

# Analysis of an Early Field Experience in Agricultural Education in Collaboration with a Local High School



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## Abstract

The purpose of this study was to determine if a four-day early field experience was educative, as perceived by the participating teacher candidates and if it was structured in a way which allowed teacher candidates to identify individual strengths and weaknesses. Specifically, the objectives of the study were to determine teacher candidates' perceptions as to the value of the experience, and to determine teacher candidates' perceptions of their strengths and weaknesses as a teacher during the experience. Nineteen (N=19) undergraduate teacher candidates, enrolled in Agricultural and Extension Education, were involved in a four-day early field experience. Results from the researcher-developed questionnaire showed that teacher candidates felt the four-day early field experience was valuable, based on four individual item responses. The results also showed that teacher candidates were able to identify individual weaknesses and strengths, during the early field experience. The teacher candidates believed that their two greatest weaknesses were in lesson planning and presentation abilities.

## Introduction

Teacher education programs must give teacher candidates the opportunities to learn the content, skills, and dispositions that can help them become leaders in education (Griffin, 1999). Early field experiences, one such opportunity, are an important part of a teacher candidate's preparation to become a full-time educator (Posner, 2005). These experiences are designed to allow teacher candidates to spend time in the actual school systems, working with teachers and students and becoming familiar with the operations and management of the classroom and the school in general. In order to maintain validity and value in any teacher preparation program, it becomes necessary to conduct regular evaluations which may be used to reflect and improve upon current structure and methodology, in an effort to better prepare participating teacher candidates for professional careers in education.

Research (Roberts, 2005; Young and Edwards, 2005; Kvaska and Lichty, 2004) into teacher candidates' perceptions of the student teaching experience are evident. However, there seems to be a lack of research in the area of teacher candidate perceptions and the value of early field experiences. Knobloch (2001) examined teacher candidates' self-efficacy of teaching that was completed in an agricultural education setting, either a high school classroom or an extension office. Knobloch recommended a combination of peer teaching and field experience to increase candidates' efficacy beliefs towards teaching. Li and Zhang (2000) explored pre-service teachers' self-efficacy beliefs following an early field experience and found that the pre-service teachers' general efficacy beliefs were lower after the experience and personal teaching efficacy was higher following the experience. While these two studies examined early field experiences rather than the actual student teaching experience, neither of these studies indicated that the teacher candidates were responsible for the instruction during the course of the early field experience.

For the purpose of this study, an early field experience was "...an advanced form of field instruction designed to be taken by agricultural education students prior to student teaching" (Oregon State University, 2004, p. 2). Teacher candidates are to observe and work with real students, teachers, and curriculum in natural settings (Huling, 1998). Through early field experiences, cooperating teachers serve to guide prospective teachers in the application of theory and instructional approaches introduced on a theoretical basis in university methods courses. The goals of such experiences are for candidates in teacher preparation programs to develop and practice their pedagogical skills, through close observation of the cooperating teacher (Anderson et al., 2005).

According to the philosophies of John Dewey (1904, 1938), personal experiences in schools are essential to the effective education of teachers. However, he also argued that all experiences are not necessarily educative. The purpose of this study was to determine if a four-day early field experience was

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educative, as perceived by the participating teacher candidates and if the experience was structured in a way that allowed the teacher candidates to identify individual strengths and weaknesses. Teacher preparation programs must remain in a continual process of evaluation, in an effort to better serve their student populations. Studies, which evaluate the effectiveness of these new changes, are important because they seek to actively assess the structure and design of the early field experience, as it relates to its efficacy and value in preparing candidates for their student teaching experience and beyond.

## **Theoretical Framework**

The teaching of theory must be linked to its application (Bruner, 1977). As such, early field experiences play a crucial role in the preparation of teachers (Guyton and McIntyre, 1990). As the chief advocate for learner-centered education and experiential education for teachers, Dewey viewed the teacher as learner, and as such, maintained the need for this individual to be provided with experiences on which to build his or her own learning (Dewey, 1904, 1938). However, Dewey existed as a visionary thinker in his time, and the most prevalent field experience provided to teacher candidates was simply student teaching. Early field experiences, if they were provided at all, mainly consisted of isolated classroom observations (Smith, 1992). Student teaching experiences typically occurred at the end of the teacher preparation program and were often the first time that prospective teachers could practice their teaching skills with actual students (Zeichner, 2005).

