Clinical Experiences for Agricultural Teacher Education Programs in North Carolina, South Carolina, and Virginia.

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Clinical Experiences for Agricultural Teacher Education Programs in
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by Thomas R. Dobbins, ABSTRACT

The purpose of this study was to build a task list for the clinical experience program, both early field and student teaching, for the agricultural teacher education programs in North Carolina, South Carolina, and Virginia. The objectives were: (1) compile a list of clinical experiences, both early field and student teaching, that currently are provided in the clinical experiences for students of agricultural education in three-selected teacher education programs, and (2) use an expert panel to determine what should be included in early field experiences and student teaching experiences for students enrolled in the agricultural teacher education program.

A modified Delphi technique was used to collect data via three questionnaires. Data were analyzed using mean scores and standard deviations of tasks rated on a five point Likert-type scale. Those tasks that the panelists rated with a standard deviation of less than or equal to one were considered to have met consensus.

The population for this study consisted of agriculture teachers, secondary school administrators, agricultural education field staff, and agricultural education teacher educators from North Carolina, South Carolina, and Virginia. Thirty-four Delphi panel members were purposively selected from the population. Thirty-one panel members responded to Round I, 33 panel members responded to Round II, and 29 responded to Round III yielding an overall response rate of 92%.

This researcher asked the Delphi panel members to rate each task on a five-point Likert type scale, 1 = strongly disagree, 2 = disagree, 3 = not sure, 4 = agree, and 5 = strongly agree. The study used mean scores and standard deviations to analyze the results. Consensus was met if

the standard deviation of a task was equal to or less than one. Rounds I, II, and III resulted in 102 tasks for early field and student teaching experiences that met consensus.

Based on the findings, the researcher developed a task list for early field experiences and student teaching experiences to be considered for use by the agricultural education programs in the three cooperating states. The task list developed is a very comprehensive list that relates to every aspect of clinical experiences.

Dedication

My education has been a long and very rewarding journey. This journey began with a high school guidance counselor saying “you are not college material” and others saying you can do whatever you want to do. I am glad I listened to “other folks”.

My faith in God has given me the ability to persevere during my challenges in my educational journey and life.

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members are more important than the candidate for without the help of my team, there is no way that I could have achieved my dream.

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Chapter 1

INTRODUCTION

Change is constant, inevitable, often uncomfortable, and usually problematic in areas such as education. Agricultural education is not immune from change or the problems associated with change. Herring and Norris (1987) contended that if agricultural education did not change its methods of teaching, it would die. Long before the Herring and Norris article, the Vocational Education Act of 1963 recognized the changing face of agriculture by expanding the definition of vocational agriculture to include the preparation of students for any occupation involving knowledge and skills in agricultural subjects.

Background for This Study

The Committee on Agricultural Education in Secondary Schools Board on Agriculture of the National Research Council issued a report in 1988 titled, *Understanding Agriculture—New Directions for Education*. This report called for major reform in agricultural education and also in teacher education programs. This report recommended the following:

- Teacher preparation and in-service education programs must be revised and expanded to develop more competent teachers and other professional personnel to staff, administer and supervise educational programs in and about agriculture.
- Colleges of agriculture, particularly in land-grant universities should become more involved in teacher preparation and inservice education programs, curriculum reform, and development of instructional materials and media. (p. 7)

This report further implied that courses imparting the concepts and knowledge integral to agriculture literacy are not available for those preparing to teach, other than courses for individuals entering vocational careers.

The education reform movement of the 1980s called for change in public education, as well as teacher education programs (Cruickshank, 1996). *A Nation at Risk* (National Commission on Excellence in Education, 1983) criticized American education and issued several recommendations to remedy perceived problems. As a result of that report, the National Commission for Excellence in Teacher Education (1985) developed a reply, *A Call for Change in Teacher Education*. *A Call for Change* addressed many issues in teacher preparation, including "teacher supply and demand, accountability, resources, and necessary conditions" (Cruickshank, 1996, p. 73).

During this same time period the Carnegie Foundation issued three reports on education that had ramifications for teacher education programs: *A Report on Secondary Education in America* in 1983; *A Nation Prepared: Teachers for the 21st Century* in 1986; and *Turning Points: Preparing American Youth for the 21st Century* in 1989 (Cruickshank, 1996). *High School: A Report on Secondary Education in America* recommended the following for teacher preparation programs:

- Preservice secondary school teachers should study a common core of subjects paralleling the high school curriculum proposed in the report.
- Preservice teachers should complete a major in an academic discipline and significant opportunity for classroom observation should be provided. Prospective teachers should major in an academic subject, not in education.
- Preservice teachers should have a fifth year of combined instructional and apprenticeship experiences that include a core of four courses designed to meet the special need for educators. (Boyer, 1983, p. 30)

The Holmes Group, formed in 1983, was a consortium of several foundations, then U.S. Secretary of Education Terrel Bell and the education deans of several research universities. This group was dedicated to solving problems associated with perceived low quality teacher preparation in the United States. Their report advocated change in the relationships, roles, and responsibilities within and between schools and universities in order to improve teacher preparation programs (Cruickshank, 1996).

The Committee on Agricultural Education in Secondary Schools, Board on Agriculture of the National Research Council (1988) also found in their report many forces have challenged American agriculture and education. "These forces include demographics; urbanization; rapid gains in worldwide agricultural production capacity; domestic farm and trade policies; lifestyle changes; global competition in basic and high-technology industries; the explosion in knowledge caused by increasingly sophisticated computers, digital equipment, and biotechnological techniques; specialization within the professions; and public expectations about the role of schools, the food supply, and public institutions" (p. v). The study pointed to two basic findings: first, agricultural education must become more than vocational agriculture and second, major revisions are needed within vocational agriculture.

As a part of the reform studies, there was a concomitant call for reform in teacher education. These reforms ranged from strengthened curriculum to clinical experiences. McCracken (1967) stated that an increasing percentage of undergraduate students in agriculture have a non-farm background and little, if any, practical experience in any phase of agriculture. He further stated that lack of student background experience in agriculture must be taken in account by teacher educators and more field experiences must be offered in the teacher education

program. This study will examine the role and structures of clinical experiences in agricultural teacher education programs.

Marvin (1967) stated that the student teaching phase of the teacher preparation program is almost universally accepted as the most important part of the professional education of teachers. Conan (1963) stated "Academic professors and professors of education are in complete agreement only on one point – that practice teaching, if well conducted, is important" (p. 210). Nelson (1967) indicated that little research had been done on field experiences of any type in agricultural education as of the late 1960s. He further argued that, if indeed field experience were a critical part of the teacher education program, then more research was needed in that area.

Instruction of secondary agriculture classes has emerged with new technology to ensure that students are prepared for an industry that is technology dependent. Agricultural businesses, leaders, organizations, and students have advocated changes in local agriculture classes (Brown, 1989). Agricultural education must adapt its programs to serve a changing student population, both on the secondary level as well as college level (Herring & Norris, 1987). To meet these student needs, future programs must be able to develop relevant curriculum and cultivate awareness of new ideas (Burton, 1988). Burton also stressed the importance of future teachers' ability to adapt and implement new types of teaching skills.

Ribich (1995) argued that fusion of theory and practice and fusion of reflection and action require a strong connection between the college or university program and the real world of the schools in the community. He suggested that field experiences should:

- Be initiated as soon as possible in the preservice program
- Be an integral part of the whole curriculum
- Be carefully planned and linked to course work

- Be sequential and developmental and,
- Provide opportunities for students to experience a wide range of settings and learners who represent a variety of socioeconomic backgrounds

Goodlad (1990) proposed 19 postulates in order to ensure able, committed teachers for our schools. Postulate 15 stated, “Programs for the education of educators must assure for each candidate the availability of a wide array of laboratory settings for observation, hands-on experiences and exemplary schools for internships and residencies; they must admit no more students to their programs than can be assured these quality experiences” (p. 61).

