participant feedback and reflections on the progress of the project is followed by implications for further development and recommendations for others to consider as similar activities are conducted in Egypt and other developing agricultural economies.

The following questions were used to guide the study.

1. How did the ATS instructors rate the workshop, learning environment, instruction, workshop components, support materials, and workshop outcomes?
2. To what degree did the workshop participants' competency increase as a result of the workshop?
3. What comments and suggestions did participants have regarding the workshop?

Methods

Three two-day workshops were delivered consecutively. Workshop I was taught by the MUCIA team; the participants were selected faculty from the agricultural colleges in Egypt, with instruction conducted in English. Workshop II was co-taught by the MUCIA team and agriculture college faculty; the participants were 40 ATS instructors, with instruction in English translated to Arabic. Workshop III was taught by agriculture faculty; the participants were an additional group of 40 ATS instructors, with instruction in Arabic. All visual and written materials for Workshops II and III were in Arabic. This train-the-trainer model prepared Egyptian agriculture faculty to offer additional workshops to ATS instructors after conclusion of the USAID project. Materials used in the workshops were adapted from *Experiencing Agriculture: A Handbook on Supervised Agricultural Experiences* (Barrick et al., 1992).

At the end of each workshop, a survey instrument was administered. The first section of the instrument addressed the rating of the workshop in five key areas using a five-point – summated rating scale (very poor to very good). The second section evaluated the use of support materials and handouts. The third portion of the instrument focused on outcomes of workshop participation asking participants how they feel about implementation into their program, while the fourth managed their competency in the specific areas of the workshop. The last section included an opportunity for respondents to provide comments and suggestions.

The instrument was adapted from the work of Israel (2006) for administering in-service training evaluation. The focus of the evaluation was based on principles for effective in-service training and outcome measures of learning environment, workshop design, and quality of instruction. Individual items on the instrument were grouped into categories utilizing Israel's factor analysis.

The version of the instrument used after Workshops II and III was translated into Arabic by faculty of Egyptian universities who participated in Workshop I. Subsequently, the Arabic version was translated into English by a third party native Arabic-speaking faculty member in the U.S.A. comparison of the original and translated versions of the instrument was made, and it was determined that the Arabic version replicated the original version of the survey instrument.

Results and Conclusions

Responses from Workshop II and Workshop III were compared and found to be consistent. Therefore, the results from the two workshops were combined and are reported together. There were 83 participants in the two workshops, and all 83 participants completed the survey instrument.

Workshop rating. Participants were asked to rate the workshop design and logistics on the five–point scale of very poor to very good. Ninety–seven percent of the agricultural technical school (ATS) instructors ($N = 83$) rated organization of training and meeting room size/comfort good to very good. Only 41% indicated the length of training was good to very good, while 45% rated length of training average (Table 1).

Learning environment. Participants rated the learning environment for the workshops are the same five–point scale as above. Four of the five learning environment items were rated good or very good by 94% to 98% of the respondents. Time spent on hands–on activities was rated good or very good by 79% and average by 19% (Table 1).

Instruction. Four items related to instruction were included on the instrument, with participants rating each item on the five–point scale. All four items related to instruction were rated good or very good by at least 94% of the ATS instructors (Table 1).

Workshop components & overall rating. The workshops were taught in six sections, each addressing one component of the project. Those components included understanding the concept of SAE; the need for SAE; possible examples of SAE; planning and conducting SAE internship programs; establishing internship programs; and establishing technical internship centers. All six components of the workshop were rated good or very good by at least 92% of the workshop participants. Overall, the workshop was rated good or very good by 100% of the ATS instructors who participated in the workshops (Table 1).

Table 1

Workshop Rating (N=83)

Survey Item	% Responses					
	Very Poor	Poor	Average	Good	Very good	Not answered
<i>Workshop design and logistics</i>						
Organization of training	0	0	1	26	71	2
The length of Training	1	11	45	19	22	2
Relevance to my teaching program(s)	0	4	6	39	49	2
Location (easily accessible)	0	1	5	30	62	2
Meeting room size/comfort	0	1	1	20	77	1
<i>Learning environment</i>						
Time spent on hands-on activities in the workshop	0	2	19	38	41	0
Opportunities for interaction with other participants	0	0	4	27	67	2
Opportunities for asking questions or comments	0	0	2	23	75	0
Activities to get me involved	0	0	5	39	55	1
Answers to my questions	0	0	1	36	62	1
<i>Instruction</i>						
Overall ease for me to understand the information	0	0	1	37	62	0
Quality of visual aids	0	1	4	38	56	1
Degree to which the information was comprehensive	0	0	2	36	61	1
Examples for using information in educational events	0	1	4	39	56	0
<i>Workshop Components</i>						
Concept of SAE	0	0	8	38	54	0
Need for SAE	0	0	2	36	62	0
Examples of SAE	0	2	5	46	46	2
Planning/conducting SAE	0	0	2	33	65	0
Establishing internships	0	0	6	32	62	0
Establishing internship center	0	1	4	33	61	1
<i>Overall rating</i>	0	0	0	21	79	0