However, structured field experiences in public school systems have recently begun to play an increasing role in teacher preparation programs. In many countries teacher candidates must now complete a series of field experiences in partial fulfillment of the requirements of their preparation program, including more and longer experiences (Zeichner, 2005).

Regardless of this evident progress, there have been a number of organizations that still recognize the need for improvement in the preparation of teachers (Huling, 1998). For example:

“The Carnegie Forum on Education and the Economy (1986), the National Commission on Teaching and America's Future (1996), and others (National Commission on Excellence in Education, 1983; Goodlad, 1990; Darling-Hammond, 1997) have recommended that future teachers have more rigorous preparation and more authentic experiences to enable them to cope with the increasing complexity, challenges, and diversity of current schools and classrooms” (Huling, 1998, p. 2-3).

More importantly, however, these organizations have recommended a more concrete experience by which teacher candidates may draw connections between theory and practice (Huling, 1998). Implementation of these programmatic ideals has been suggested to transpire through increased cooperation between universities and public schools (Guyton and McIntyre, 1990). Putting theory into practice was precisely what the early field experience in this study sought to achieve by facilitating an early field experience in collaboration with the area high school agricultural education program.

However, offering an early field experience was only a prelude to success. Posner (2005) believed that teacher candidates should inventory and examine the many different teaching experiences they have had in the past. Reasonably the colleges and universities offering these experiences should do the same. Swartzel (1999) believed that institutions preparing agricultural educators must evaluate their programs to be certain teachers are well prepared when leaving the program. Therefore, by examining the types and quality of experiences offered during pre-service training, teacher education programs can begin to understand where future efforts should be focused to better prepare teacher candidates.

However, colleges and universities, which currently include an early field experience as a component of their teacher preparation programs, have concentrated, primarily, on evaluating the candidates' personal performance for the duration of the early field experience, and there seems to be a gap related to the way schools evaluate the internal structure and design of the field experience. Due to the apparent lack of information regarding program evaluation, research similar to the current study will aid teacher preparation programs in designing an effective method to evaluate the effectiveness of their efforts and to improve early field experiences for teacher candidates.

## **Purposes/Objectives**

The purpose of this study was to determine if a four-day early field experience was educative, as perceived by the participating teacher candidates and if it was structured in a way which allowed teacher candidates to identify individual strengths and weaknesses. Specifically, the objectives of the study were to:

1. Determine teacher candidates' perceptions as to the value of the experience, and;
2. Determine teacher candidates' perceptions of their strengths and weaknesses as a teacher during the experience.

**Methods**

In the fall semester of 2006, a group of nineteen (N=19) undergraduate teacher candidates enrolled in Agricultural and Extension Education were involved in a four-day early field experience, to be completed in partial fulfillment of their degree. The early field experience occurred in the academic semester prior to the student teaching experience, which occurred in the spring of 2007. Incorporated as an integral component of the preparation program's teaching methods course, the experience took place in a local high school agricultural education program, where the teacher candidates had the opportunity to interact professionally, with high school students prior to the student teaching experience. The university's office of research protections reviewed the Institutional Review Board (IRB) application and determined that the study was exempt under the current guidelines. Following approval by the method's course instructor, the high school agricultural education instructor and administration, and the IRB the researchers administered the survey instrument to each of the teacher candidates following the early field experience.

Teacher candidates enrolled in the methods course had completed introductory coursework in agricultural education. In the introductory courses, teacher candidates are instructed in the history and philosophy of agricultural education, as well as being introduced to other aspects of teaching such as lesson planning, time management, and verbal and written communication skills. Teacher candidates are also given multiple opportunities in the introductory agricultural education courses to lead class through group or individual presentations. However, all of these teaching experiences are with the teacher candidate's peers.