The review of literature indicated agreement about the need for a sound field component of the teacher education program. There seems to be less agreement about what the term “field experiences” means.

Supervision Models

Most beginning teachers report that their early field experience and student teaching experience were the most influential parts of their preservice programs. At the same time, other studies indicated that the type of supervision the student receives during these experience will dictate if the experience is beneficial or detrimental (Slick, 1995).

Reavis (1978) reported that clinical supervision differs from traditional supervisory approaches primarily in its content. Clinical supervision emphasizes teacher growth; traditional supervision emphasizes teacher defects.

Hedges (1989) indicated that two problems are created by traditional supervision of teaching. First, supervision becomes equated with evaluating for the purpose of job retention. Second, supervision arises from a need the supervisor has, rather than from a felt need of the teacher. Hedges further stated that clinical supervision is more beneficial to the student.

Early Developments

Charles Allen Prosser was an educator who was appointed to the National Society for the Promotion of Industrial Education (NSPIE) as executive director. He was later appointed as a member to the Commission on National Aid to Vocational Education. This commission's major work, under the leadership of Prosser, led to the Smith-Hughes Act (Camp & Crunkilton, 1985). The Federal Board of Vocational Education was formed because of this act and Prosser was appointed chairman. Prosser is most noted for his theory of vocational education and Prosser's "Sixteen Theorems" which have helped to shape vocational education (Camp & Hillison, 1984).

Among Prosser's "Sixteen Theorems" was the proposition that vocational education will be effective in proportion as the instructor has had successful experiences in the application of skills and knowledge to the operations and processes he undertakes to teach (Prosser & Allen, 1925). Agricultural education has utilized Prosser's "Sixteen Theorems" as guidelines for its program.

In *Teacher Training in Agriculture: Status, Development, and Methods in the Field of Teacher Training (Bulletin No. 20)*, the Federal Board for Vocational Education (1924) outlined three models for clinical and field-based approaches to teacher preparation. The Ohio plan (The Ohio State University, Columbus) involved coordination of directed teaching in five local high schools. The Virginia plan (Virginia Polytechnic Institute, Blacksburg) used only one rural school to ensure the rural nature of agriculture. The Georgia plan (Georgia Agriculture College, Athens) included a system of "practice teaching."

Calls for Contemporary Reform

Lynch (1997) stated that "vocational educators appear to have begun to take seriously reform of teacher education around 1993. Until then, it appears as though very few institutions

with vocational teacher education engaged in much dialogue about reform or showed much concern that their graduates perhaps were not meeting the public's expectations for teacher preparation" (p. 39).

Education continues to be debated in the political arena. Public education always is under the magnifying glass. Druckhammer and Kay (1986) stated that public institutions always have had the responsibility of being accountable to the public. As accountability has increased, so has the need for effective evaluation (Jewell, 1989). McGhee and Cheek (1989) stated that providing evidence of effectiveness to outside audiences would aid in accountability of our teacher education programs.

Agricultural teacher education programs, for the most part, have expanded their mission and revamped their curricula over the past few decades. However, this study's review of literature revealed little reform in either early field experiences or student teaching experiences. Deeds (1993) stated that early field experience and student teaching experiences have remained relatively unchanged in the last 20 years. Agricultural teacher educators should review the experiences provided for their students and determine if they are still serving the functions for which they were intended. Swortzel (1997) stated that "as teacher education programs plan early field experiences and student teaching activities, efforts should be made to provide preservice teacher education students opportunities to work with academic teachers in intergrating agriculture into the curriculum, as well as providing experiences in different school settings so preservice students can work with students of different backgrounds and different agricultural setting" (p. 62). Biggs, Hinton, and Duncan (1996) agreed that if preservice teachers are to become competent, extensive field/clinical experiences must be provided. They further stated

that teacher educators must redesign field/clinical experiences to provide realistic opportunities in the classroom as well as reflect the context of the workplace.

As early as 1978, Cox and McCormick pointed out that background and experience of prospective teachers has changed drastically. They further stated that when looking at undergraduate enrollments, most teacher educators see "former students of agriculture as clearly in the minority. Most have not lived on a farm or worked in other areas of agriculture industry" (p. 18). In reviewing clinical experiences for agricultural education majors, the literature indicated that these experiences did not permit the agriculture student to obtain practical experiences in the field of agriculture, Nelson (1982). He futher stated that it seems logical for a teacher educator in agriculture to have experienced some of the many requirements faced by teachers in the field. Teaching how to advise the FFA without having experienced the activity would be sterile and academic, just as would teaching the dehorning of a calf without ever having performed the task. Nelson (1982) further stated that this premise supports requiring specializing experience and preparation for teacher educators in agriculture.

According to McLean and Camp (1998), agricultural teacher educators have experienced pressure over the past 15 years to reform the process of preparing agricultural teachers. They further stated that there is a void of current data on curricular content or structure in agricultural teacher education programs.

Field experiences prior to student teaching are required by most programs, yet few programs provide separate courses for such pre-clinical experiences (McLean & Camp, 1998). Camp and Bailey (1999) stated, "We can see that there is a long-standing and broad advocacy for and acceptance of field-based student teaching apprenticeship as of a paramount importance in agricultural teacher education. At the same time, a strong case can be made that student

teaching, organized on the apprenticeship model is not the most effective or efficient means of preparing new teachers. Indeed, from a theoretical perspective, some even question the appropriateness of student teaching as apprenticeship" (p. 62).

The pressure to reform teacher education is gaining support within the profession. An example of this is the Kellogg Foundation sponsored program called "Re-inventing Agricultural Education 2020." These different consortiums across the United States are to define what agricultural education should be in the year 2020. North Carolina, South Carolina, and Virginia formed the 2020 Mid-Eastern Consortium. This consortium is working jointly to develop the framework for agricultural education in the member states. The researcher chose these states to conduct this study based on their willingness to work together, their similar programs, and their type of institutions.

The Delphi

The Delphi technique has been a process for eliciting group consensus and is used primarily as a method of forecasting (Flanders, 1988). Linstone and Turoff (1975) stated: "when viewed as a communication process, there are few areas of human endeavor which are not candidates for application of 'Delphi'" (p. 4).

The Delphi procedures have three countenances: a) anonymity, b) controlled feedback, and c) statistical group response (Dalkey, 1972). "The Delphi method," according to Linstone and Turoff (1975), "has four phases: a) exploration of the subject under discussion, with each individual contributing additional information he or she feels is pertinent to the issue; b) reaching an understanding of how the group views the issue; if there is significant disagreement, then that disagreement is explored; c) study the underlying reasons for the differences and to evaluate

them; d) final evaluation of the process when all previously gathered information has been initially analyzed and the evaluations have been fed back for consideration" (p. 4).

Problem Statement

The educational reform movement has been ongoing for over 15 years. As a result, teacher education programs are changing. However, clinical experiences both early field and student teaching in agricultural teacher education programs are structured, by and large, as they were 75 years ago. An increasing number of students enrolling agricultural education with no practical experience in agriculture or who were never enrolled in a high school agricultural program, presents new challenges for the profession in the area of student preparation. Moreover, little research has been conducted to examine how preservice clinical experiences should be modeled to meet the needs of today's contemporary students.

