



# RESEARCH PROJECT OUTLINE

Research and Graduate Education ♦ College of Agricultural Sciences  
The Pennsylvania State University ♦ University Park, Pennsylvania

**Title:** Experiential Learning Opportunities in Agricultural Education Programs

**Probable Duration:** 59 Months (May 1, 2007 – March 31, 2012)

**Personnel:**

*Project Investigator(s):*

John C. Ewing (25%),  
Dennis C. Scanlon (10%)

Department of Agricultural and Extension Education

*External Collaboration:*

Agricultural Education Teacher Preparation Units, American Association for Agricultural Education, National Association of Agricultural Educators - Each of the above mentioned groups will have access to key participants for this research project. Their cooperation is vital to the success of obtaining data related to experiential learning in agricultural education programs.

*Advisory Committee:*

Rama Radhakrishna, Associate Professor of Agricultural and Extension Education

**Justification, Relevance and Expected Outcomes or Impacts:**

Individuals, especially teachers, in today's educational arena are inundated with demands to be accountable for student learning. Teachers must meet the standards set before them, if they hope to continue in the profession. The No Child Left Behind Act (2002) has mandated that a quality teacher be in each classroom by the year 2006. Therefore, agricultural education teacher education programs must continue to prepare quality teachers to enter secondary agriculture classrooms and laboratories.

Teacher candidates must possess particular knowledge, skills, and dispositions (NCATE, 2002) to be effective teachers. Cruickshank and associates (1996) proposed that teacher candidates must possess knowledge beyond content areas to help students learn. How, then, can teacher education units be certain that pre-service teacher candidates are receiving the experiences that will best prepare them to enter the profession of agricultural education? The answer is by providing up-to-date and quality curriculum, instruction, and assessment. To help teacher candidates, teacher education programs must focus on providing quality learning opportunities through the curriculum, instruction, and assessment. (Smylie, Bay, & Tozer, 1999). Thus, this project will focus on experiential learning opportunities provided to candidates through their agricultural education program.

Posner (2005) believed that teacher candidates should inventory and examine the many different teaching experiences that they have had in the past. By examining the types and quality of experiences received during pre-service training, teacher education programs can begin to understand where to focus efforts to better prepare teachers of agricultural education.

Some standards have been set or recommended related to teacher education experiences for candidates (NCATE, 2002). However, more research must be conducted to examine what various programs are doing to prepare their teacher candidates to enter the profession, through the use of meaningful experiences.

Candidates are exposed to “the real thing” during experiential learning situations; therefore, the candidate needs to have quality experiences in the field, if they are to gain the most from the experiences (Posner, 2005). The goal of any pre-service teacher education unit should be to prepare teachers who are able to effectively educate all students.

### **Previous Work (Background) and Present Outlook:**

#### **Experiential Learning**

Dewey (1938) believed that experiential learning required both reflection and practice. Kolb (1984) described experiential learning as a cycle made up of experience, reflection, generalizing, and application. Both Dewey and Kolb believe that the students learn from an experience by thinking about what they experienced. Kolb takes the experience even further by stating that the learner will generalize and be able to apply the knowledge in other settings. Posner (2005) believed that candidates must understand how to reflect on their planning, teaching, and assessing in the classroom to continually improve what they are doing with their students.

Briers (2005) wrote that for experiential learning to accomplish what it is meant to accomplish the students need to be excited and care about the topic at hand. If the students are not interested in what is going on, it will be much harder to convince them of its importance. Individuals that are genuinely interested in teaching and student learning should get more out of experiences geared towards preparing individuals to teach. Spiess (1992) said that experiential learning is not new to agricultural education and we have been doing a good job at the secondary level through supervised agricultural experience (SAE). However, the question remains; What is being done at the post-secondary level that translates into experiential learning opportunities for teacher candidates?

#### **Teacher Preparation and Effectiveness**

Three principles of learning that Ornstein (1992) advocated were learning by doing, as one learns to do what one does, and teachers should provide opportunities for meaningful and appropriate practice. Newcomb, McCracken, Warmbrod, and Whittington (2004) believed similar principles and outlined the following; in which learners will learn what they practice, and supervised practice is more effective when it occurs in a functional environmental setting.

At the secondary level, agricultural education students have the opportunity to expand upon their academic and vocational skills by entering the laboratory setting and practicing the skills that were just taught in theory within the classroom (Hubert, Ullrich, Linder, & Murphy, 2003). Why should these students’ teachers not be given the same opportunity to learn through their experiences while preparing to become a teacher of agricultural education? The concept, as it relates to preparing teacher candidates, ties directly back to what Ornstein (1992) and Newcomb, McCracken, Warmbrod, and Whittington (2004) discussed about the principle of learning by practicing.