The early field experience included one day of classroom observation followed by three days of teaching. Teacher candidates were able to select one agricultural education course to teach during the early field experience. The courses that teacher candidates could choose from included: Agricultural Science (large animal science), Companion Animal Science, Horticulture, Wildlife, or Agricultural Mechanics (small gas engines). Teacher candidates worked in close collaboration with the agricultural education instructor to

choose an individual topic area so as to avoid teaching the high school students any material that had previously been presented in class. Upon completion of each day of teaching, the teacher candidates took part in a reflection exercise with the university supervisor and the high school agricultural education instructor, which consisted of an evaluation of their performance, paired with related feedback. Following the experience, teacher candidates completed a questionnaire regarding their perceptions of the experience. The survey instrument was administered in the morning immediately following the teacher candidate's final day of teaching.

The survey instrument consisted of fourteen items. A panel of four experts in teacher education examined the instrument for content and face validity. One of the panel members was also known to be an expert in survey instrument design. Items one through nine asked participants to rate their performance on each specific day, using a scale of one to six, with one being "very strongly disagree," and six being "very strongly agree." In the analysis of this early field experience, the survey underwent a post-hoc reliability analysis to determine the reliability of the instrument, using the Statistical Package for the Social Sciences 14.0 (SPSS 14.0). Using Cronbach's alpha coefficient, reliability for the four items which were directly related to the value of the early field experience was alpha = .76. Nunnally (1978) indicated that an alpha level of .70 and higher was acceptable for development of social science research instruments.

Items ten through fourteen were open-ended, and centered on teacher candidate perceptions of the structure of the experience and determining overall student learning. The categories for inclusion were based on teacher candidate responses to each individual question. After a three-week period, intra-rater reliability ( $r_{3weeks} = .91$ ) was established by examining each teacher candidate response to

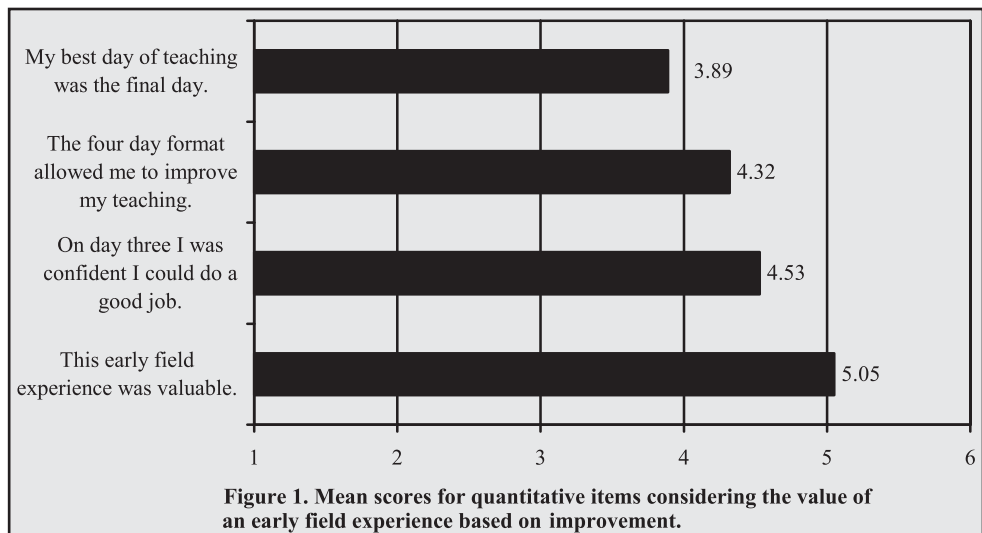


Figure 1. Mean scores for quantitative items considering the value of an early field experience based on improvement.

each of the open-ended items for a second time, classifying the responses into appropriate categories. Thus, the Pearson Product-Moment correlation coefficient was calculated based on the number of agreements between the first classification and second classification of each response.

## Results

Four quantitative items (see Figure 1), intended to determine teacher candidate perceptions of the value of the experience and opportunity for improvement, were selected for analysis in this study. The first part of the survey asked the teacher candidates to rate their performance on each day, using a scale of one to six, with one being “very strongly disagree,” and six being “very strongly agree.” Several of the instrument items, which did not directly relate to the overall value and opportunity for improvement in this early field experience,

analyzed asked the teacher candidates to rate the value of the teaching experience overall. The mean response was 5.05 ( $SD = .78$ ).