Purpose and Objectives

The purpose of this study was to build a task list for the clinical experience program, both early field and student teaching, for the agricultural teacher education programs in North Carolina, South Carolina, and Virginia.

The following specific objectives were established to guide the study in conducting this research:

1. Compile a list of clinical experiences, both early field and student teaching, that are currently provided in the clinical experiences for students of agricultural education in three selected teacher education programs.
2. Use an expert panel to determine what should be included in early field experiences and student teaching experiences for students enrolled in the agricultural education program.

Importance of the Study

Agriculture education programs in the public schools are dependent on agricultural teacher education programs (McGhee & Cheek, 1989) because they produce the teachers for the programs. Teacher education programs must be flexible and ensure that they provide the experiences that are needed to prepare the future teachers for our changing society.

"Graduates who accepted positions as vocational agriculture teachers reported that the practical and technical parts of their schooling were the most useful, while courses in education, pedagogy, and the humanities were the least useful" (Aldrich, 1988, p. 46). According to Lee's (1985) study, vocational agriculture teachers reported student teaching as the most helpful part of their education.

A study of this type has not been conducted in recent years in the field of agricultural education in North Carolina, South Carolina, or Virginia. Information gained from this study can be used to help determine if changes need to be made in the early field experience and/or student teaching experiences in those states' agricultural teacher education programs.

Definitions of Terms

Early Field Experience (EFE) – These experiences are distinguished by clinical programs that precede student teaching (Cruickshank, 1990).

Secondary school administrators – Secondary school administrators which have been involved with clinical experiences in teacher education training who are either superintendents, principals or vocational directors.

Student teaching – "The period of supervised teaching in which the university student takes increasing responsibility for the work with a given group of learners over a period of consecutive

weeks. The student usually moves from ‘observation’ to ‘part-time’ teaching to ‘full-time’ teaching” (Hopkins & Moore, 1993, p. 5).

University supervisor – “The university faculty member who is responsible for supervising a student teacher or a group of student teachers during their clinical experiences” (Hopkins & Moore, 1993, p. 5).

Cooperating teacher – “A teacher in a cooperating school who is recognized by the public school and university as qualified to work with student teachers. This individual agrees to the charge of and guidance of the student teacher as the student teaching process develops” (Hopkins & Moore, 1993, p. 5).

Cooperating school – “A public or private school that is not controlled nor supported by a higher education institution, but provides opportunities and facilities for professional student teaching experiences in a teacher education program” (Hopkins & Moore, 1993, p. 5).

Expert – An individual with in-depth knowledge and insight with regards to teacher education programs (Sutphin, 1981). The operational definition of expert as used by this study is an individual who has supervised, worked with, instructed, or been involved with field experience in regards to teacher education.

Clinical experience – Clinical experience refers to the experiences which occurred – the school, the classroom, or the laboratory (Hopkins & Moore, 1993).

Theoretical Framework

The focus of the study is early field experiences and student teaching experiences and how these two clinical experiences should be designed in order to meet the needs of today’s contemporary agricultural education student. This study will use behaviorism as the basis for the theoretical framework.

According to Fosnot (1996), behaviorism regards psychology as a scientific study of behavior and explains learning as a system of behavioral responses to physical stimuli. Schwartz (1978) noted that Rene' Descartes (1596-1650) divided behavior into two classes, voluntary and involuntary. Voluntary behavior was governed by reason of the mind, and involuntary behavior was purely mechanical.

Schwartz (1978) noted that David Hume (1711-1776) viewed the source of all knowledge as sensory experience. According to Hume, people are born knowing nothing and gradually build up knowledge of the world by accumulating bits of sensory information.

According to Schwartz (1978), the building of behavior theory included Hermanny Ebbinghaus (1850-1909), Ivan Pavlov (1849-1936), and John Watson (1878-1958). Ebbinghaus' research indicated that our understanding of complex ideas reflects a past history of association of simple ideas. Pavlov's study of conditioned reflexes was the study of the laws of association of ideas. Watson argued the view that psychology should be the scientific study of behavior and nothing more.

Gagne and Driscoll (1988) credited Thorndike (1913) with the Law of Effect and expressed it as follows:

> When a modifiable connection between a single situation and a response is made and is accompanied by a satisfying state of affairs, that connection's strength is increased. When made and accompanied by an annoying state of affairs, its strength is decreased. (Gagne & Driscoll, 1988, p. 11)

B. F. Skinner, in the early 1950s, restated this law of reinforcement and developed a general behaviorist theory of learning, which incorporated the law. Skinner proposed that learning could be understood and described by studying only overt behavior and its

consequences in the environment (Gagne & Driscoll, 1988). According to Skinner, a person did not understand a behavior unless that person knew how to train an organism to perform the behavior. The emphasis was on understanding how behavior was controlled and how it could be changed (Anderson, 1995). Skinner's biggest contribution was response shaping. "He believed most complex behaviors to be a sequence of responses, each response setting the context for the next. A complex behavior could be taught by beginning with the first step and teaching each element of the chain until the whole sequence was completed" (Anderson, 1995, p. 23).

According to Fosnot (1996), "educators using the behavioral framework preplanned into assumed component parts – 'skills' – and then sequencing these parts into a hierarchy ranging from simple to more complex" (p. 9). Bloom (1956) and Gagne (1965) stated that observations, listening to explanations from teachers who communicate clearly or engaging in experiences, activities or practice sessions with feedback will result in learning and that proficient skills will quantify to produce the whole, or more encompassing concept. The classical behaviorism model is Bloom's mastery learning model. This mode breaks wholes into parts, and skills are broken into subskills. Bloom's model indicated that if "needs" are met, then one could teach until mastery is reached (Fosnot, 1996).

This study is based on behaviorism and the concepts that have solidified behaviorism. Behaviorist theory has persisted for many years and has been shown to have validity under many educational conditions (Gagne & Driscoll, 1988). According to number seven of Prosser's "Sixteen Theorems," vocational education will be effective in proportion as the instructor has had successful experiences in the application of skills and knowledge to the operations and processes he undertakes to teach (Camp & Hillison, 1984). Vocational education uses behaviorism theory as the cornerstone of practices used to teach students. For the most part,

vocational students are taught one task at a time. Each task will be a building block for the next task that follows. Through several steps, this study is designed to generate a list of task that specify clinical experiences needed by the students of agricultural education.

Assumptions

This is a regional study to build a model for clinical experience programs, both early field and student teaching, for the agricultural education programs in a three-state area. The researcher made the following assumptions for the purposes of this study:

1. The appropriate source for the tasks best suited for preservice clinical experiences in agricultural education is consensus among experts in the profession: teacher educators, master cooperating teachers, local school leaders, and state supervisory personnel in agricultural education.
2. The respondents participating in the nomination of the panel of experts were knowledgeable of the agricultural education profession, its leaders, and its progressive professionals, and nominated persons on this basis.
3. The members of the panel of experts were representative of the most knowledgeable, forward thinking, and progressive persons in the profession.
4. The members of the panel of experts are actually experts in the area of this study.
5. The respondents who were willing to participate in the study gave answers truthfully and to the best of their ability.
6. The Delphi technique is a valid method of obtaining consensus.

Limitations

The researcher acknowledges the following limitations of this study:

1. The data collected in this study were limited to a regional panel of experts.
2. This study was limited to agricultural education and to the area of clinical experiences, both early field and student teaching.
3. The generalization of the results is limited to the population of agricultural teacher education programs in North Carolina, South Carolina, and Virginia.

Organization of the Study

Chapter 1 contains the introduction as well as a discussions on teacher preparation, background of the problem, statement of the problem, purpose of the study, objectives of the study, significance of the study, definitions of the terms, theoretical framework, assumptions, limitations, and organization of the study.