Support Materials. ATS instructors rated handout materials very useful (72%) and internship scoring rubrics moderately useful (45%) or very useful (48%) (Table 2).

Table 2

Support Materials (N=83)

Item	% Responses					
	Not useful	Slightly useful	Fairly useful	Moderately	Very useful	Not answered
Handouts (in general)	0	0	1	27	72	0
Internship scoring rubrics	0	0	3	45	48	4

Workshop outcomes. At least 90% of the ATS instructors agreed or strongly agreed with statements regarding use of information, commitment, and confidence in their ability to utilize what was taught in the workshops within their school (Table 3).

Table 3

Workshop Outcomes (N = 83)

Survey Item	% Responses					
	Strongly disagree	Disagree	Neither agree nor disagree	Agree	Strongly agree	Not answered
I have opportunities to use the information in my school	0	1	7	63	27	2
I am committed to using information from this training in my school	0	0	0	60	39	1
I am confident in my ability to utilize what was taught in the workshop	0	0	2	55	42	1

Competency development. The fourth section of the instrument addressed the degree to which the workshop increased ATS instructor competency on a four-point scale (not at all to a lot). The ATS instructors indicated their level of competency increased “a lot” in three areas; educating their students about internships (86%), use workshop activities into their classroom teaching (82%), and educating others in a workshop type setting (81%). The two lowest scoring items (with less than 70% of the participants responding that their competency increased “a lot”) included instructors working with the local agri-businesses (65%) and working with families and employers (64%) (Table 4).

Table 4

Competency Development (N=83)

Survey Item	% Responses				
	Not at all	A little	Some	A lot	Not Sure
Ability to teach students on this topic	0	1	5	86	8
Use workshop activities in my own teaching	0	0	6	82	10
Design and lead a workshop on this topic	0	0	5	81	14
Collaborate with local businesses	0	1	26	65	8
Ability to work with families and employers on this topic	0	3	23	64	10
Ability to design internships with students	0	0	10	71	18
Effectively evaluate internship	0	0	10	74	17
Design an award recognition system for successful internships	0	1	15	70	14
Understanding the roles the student, teacher, employer, parents, and community have regarding internships	0	1	10	74	15

Comments and suggestions. The final portion of the instrument provided an opportunity for the respondents to share their comments and suggestions. The ATS instructors indicated that they planned to implement the knowledge gained about supervised agricultural internships in a very systematic process. ATS instructors frequently provided the steps they plan to take to implement the internships at their local school. ATS instructors intend to educate their peers, students, families, businessmen, and industry. They also noted that building relationships and understanding is a key to success. Suggested improvements to the workshop could include a longer training period. Participants also noted the need for more group time with workshop instructors. Financial resources (for internships), building investor (industry) support, actual farm visits made with workshop presenters, and workshops to improve their personal teaching techniques (in general) were topics the ATS instructors wished to be included in future workshops through MUCIA.

Recommendations and Implications

ATS instructors were positive regarding their experience in the internship workshops. However, since instructors indicated that they can and will use the information in their teaching, there may not be a need for major changes in content. Working with businesses and industries that could accept a student intern and working with students' families are skills that ATS instructors do not have and do not believe their competency increased. Future workshops should concentrate on helping ATS instructors develop those skills, perhaps through role-playing exercises and on-site visits.

Based on feedback from the workshops, it appears that Egyptian ATS instructors recognize the benefits of experiential learning (Roberts, 2006), much the same as their American counterparts (Phipps & Osborne, 1988). It also appears that the instructor will be the key to

successful implementation of these experiences, which aligns with what Dyer and Williams (1997) found with U. S. secondary agriculture teachers. It is recommended that follow-up research be conducted to see the extent that supervised internships were actually implemented.

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