As illustrated in Figure 2, the first open-ended question asked the teacher candidates what one thing they would change about their own efforts and performance in the early field experience. Participants listed various answers that were later analyzed and classified into four categories. Two of the teacher candidates reported more than one item for the first question; thus, a total of 21 responses were examined for the first open-ended question. Two teacher candidates (9.5%) listed responses related to time management. Two participants (9.5%) wanted to improve upon their communication abilities. Thirteen participants (62%) felt that they would change their lesson planning. Four teacher candidates (19%) wanted to work on their presentation to the class.

As can be seen in Figure 3, another open-ended question asked the teacher candidates to describe what this early field experience taught them about their strengths and weaknesses. The teacher candidates gave various responses, which were later categorized into the five areas of classroom management, time management, communication, lesson planning, and presentation. Due to the

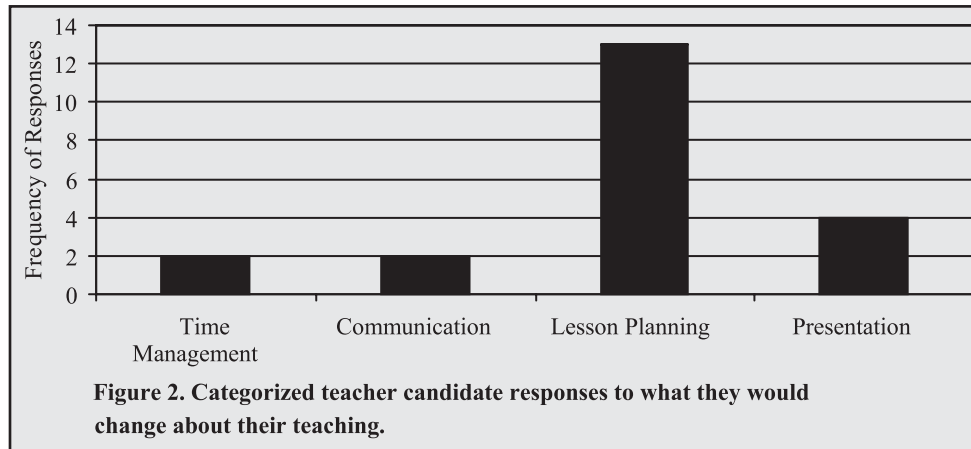


Figure 2. Categorized teacher candidate responses to what they would change about their teaching.

were not selected for analysis in this study.

Participating teacher candidates were asked to rate the accuracy of the statement “my best day of teaching was the final day.” The mean response was 3.89 ( $SD = 1.63$ ). The second item that was analyzed asked the nineteen teacher candidates to rate the four-day format as it related to the improvement of their teaching abilities. The mean response was 4.32 ( $SD = 1.11$ ). The third item that was analyzed required participants to rate their confidence on day three of teaching. The mean response was 4.53 ( $SD = 1.17$ ). Finally, the fourth item which was