Chapter 2 provides a review of literature in history and trends of vocational and agricultural education, clinical experiences: early years, teacher training, general education, changing the environment, early field experiences, evaluating early field experiences, vocational education clinical experiences, agricultural education clinical experiences, and the Delphi technique.

Chapter 3 presents the study from a methodological standpoint. It explains the methods and procedures used in this study to collect, organize, and analyze data.

Chapter 4 presents the findings of the study. The findings were organized under the following headings: (1) Purpose and objective of the study, (2) Background information, and (3) Results of Round I, Round II and Round III.

Chapter 5 presents the summary, conclusions, and recommendations generated from the findings. The summary, conclusions and recommendations were organized under the following headings: (1) Purpose and objectives of the study, (2) Summary of research procedures, (3) Summary of Rounds I, II, and III, (4) Conclusions, and (5) Recommendations.

Chapter 2

REVIEW OF LITERATURE

The purpose of this study was to build a task list for the clinical experience program, both early field and student teaching, for the agricultural teacher education programs in North Carolina, South Carolina and Virginia. As the literature reported in this chapter would show, little work has been done in the area of clinical field experiences and preservice teaching experiences in agricultural education. This chapter examines clinical field experiences and preservice teaching experiences and describes the conceptual framework that shaped the research. Finally, the chapter describes the Delphi method and how to apply this research method to this study.

History

The history of teacher education in agriculture in America has been researched and debated for many years. Hillison (1997) gave credit to the first public school educator to Cyrus Peirce. Cyrus Peirce started the Lexington Normal School in which the curriculum used later by agricultural educators was developed. Cardozier (1967) credited Booker T. Washington as the founding father of the Tuskegee Institute for preparing black teachers in the area of agriculture.

The Smith-Hughes Vocational Education Act has been cited as the most influential piece of legislation for agricultural education (Camp & Crunkilton, 1985). The Smith-Hughes Act allocated monies for the development of teacher education courses in agriculture (True, 1969), which forced land-grant colleges into preparing teachers of agriculture for our secondary schools. Wiegers (1967) stated that within two years, after the passage of Smith-Hughes, 21 land-grant colleges were offering teacher preparation courses in agricultural education. Smith-

Hughes provided regular funds to states for agricultural education and also required states to use a portion of the funds for education of agriculture teachers (True, 1969).

Legislative action that actually led to the development of teacher education in agriculture, according to Hillison (1986), was not the Smith-Hughes Act of 1917 that provided for federal support for agricultural education programs. It was the work done during 1900 to 1916 that laid the groundwork for agricultural education programs. During those 16 years, the following questions had to be answered: “What should be the source of teachers? Should college graduation be a requirement for teaching agriculture or should some other source of teachers be found? What preservice activities should be part of the program? Should preservice include separate teaching methods and student teaching? Should agriculture teachers be prepared by normal schools or land-grant colleges?” (Hillison, 1986, p. 8). The questions had to be answered before any uniform bill could be passed to support agricultural education.

During 1900-1916, the teaching of agriculture in both elementary and secondary school grew in popularity (Hillison, 1986). Hillison (1986) suggested that with the popularity of agriculture in secondary schools, there was a growing demand for qualified teachers of agriculture. Bricker (1914) suggested the use of nature-study teachers, proposing that agriculture teachers would be a mistake because agriculture dealt with the economy while nature study did not. Bricker (1914) opposed the idea of agricultural college graduates as being qualified to teach agriculture. He feared that the college of agriculture graduates would not know how to react to high school students. He also noted that they would have no training in teaching methods. During those 16 years, people like Bricker realized the importance of teaching agriculture. They worked tirelessly to ensure that the development of agricultural education was a reality.

The Nelson Amendments to the Agricultural Appropriations Bill of 1907 was a major milestone for teacher education in agriculture (True, 1969). Wheeler (1948) and Wiegers (1967) explained that the Nelson Amendment provided federal funds to be used for teacher preparation in the field of agriculture. The Nelson Amendments is thus credited with the start of teacher education for agriculture in the United States.

According to Martin and Berkey (1982), science was evolving in the field of agriculture during the period of 1900-1919. Martin (1967) stated that the sciences were the foundation for agriculture and that teacher educators were proponents of scientific agriculture. There were many leaders in the early years to infuse methods and research of science in education. Leaders such as Dewey, Kilpatrick, and James influenced agricultural education in its early years (Mulkey, 1994). Mulkey further stated that these leaders were forefathers in applying the problem-solving approach to agricultural education.

Teacher education in agriculture was initiated and nurtured during a period of great expansion in the professional occupations (Wiegers, 1967). During the early years from 1900-1919 agricultural educators emerged with an aggressive and progressive agenda to establish teacher education programs in agriculture (Martin, 1967). The reason for this type of agenda was the relationship of the land grant colleges and support from the federal government. Martin and Berkey (1982) stated that during these years of development of teacher education in agriculture, the land-grant colleges were faced with demands for teachers, enhancing the character of agriculture, instruction in secondary schools and the advancement of scientific farming. Martin and Berkey (1982) also contended that these challenges led to the development and growth of teacher education in agriculture from 1917 to the present. It was during this time of growth and maturing that teacher education in agriculture developed strong linkages with the field of

agriculture as well as with the field of education. Because of the nature of teacher education in agriculture, it was paramount that these ties with both education and agriculture remain strong. With this understanding, teacher education in agriculture has matured into its own orientation and outlook for the preparation of teachers of agriculture (Mulkey, 1994).

The Vocational Education Act of 1963 expanded teacher education programs to include research, inservice education, beginning teacher supervision, curriculum development, dissemination and evaluation, college teaching, improvement, extension education, and international education (McCormick & Peterson, 1982). However, McCormick and Peterson stated that teaching was still the primary function of most teacher education programs. To help obtain the expanded role of teacher education in agriculture, a few institutions developed a cooperative relationship with extension education (Martin & Berkey, 1982).

The federal Carl D. Perkins Act of 1998 was passed that same year to aid in the continued development and operation of vocational education programs. Until this act was passed the vocational education system had been operating under the Carl D. Perkins Act of 1990. This act was amended many times during the time period of 1984-1998; however, in 1998 The Carl D. Perkins Vocational and Applied Technology Act underwent major changes that reflected reform.

Clinical Experiences: Early Years

The following section will show that agricultural education's framework for teaching was established with the passage of the Nelson amendment and strengthened by the passage of the Smith-Hughes Act. Teaching through experience, "hands on learning," has been the cornerstone of agricultural education's history (Marvin, 1967). A review of the history of agricultural education reveals that teaching methods and curriculum have changed over time; however, clinical experiences have changed very little during the same time period.

Early Efforts at Teacher Training in Agriculture

According *to Teacher Training in Agriculture, bulletin 20* (Federal Board for Vocational Education, 1924):

> The function, then, of a teacher training department is not only that of giving courses in methods, and practice in teaching organized subject matter but contemplates which will more fully prepare the trainee to efficiently discharge the various responsibilities which will face him when he becomes a teacher of vocational agriculture. In other words, it is the job of the teacher-training department to make a good agricultural teacher out of a good farmer. (p. 2)

According to the *Teacher Training in Agriculture* (Federal Board for Vocational Education, 1924), provisions for ample supervised early field experience and student teaching is one of the most difficult requirements in the whole scheme for preparing vocational teachers; however, it is the most important feature. Some features of "The Ohio Plan" are as follows:

- Five well-organized departments of vocational agriculture located in rural centers within 15 miles of the university.
- These special schools are not under full control of the teacher training department, but such cooperative arrangements are established as permit classes in agriculture being scheduled to the best advantage to the teacher-training work.
- The vocational classes are under the charge of trained supervising teachers who are members of the teacher-training faculty, their entire salaries being paid by the university. These men are brought to the university for frequent conferences.
- One member of the teacher-training staff carries full responsibility for the program of observation and practice.