Myers (2005) encouraged agricultural education instructors to modify laboratory activities to enhance student learning in science, math, and reading. The author believed that the primary objective of a laboratory is to facilitate student learning. Teacher educators must be able to prepare teacher candidates in a way that supports using the laboratory, for example, to enhance student learning. Thus, teacher candidates should be provided with opportunities, through their teacher education program, to examine the content using an experiential learning model for teaching and learning.

Goal

The goal of this AES project is to identify best practices that can be used to enhance the use of experiential learning in high school and college agricultural education classrooms.

#### **Objectives:**

1. Identify teaching and learning models that are currently being used in agricultural education.
2. To describe how experiential learning is used in agricultural education.

3. To describe teacher education students' perceptions of the experiential learning opportunities provided to them in agricultural education programs and how these opportunities impact student behavior.
4. To develop and disseminate a best practices publication which facilitates integration of experiential learning opportunities into the agricultural education curriculum.

**Procedures:**

To implement and complete this project, multiple procedures are planned. Procedures for measuring the area of interest are outlined under each objective. Both quantitative and qualitative approaches for data collection and analysis will be used; dependent upon the nature of the objective. The type of statistics utilized will be determined by the level of measurement for the data being secured through the study of each objective.

**Objective 1-** Identify teaching and learning models that are currently being used in agricultural education.

Mailed questionnaires will be utilized to determine the teaching and learning models that are being used in agricultural education. Teacher educators from across the United States will be asked to provide information related to the models used in their program. In addition, they will be asked to provide their perceptions of various teaching practices, and the importance of each practice in agricultural education. Procedures suggested by Dillman (2000) will be employed to collect data from the agricultural teacher educators. The data will be displayed in a matrix of teaching and learning models used, and the importance of each model in agricultural education.

**Objective 2-** To describe how experiential learning is currently being used in agricultural education.

Two strategies will be utilized to address this objective. First, a comprehensive review of literature related to experiential learning in teacher education will be completed. The results of this review will yield key investigative factors that will guide the second part of this objective.

Second, the use of experiential learning in agricultural education teacher preparation programs will be examined. Based upon the aforementioned literature review, self-reported questionnaires, focus groups, and interview questions, will be developed to address this objective. The target population for this objective will be agricultural education teacher educators.

**Objective 3 -** To describe teacher education students' perceptions of the experiential learning opportunities provided to them in agricultural education programs and how these opportunities impact student behavior.

Candidate perceptions of experiential learning opportunities provided in the agricultural education curriculum will be collected using mailed questionnaires. These students will also be asked to provide information about their learning, or change in behavior, due to taking part in the experiential learning opportunity. Information regarding the experiences, and how these experiences help meet academic and/or professional standards will also be assessed through this objective. The target population for this objective will be teacher candidates in agricultural education programs.

**Objective 4 -** To develop and disseminate a "Best Practices Publication" (BPP) which facilitates integration of experiential learning opportunities into the agricultural education curriculum.

An outcome of this project will be a model that emphasizes incorporating experiential learning opportunities into the curriculum. In addition, teacher educators and agricultural education instructors will have an easy to use publication that outlines the procedures for enhancing experiential learning opportunities in the agricultural education curriculum. The BPP will include explanations on experiential learning and examples

of how to incorporate experiential learning into existing lessons. It will also include sample unit and lesson plans that agricultural education instructors can use to enhance instruction. The development of this document will be accomplished by summarizing, and incorporating, the results of the previous three objectives from this study.

**Stakeholder Engagement:**

Teacher educators and pre-service candidates will provide information that will aid in determining the current state of experiential learning in agricultural education programs. These stakeholders will also benefit from the findings of this study through the development of a Best Practices Publication that integrates experiential learning opportunities into the agricultural education curriculum and targets the needs of these individuals.

**Scope of Impact:**

The scope of impact for this study is broad. Agricultural teacher educators and agricultural instructors from across the country can benefit from the findings of this research. These individuals can also benefit through the use of the best practices publication, which will be developed as part of this project.

**Integrated Activities:**

The project links research with formal education and outreach into communities throughout the state and nation, by preparing quality teachers to enter the classrooms and laboratories of our secondary schools.

**Milestones:**

Through this project it is anticipated that the current use of experiential learning in agricultural teacher education programs determined and described. An understanding of current practice related to experiential learning will enable the researchers to make recommendations which will enhance the teaching and learning environment through experiential learning. Also, a publication of best practices will be developed for use by teacher educators whom prepare the agricultural education teachers for our communities. The publication will help teachers provide enhanced instruction in the classroom and laboratory through the use of experiential learning techniques.

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