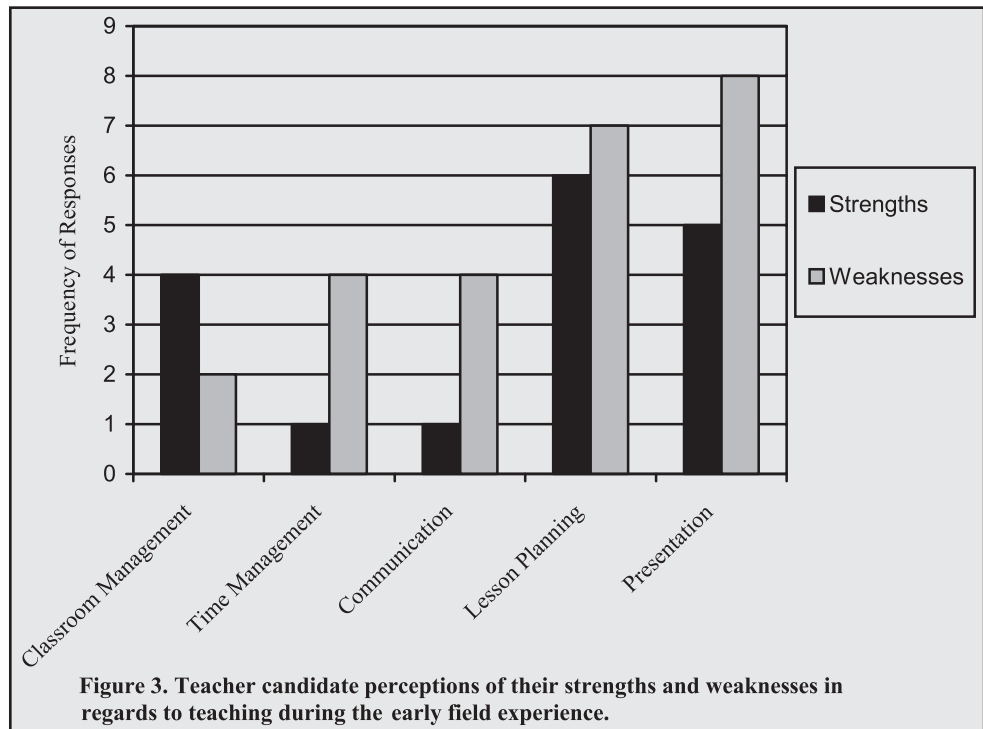
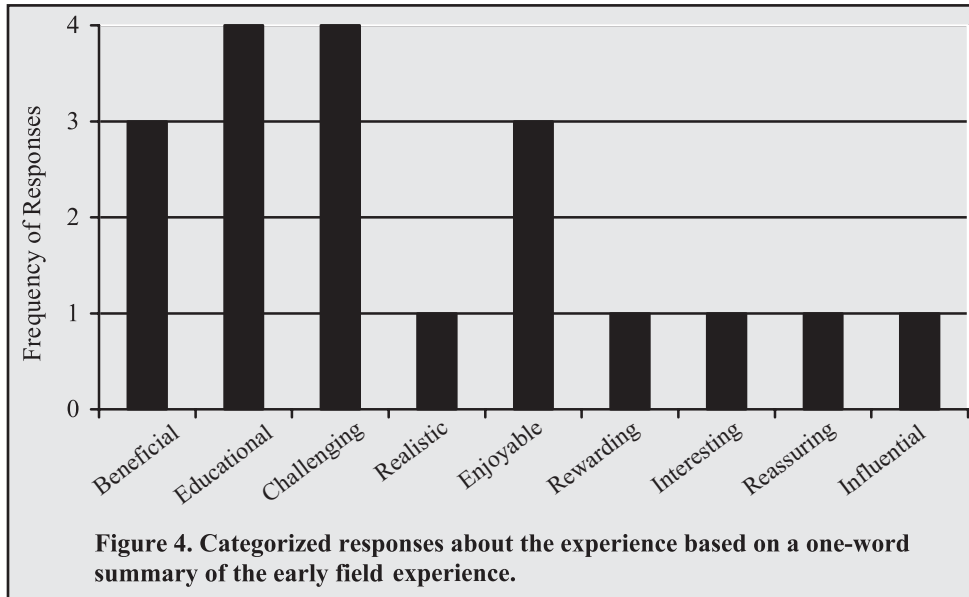


Figure 3. Teacher candidate perceptions of their strengths and weaknesses in regards to teaching during the early field experience.

## Analysis of



open-ended structure of the question, teacher candidates had the option of identifying more than one strength or weakness, but not all teacher candidates chose to identify both. Ultimately, participants identified 17 strengths and 25 weaknesses. Overall, four responses (24%) indicated classroom management as a strength, while two (8%) identified it as a weak area of experience. One response (6%) identified time management as a strength, and four (16%) listed it as a weakness. One reply (6%) expressed a perceived strength in communication, while four (16%) viewed it as a weakness. Six responses (35%) recognized a strength in lesson planning while seven (28%) suggested it as an area for improvement. Finally, five responses (29%) identified presentation as a strength and eight (32%) perceived it as a weak point of their personal performance.