- Practice teaching is open only to seniors in the teacher-training department.
- Two students are assigned to each department for a quarter - 12 weeks. They observe and teach alternately, receiving credit for both observation and practice teaching.
- Trainees make full reports to the supervisor of practice teaching. Weekly conferences of trainees are held; at which time their problems are discussed.
- Toward the end of the quarter the trainees are required to observe certain lines of work in each of the other four training centers, thus giving them the advantage of observing work in five well organized departments.
- An outline of the major activities of the trainees has been prepared by the department, against which their progress is checked. (1924, p. 31)

Marvin (1967) stated that vocational agriculture instructors have had a field experience component in teacher education programs since the establishment of teacher education program and very few changes have been made. The student teaching phase of the teacher preparation program is the most important part of the professional education of teachers (Marvin, 1967). The major objectives of student teaching, as stated in the handbook from the University of Minnesota (Marvin, 1967):

- To demonstrate the ability to teach students in high school.
- To observe a comprehensive secondary school program.
- To describe the purpose of vocational agriculture in a comprehensive school curriculum.
- To demonstrate the use of community activities.
- To demonstrate the ability to organize and operate a vocational agriculture department.

- To demonstrate the ability to work effectively with all phases of a complete vocational agriculture program.
- To demonstrate the ability to function effectively in various non-teaching activities related to the operation of a comprehensive school program. (p. 165)

The Ohio Plan (National Board for Vocational Education, 1924) and Marvin (1967) agreed that it is essential that the efforts of the college supervisors and vocational agriculture instructors who serve as supervising teachers in student teaching centers be closely coordinated. Marvin (1967) stated that very little research has been done to determine the best pattern for clinical experiences.

In summary, from the beginning of teacher education programs in agriculture, clinical experiences is one component that has been condidered to be essential. Howey and Gardner (1983) stated that in 1839 Cyrus Peirce, the first teacher educator and first supervisor of student teaching led him to a most remarkable insight: "that the teacher-to-be needed not only specific instruction in the 'normalities' but the encouragement to experiment and identify new methods of teaching and self-evaluation during teaching experiences" (p. 105). History indicates that no law or act can reform teacher education faster than a well-planned and supervised clinical experience (Marvin, 1967).

Trends

True (1969) proposed that teachers educated in land-grant colleges would determine the success or failure of agricultural instruction in these schools and that the public would hold these colleges responsible for teaching agriculture in public schools. He hypothesized that when agricultural teachers were successful, the agricultural college image would be enhanced in the rural sector, and then these land-grant colleges would influence these communities.

Accountability was a factor. The public demanded more accountability for land-grant colleges, and the states were demanding accountability of the educational system in the form of teacher certification (Wiegers, 1967). Martin and Berkey (1982) contended that as society was growing more complex, government agencies developed licensing requirements for doctors, lawyers and teachers. During the early years of agricultural education, a certificate was not required to teach agriculture. Smith-Hughes allowed each state to set qualifications for teachers of agriculture (Martin & Berkey, 1982). They pointed out that in 1921 only 15 states had centralized licensing of teachers but by 1965, all states required teaching certificates.

Teacher certification was not the only trend during this era. Agricultural proficiency was an area of commitment on the part of agricultural educators (Martin, 1967). From 1920 to 1950 the primary focus of teacher education was on the farm owner/operator with the total agricultural education program related to the production area of agriculture (Martin & Berkey, 1982). According to Wiegers (1967) during the 1960s, production agriculture in the United States was the model for the world and employment opportunities for youth in production agriculture was on the decline, while jobs in agriculture related fields was on the increase. Agricultural education was at a turning point in regards to classroom instruction.

Martin (1982) suggested that the Vocational Education Act of 1963 provided much needed support for the expansion of the vocational agriculture program. It offered a new orientation for teacher education in agriculture, which included a broadened social and occupational perspective. Wiegers (1967) implied that the passage of The Vocational Education Act of 1963 allowed agricultural educators to concentrate more efforts toward preparing teachers who could conduct local programs that included employment in farming and agribusiness while preparing students to be employed in agriculture.

According to Martin and Berkey (1982), the time period of 1967-1981 was a time for maturation for the agricultural education profession. National efforts and progress toward consensus and application of philosophy, terminology, standards, and competency identification evidenced this. Spalding (1964) indicated that in an era of change, more was known about how to implement change than was known about good teacher education. He further suggested that teacher educators in agriculture needed to develop proposals for change with an understanding for the procedures to be used in making the proposals practical and applicable. McCormick and Peterson (1982) suggested that because of the dynamic nature of the profession, teacher educators in agriculture must require periodic evaluations. Wiegers (1967) reported that analyses of professional training programs indicated that prospective teachers of agriculture must be able to execute many tasks in fulfilling the roles expected of them by teacher educators, state and local administrators, parents and students.

The passage of The Carl D. Perkins Vocational Education Act of 1984 presented a new era for teacher educators in agriculture. Case (1985) stated that unlike previous vocational education acts, The Carl D. Perkins Act of 1984 had no specific set-asides for agricultural education in the legislation, agricultural educators must be creative in producing programs that will meet the need of the community, and to evaluate that program under the purpose of the Act. He further stated that under Perkins, agricultural educators must continue to develop programs that will service the full range of student population.

Teacher education programs will be the nucleus to offer opportunities for people to work in the rapidly changing field of agriculture, as current programs are preparing teachers for a critical period in United States agriculture (Amberson & Bishop, 1982). They also concluded that societal and attitudinal changes would have implications for the preparation of teachers, and

that teacher education must continue to change in order to meet these demands if agricultural education is to be a viable part of society.

Nothing is more important to the future of agricultural education than the teacher of the local program (Blanton, 1985). Teachers who are committed to purpose, teaching excellence, and technological competence are too important to be left to chance. Preservice and inservice educational experience must be a planned part of the students' experience (Blanton, 1985). Hillison (1998) stated that the teacher educator of agriculture would teach a clientele from pre-school through adult education preparation. He further stated that academics as well as vocation must be part of the instruction. Our secondary audience will be diverse groups such as cooperative extension and agricultural communications, as well as other agriculture-related groups. “Agricultural education has a bright future. That future is written in the purposes of Smith-Lever and Smith-Hughes Acts, programs which integrate emerging technology with development of individuals, communities, natural resources and society” (Blanton, 1985).

McCormick and Peterson (1982) recorded the phrase “Teaching is the mother of all professions” (p. 39). This phrase is most powerful and has lasting implications for society. This statement also has strong implications for programs that prepare our teachers. Education at any level is only as effective as the teacher. The teacher education preparation program must be designed to embrace this statement (McCormick & Peterson, 1982). John Goodlad (1990) in his book, Teachers for Our Nation’s Schools, agreed with McCormick and Peterson’s contention that the education received at any level is only as effective as the teacher. Effective teachers are gained through quality preparation programs that are designed and utilized to prepare prospective teachers.

General Education

Student Teaching

A modest amount of research has been conducted on early clinical field experience and student teaching experience in K-12 general education. The areas of math and science have been extensively researched. However, the literature includes very little research in the area of early clinical field experience and student teaching experience in agricultural education.

Knowles and Cole (1996) suggested that most preservice teacher education programs place little emphasis on the contextual realities of schools or the complexity of teaching by focusing too much on what takes place between students and teachers within the classroom. They further indicated that preservice teachers are poorly prepared for the working conditions of schools.

> The preoccupation with the knowledge base and with accountability has encouraged the adoption of simplified pedagogy and educational reductionism… Teaching is emerging in the popular educational literature as a linear process, something that moves through discrete steps. Preservice teachers learn the steps and during field practices they are evaluated on those skills. The linear approach is reinforced by the reliance school districts place on packaged approaches. Even in teacher education programs students go into field placements and work with teachers who possess the 'right method.' (Knowles & Cole, p. 657)

Evertson (1990) stated that preservice students and practicing teachers regard student teaching as the most valuable aspect of preservice preparation. Goodlad (1990) indicated that student teaching is viewed as a problem; it is on-the-job experience that solicits isolation, practical expediency, and dependence on traditional wisdom.

Research has implied that formal traits of preservice preparation do very little to change students' outlooks and practices. On the other hand less formal, experimental aspects of student teaching are potentially significant influences (Fieman-Nemser, 1983; Zeichner, 1987).

Current Situation

Teacher educators generally agree on the value of clinical education for preservice teachers. Conant (1963) summed up student teaching to be "the one indisputable essential element in professional education" (p. 63). When beginning teachers are asked what was the most meaningful experience in their preservice program, they consistently identify student teaching (Fieman-Nemser, 1983; Griffin, 1983). Innaccone (1963) described student teaching as the transition between beginning and becoming. However, some researchers have questioned the effectiveness of student teaching and feel that it could be overrated as educative (Evertson, 1984). Some even suggested that it might be demonstrated as possibly miseducative (Innaccone, 1963; Tabachnick, 1979-80). Peck and Tucker (1973) in their chapter in the Second Handbook of Research on Teaching noticed this trend. They suggested by the end of student teaching, there are some almost universally reported decrements in attitude and teaching behavior, as compared with the starting position of students prior to their field experience. The reaction to Peck and Tucker's chapter generated studies on every aspect of student teaching. Byeas and Freeman (1983) wrote an article on students' expectations and teacher education traditions with which we can and cannot live and how students' ideologies of pupil control remain unaltered after student teaching (Zeichmer & Grant, 1981). Kronwritz (1982) indicated that students in the classroom influence student teachers. Goodlad (1983) argued that teachers teach as they have been taught and that little can be done formally to change this impact.

Traditionally student teaching has been seen as the bridge between the theory, knowledge, and skills gained at the university and their application in the classroom. The results of research on the practicum suggest that we seriously need to question this notion (Wideen, Mayer-Smith, & Moon, 1998). They further stated that their study indicated during student teaching practicum tension between teacher educators and preservice teachers in their attempt to bridge the cultures of the school and the university. According to Pape (1992) this tension is caused by failed expectations of teacher educators, and a sense among preservice student teachers that they are not properly prepared to teach.

Student teaching practicum is a time when some student teachers see their images of teaching shattered (Cole & Knowles, 1993). Wideen (1998) reported that the preservice teacher's pedagogical thinking changed as a result of conflicts arising when the beginning teacher's way of thinking about learning and teaching were inadequate in the classroom situation.

Changing the Environment

The reality of preservice clinical experiences is to move the student from the very controlled environment of college or university into the "real world" of teaching. This change can be very traumatic for certain students. The intent of this strategy was to bridge the gap between college and the "real world" of teaching. According to Zeichner (1983), "master/apprentice relationship is seen as the proper vehicle for transmitting the 'cultural knowledge' possessed by good teachers to the novice" (p. 10). In theory, the novice should learn from the "master teacher," however, Zerchmer and Grant (1981) indicated that the novice feels alone during this experience. Another problem which arises during this time alone is that the student teacher feels cut off from the university and what the "supervisor" expects from this experience (Griffin, 1993; Page, 1990; K. Ryan, 1982). Other research indicates that cooperating

teachers hold their own set of expectations, as do the student teachers (Griffin, 1993). Associated with these problems is the need for peer activity. Even though most programs require an on-campus seminar during this time, most students need peers with whom they can relate their own feelings of stress and anxiety (Hoffman, 1982; Oprovies & Morris, 1980).

The university supervisor should be the student teacher's safety net during this experience. Literature indicated that the role of the university supervisor is ill defined. Morris, Pannell, and Houston (1985) reported that according to a survey conducted on State Directors of Teacher Education and Certification, only five of the responding 47 states had criteria for becoming a college supervisor. Stones (1984) indicated that university supervisors are "extremely unlikely to have given thought to the theory and practice of supervision" (p. 69).

> The supervisor is the watchdog for the completion of university requirements during student teaching, the facilitator of relationships among students, teachers and principal, and the personal confidantes of anyone in the trend who chooses to confide. (Zimphere, 1980, p. 14)

In an ideal situation, the university supervisor would communicate the university expectation to the student as well as the cooperating teacher. The university supervisor should ensure that this triad has the same goal of modeling an improved student teacher from these experiences. This raises another question of who should be considered to be a university supervisor. According to Bowman (1978) the debate over who should be the supervisor, a faculty member or a graduate student, brought another set of personal conflicts. When graduate students are used as supervisors, they have their own studies and time commitments. By the time they have begun to make sufficient progress in the development of supervisory and pedagogical strategies, they leave (Zeichner & Liston, 1987). On the other hand, when faculty members

supervise they feel unrewarded because of the faculty promotion agenda; the “status” in teacher education is on campus not in the field (Joyce & Clift, 1984).

Students in the student teaching experience spend their time “in specified learning experiences (and) these experiences are generally narrow, stereotyped and repetitive. An even smaller proportion of these experiences is effectively supervised” (Turney, 1985, p. 11). Zimpher (1980) discovered in a case study that “conferences with students confirming satisfactory progress tended to give the students a signal that change in behavior and attitude were not necessary in order to pass student teaching” (p. 15).

Iannaccone (1963) analyzed daily logs of 25 education students written during the student teacher experience. Twenty-four of the 25 students were shocked at the teaching methods incorporated by the cooperating teacher. Peck and Tucker (1973) state that much disagreement is expressed between what student teachers had learned in course work and what they observed in clinical experiences. However, these same students used unaccepted methods when faced with actual teaching. “These young teachers started out with the idea of ‘getting the class through the lesson’ but replaced it with ‘teaching means taking the class through the lesson’. In other words the student teachers change from presenting the material to actually teaching the material” (Peck & Tucker, 1973, p. 969). According to Peck and Tucker (1973) there is a great need to continue clinical education on methods beyond student teaching into 1-3 years of "real teaching."

The Research in Teacher Education (RITE) program was created at the Research and Development Center for Teacher Education at the University of Texas at Austin. This group conducted studies on clinical experiences in the United States during 1980-1985. According to Griffin (1986), “These studies included three major efforts:

1. A comprehensive multi-method, multi-site descriptive study of student teaching (clinical teacher education as a function of cooperative relationships between universities and elementary and secondary schools);
2. An experimental study of inservice teacher education and leadership (clinical teacher education as a function of the relationship between instructional leaders and teachers); and
3. An analytic study of formal state-mandated teacher induction programs (clinical teacher education connected by state law and regulation to the certification and licensure of beginning teachers)." (p. 3)

"The research and theory we have identified suggest one defining property and seven critical features of an effective clinical teacher education program, whether that program is at preservice, induction or inservice levels of implementation. The program must be embedded in a school context (defining property), and be 1) context-sensitive, 2) purposeful and articulated, 3) participatory and collaborative, 4) knowledge-based, 5) ongoing, 6) developmental and 7) analytic and reflective" (Griffin, 1986, p. 7). The RITE program suggested a framework for clinical teacher education. This framework proposes context as a defining property and the set of seven critical features; furthermore, it was based on the strong belief that the best clinical teacher education programs will give attention to the defining property and all the critical features in interaction (Griffin, 1986).