When asked to choose one word to describe how teacher candidates felt about the experience, participants listed nine different adjectives (see Figure 4). Three teacher candidates (16%) felt that the experience was beneficial, four (21%) believed it to be educational, four (21%) said it was challenging, one (5%) thought it was realistic, three (16%) said it was enjoyable, one (5%) felt it was rewarding, one (5%) thought it was reassuring, and one (5%) felt that the experience was influential.

## Discussion

Participating teacher candidates viewed this early field experience as a valuable element of their methods course. In fact, when asked to identify one word to describe their teaching experience, every response indicated that it was a positive addition to the traditional course work. The teacher candidates felt that the four-day format helped them to improve their teaching abilities and identify

individual strengths and areas in which they needed improvement, and by the final day, most were confident that they would do a good job in the classroom. Teacher education programs interested in using early field experiences, such as this, should consider the length of the experience (Posner, 2005) and make it suitable to the needs of the program and the teacher candidate.

The teacher candidates in this study perceived their presentation abilities as a weakness. When asked

to identify one thing they would change about their teaching, participants selected responses related to their actual presentation of materials. This same category was also selected as teacher candidates' most common perception of weakness. Thus, more emphasis on presentation skills must be built into the curriculum and brought to attention of teacher candidates early in the teacher preparation program, to better prepare prospective teachers for the related challenges they may face in the classroom.

Lesson planning was a primary area of concern. However, almost as many responses identified lesson planning as an area of strength. In an effort to convert these perceived weaknesses into realized strengths, focused effort must be dedicated to the composition of effective lesson plans that teacher candidates can follow easily for classroom application. Preparing for the class session, through unit and lesson planning (Newcomb et al., 2004), should be of prime importance in teacher education programs.

The participating teacher candidates perceived time management and communication ability as weaknesses. Comprehensive development of these two elements must remain a priority of teacher education programs. Teacher candidates must be able to efficiently manage their time in the classroom and successfully communicate (Rosenshine and Furst, 1971) with their students for the class to be considered worthwhile and educationally effective by the students in their class. Teacher preparation programs should provide more opportunities for their candidates to incorporate these two components. This may be accomplished by the addition of more, possibly abbreviated, early field experiences or more traditional, in-class presentations in an effort to establish sufficient professional confidence in each teacher candidate as to their

abilities to effectively relay important information in a time-efficient manner.

Teacher candidates perceived classroom management as an area of strength. It is imperative to the sustained quality of teacher preparation programs that they dedicate ample time to educating the candidates in methods of classroom management. When it comes time for teacher candidates to apply what they have learned in theory, they must have a sufficient variability in their instruction (Rosenshine and Furst, 1971), better preparing them to act as a responsible leader of the classroom.

## Summary

Early field experiences are an important part of a teacher candidate's preparation to become a full-time educator. According to the philosophies of John Dewey (1904; 1938), personal experiences in schools are essential to the effective education of teachers. However, he also argued that all experiences are not necessarily educative. The purpose of this study was to determine if a four-day early field experience was educative, as perceived by the participating teacher candidates and if it was structured in a way which allowed them to identify individual strengths and weaknesses.

A group of nineteen (N=19) undergraduate teacher candidates enrolled in Agricultural and Extension Education were involved in a four-day early field experience. Following the experience, teacher candidates completed a survey regarding their perceptions of the experience. Reliability for the quantitative portion of the instrument was  $\alpha = .76$ . Intra-rater reliability ( $r = .91$ ) was established by examining teacher candidate responses to the open-ended items for a second time, categorizing the responses into appropriate categories, and calculating the number of agreements in the categorizations.

Results show that teacher candidates were able to identify individual weaknesses and strengths, during the early field experience. Teacher candidates believed that their two greatest weaknesses were in lesson planning and presentation abilities. Presentation skills and lesson planning must be thoroughly addressed in teacher preparation programs, if these perceived weaknesses are to be offset.

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