Early Field Experience

Early Field Experiences (EFE) in teacher preparation programs are a much talked about but little studied phenomenon (Cruickshank, 1990). However, when one discusses early field experiences (EFE), there is considerably more literature to support the concept. According to

Cruickshank (1990) the following studies had been conducted on EFE: Applegate and Lasley (1983), Bates (1984), Denton (1982), Galluzzo and Arends (1989), Hedberg (1979), Ishler and Kay (1981), McIntyre and Killian (1986), Scherer (1979), and Sunal (1980). According to Cruckshank (1990), each of these studies was conducted on different areas of EFE, and the majority of the studies provided positive results for EFE.

Rebeck (1995) stated that in the last 15 years most major teacher education programs have required students to spend more time observing and working in schools. This type of exposure gives students firsthand experiences for preparing themselves for teaching roles.

Elliott and Mays (1979) stated, “student teaching in a student’s senior year is too late in the preparation of a prospective teacher for the first attempt at teaching or working with students” (p. 34). They also concluded that an early field experience helps the student to determine their commitment to the teaching profession. Paese (1986) found that teaching was better for student teachers that had early field teaching experiences. The preservice teachers surveyed by Paese indicated that they were better prepared for student teaching because of their experience in the public school.

However, one can find disagreement in the literature as related to early field experience. There is wide disagreement as to the purpose of early field experiences (Applegate, 1985). According to Bennie (1982) it should be an opportunity for students to declare their career choice. A study by Anderson (1987) showed that among 95 elementary teacher education students who had an early field experience program, there was a decline in interest in becoming a teacher. Goodman (1984) studied 10 students who were enrolled in an early field experience program. The program was designed to expose the student to classroom experience; however, most of the time the student was involved in the actual teaching practices.

Ribich (1995) suggested that all institutions that house teacher education programs should incorporate some form of field experiences because it is politically, as well as professionally correct to do so. Field experiences are simply accepted as important and worthwhile in the professional development of teachers.

State departments of education have established requirements for field experiences (Ribich, 1995). The Association of Teacher Educators (1986) has developed guidelines for the field experience component of teacher education programs, and the National Council for the Accreditation of Teacher Education (1992) has established standards for field experiences: Quality of Field Experiences, the standards specify that the unit is to ensure that field experiences are well-planned and sequenced, and are of high quality. The standard also expects "student teaching and internship experiences (to be) sufficiently extensive and intensive for candidates to demonstrate competence in the professional roles for which they are preparing" (NCATE, 1996, p. 3). There is agreement that field experiences are a necessary and valuable part of preservice education (Ribich, 1995).

The review of literature indicated two agreements that support field experience in teacher education programs, particularly in the freshman and sophomore years (Ribich, 1982).

> The first argument suggests that the person of the teacher candidate is central to the educative process. In the initial stages of the teacher education program, student growth in self-awareness, social effectiveness, decision making and exploration are most effectively enhanced by a close working relationship of field experiences to classroom activities at the college or university. The integration of fieldwork and classwork at this level should promote opportunities for students to observe in classrooms, reflect, examine

themselves psychologically in relationship to becoming teachers and interact with professionals and students in diverse settings.

> The second argument is that the fusion of theory and practice and the fusion of reflection and action require a strong connection between the college or university program and the real world of the schools in the community. The fact is that the schools of the community are the natural allies of the colleges and universities in preservice education. (Ribich, 1982, p. 257)

Ribich (1995) suggested that the field experiences should:

- Be initiated as soon as possible in the preservice program.
- Be an integral part of the whole curriculum.
- Be carefully planned and linked to course work.
- Be sequential and developmental.
- Provide opportunities for students to experience a wide range of settings and learners who represent a variety of socioeconomic backgrounds.

The University of Northern Iowa Teacher Education Program is predicated on beliefs that are consistent with the direction of the goals described by Goals 2000. The goal of the Field Experiences Program is to guide teacher education students through progressive stages of the pre-student teaching period by engaging them in numerous and varied experiences. Designers of this program use first base, second base, third base, and home plate as metaphors for developmental stages in the preservice teacher education process. First base is Level I exploring and teaching. Second base or Level II is Teacher as a Change Agent, third base or Level III consists of the Professional Semester, and Home Plate or Level IV provides students the

opportunity to experience in depth the full role and meaning of teaching (Oakland, Fernadez & Keuter, 1995).

There are numerous ways to make early field experience a part of the total teacher education program. The literature indicates agreement in the following areas as to what should be included in early field experience: observation, tutoring, reporting on the classroom experience, performing non-instructional tasks, operating, assessing pupil characteristics and activities, planning instruction, designing instructional materials, supervising extracurricular activities, assessing teacher characteristics, reviewing education literature, supervising laboratory work and field trips, and planning non-instructional activities (Cruickshank, 1990; Elliott & Mays, 1979; Ribich, 1995; Ryan, 1986).

Agreement also was indicated in the review of literature in regards to problems associated with early field experiences. They were as follows: scheduling and transportation, lack of adequate university personnel for supervision, and lack of cooperation by some local education agencies (Cruickshank, 1990; Ribich, 1995; Ryan, 1986).

Field experience carried out at the same time as course work during the beginning stages of the teacher education program are most beneficial to the student (Wideen, Mayer-Smith & Moon, 1998). The researchers further stated that there is conflicting research in the area of early clinical experience, in relationship to value, design, and duration.

In summary, research supports the importance of early field experience and indicates that early field experience should be a part of every teacher education program. It also indicates that this is an area that must be well planned and supervised, or it may do more harm than good for the student.

Evaluating Early Field Experiences

John Dewey proposed the following question, "What constitutes an educative experience?" Dewey (1973) differentiated educative from miseducative experiences as

> The belief that all genuine education comes about through experience does not mean all experiences are genuinely or equally educative. Experience and education cannot be directly equated to each other. For some experiences are miseducative. Any experience is miseducative that has the effect of arresting or distorting the growth of further experience. (p. 25)

Dewey's statement provides a foundation for evaluating field experiences programs. Erdman's (1983) research indicated that in assessing and participating in early field experience programs, attention to the theory/practice dialectic can make early field experiences educative for the teacher educator as well as the preservice teacher. Perhaps that is what Dewey (1913) meant when he said we should all be "students of education" (p. 31).

Passe's (1994) research called the overall quality of the early field experience into question. He stated that each teacher education program should evaluate its own program to ensure that an early field experience applies the learning of the methods courses. Bowyer and Van Dyke (1988) stated that evaluation of students during early field experience is seldom consistent and usually cursory. Constructive criticism to "neophyte teachers" during the early field experience is meaningless because both the university supervisors and cooperating teachers are poorly prepared for this role (Morris & Curtis, 1983). The assignment of cooperating teachers is a constant problem (Cruickshank, 1984). The teacher education program most often does not have the power to choose cooperating teachers.

Other studies (Gibson, 1976; Goodman, 1985; Tabachnick, Popkewitz & Zeichner, 1979-80) reported that students in early field experience and student teaching were evaluated on their ability to keep students quiet and doing their work and their ability to follow a lesson plan. Goodman (1985) stated that educators should be critical of this type of evaluation and that the purpose of early field experience and student teaching experiences should become problematic.

Clinical Experiences in Vocational Education

Lynch (1997) recognized the need for substantive change in vocational teacher education. Vocational technical teachers have been prepared differently than general education teachers since the Smith-Hughes Act established a different system for vocational training (Lynch, 1997). He further stated that the path of teacher preparation in vocational education has been increasingly challenged by end-of-the century changes in the workplace and new knowledge about teaching and learning.

The main purpose of student teaching has remained the same for many years: "To provide a planned, carefully supervised learning experience that allows the student teacher to demonstrate resourcefulness as a teacher in a real world setting" (West, 1985, p. 8). McEwen and King (1998) stated that "regardless of the name by which it is called (student teaching practicum, preservice teaching experience, field experience, or internship), it is that period of time, near the end of the student's formal education, when prospective teachers get the opportunity to play the role of an experienced teacher" (p. 9). Student teaching is a critical component in the process of teaching excellent teachers (McEwen & King, 1998). A 1998 study of what business teacher education programs need in their student teaching lists:

- Student teachers need good time management skills…

- Student teachers need to understand the importance of proper planning and preparation for each class, including preparation of lesson plans and previewing lessons…
- Cooperating teachers need to find a good balance between over-supervising their student teachers and not being available when needed to provide support.
- Student teachers need to understand that the school day does not begin and end at specific times.
- Cooperating teachers need to give student teachers some flexibility to try new ways of doing things and should also show some willingness to not only coach student teachers, but also to learn from them.
- Student teachers often have difficulty in adjusting to the environment of the host school. They need to learn to adjust and adapt quickly to the equipment, the rules and regulations, the personalities and the administration in order to have a smooth transition.
- Cooperating teachers need to remember that student teachers are still novices and should not be expected to perform as master teachers. Student teaching is a learning experience.
- Student teachers need to be reminded of the importance of mastering the content they teach… Enthusiasm and willingness to learn are vital traits for effective student teaching.
- Student teachers should be warned against "making it up as they go," whether it be rules for classroom management, points in a discussion, or steps in completing a process . . . . Thorough preparation is a critical component of effective teaching.

- The role of the cooperating teacher in the student teaching process is critical and both the cooperating teacher and the student teacher must be encouraged and assisted in building a strong, supportive relationship. (McEwen & King, 1998, p. 13)

Lynch (1997) stated that well planned and executed clinical experiences should be the cornerstone in the preparation of teachers throughout their lives. Lynch divides clinical experiences into two groups "Occupational" and "Educational." Occupational clinical experiences include courses or activities for preservice and inservice that are related with the school to work initiatives. Educational clinical experiences are those experiences that should begin early in the preparation of prospective work-based education teachers and continue throughout life.

In summary, clinical experiences in vocational technical education are considered as one of the most important if not the most important phases of teacher preparation. However, the review of literature indicates that this is the opinion of researchers rather than researched fact.

Clinical Experiences in Agricultural Education

Marvin (1967) stated that student teaching is one phase of preservice that is accepted as the most valuable. Marvin (1967) in his chapter - The Curriculum: Field-Centered Experiences, referred to the DeKalb Conference on Teacher Education as the framework for clinical experiences. Marvin (1967) used the DeKalb principles as guidelines to organizing laboratory experiences:

- An important principle is to have the laboratory experience contribute to the establishment of understandings and feed into a sequence so there is continuity of teacher growth.

- It is highly desirable that experiences be presented in true life situations, and that they be accompanied with such guidance that the components of a good teacher are built in the stages of development. Caution is urged in use of artificial, "canned" experiences that cannot involve the total situation.
- The laboratory experiences should lead from those more highly directed to those more complex ones which will be pursued with increased student initiative and use of the supervisor as a consultant.
- There is need of exploration and experimentation in ways to provide profitable experience for the student teachers. (p. 162)

Marvin (1967) stated that early field experiences should give students the opportunity to observe and evaluate classroom student behavior these experiences helps to make real the concepts and principles presented in class reading and discussions. He further stated that these experiences should be provided throughout a student's preservice education. Marvin (1967) suggested the following outcomes from these experiences:

- To become familiar with the community and the agricultural situation in the community.
- To visit high school students, young and adult farmers, and to become familiar with their programs and problems, and to gather information to use in planning units to teach during the student teaching period.
- To become familiar with the school and the vocational agriculture department's organization, facilities, programs of work, and teaching calendars.
- To determine, insofar as possible, the units to teach during the teaching period. (p. 163)

Paul Marvin's chapter, although over 30 years old, is the most recent publication on clinical experiences in agricultural education.

McLean and Camp (1998) stated that strong call for reform in agricultural teacher education preparation process has gained momentum over the past 15 years. Even with these pressures for reform there is a void of current data on curricular structure or content of agricultural teacher education programs (McLean & Camp, 1998). Swortzel (1995) stated that agricultural teacher education faculty must continually evaluate their programs to see that they are achieving their mission of preparing teachers who are literate in science, and agriculture and who are prepared to teach.

Almost without exception, student teachers, veteran teachers, and teacher educators describe student teaching as a critical part of the teacher education program (Camp & Bailey, 1999). However, as the authors stated, "we know very little about how student teaching is organized, managed, supervised, and evaluated in the profession" (p. 12).

In summary, the review of literature for this study indicated a void in research on clinical experience, in agricultural education from 1968 to today. Arthur Berkey (1968) in *Teacher Education in Agriculture,* in which Paul Marvin provided the work on clinical experience, was one of the latest publications found in this area.

Delphi Technique

Helmer (1983) described Delphi as an experiment designed to apply expert opinion to nuclear weapons targeting system in the 1950's. He further stated that "Project Delphi" is the name for a study of the use of expert opinion that has been intermittently conducted at the Rand Corporation. According to Dalkey (1972) the Delphi is a procedure that is a rapid and efficient way to "cream the tops of the heads" of a group of knowledgeable people. He further stated that

a well-designed and properly managed Delphi could be a highly motivating environment for respondents. Linstone and Turoff (1975) suggest that “Delphi may be characterized as a method for structuring a group communication process so that the process is effective in allowing a group of individuals, as a whole, to deal with complex problems” (p. 13).

The Delphi procedures have three countenances: 1) anonymity, 2) controlled feedback and 3) statistical group response (Dalkey, 1972). The Delphi method according to Linstone and Turoff (1975) has four phases: 1) exploration of the subject under discussion, with each individual contributing additional information he or she feels is pertinent to the issue; 2) reaching an understanding of how the group views the issue; if there is significant disagreement, then that disagreement is explored; 3) studying the underlying reasons for the differences and to evaluate them; 4) final evaluation of the process when ALL previously gathered information has been initially analyzed and the evaluations have been fed back for consideration.

Delphi techniques were developed to gain consensus within a group of military experts on a very sensitive problem. However, Linstone and Turoff (1975) argued that Delphi has application in the following areas:

- Gathering current and historical data not accurately known or available.
- Evaluating possible budget allocations.
- Exploring urban and regional planning options.
- Planning university campus and curriculum development.
- Putting together an educational model.
- Delineating the pros and cons associated with potential policy options.
- Distinguishing and clarifying real and perceived human motivations.
- Exploring priorities of personal values, social goals, etc. (p.4)

They further stated that one or more of the following leads one to use the Delphi Technique:

- The problem does not lend itself to precise analytical techniques but can benefit from subjective judgements on a collective basis.
- The individuals needed to contribute to the examination of a broad or complex problem have no history of adequate communication and may represent diverse backgrounds with respect to experience or expertise.
- More individuals are needed than can effectively interact in a face-to-face exchange.
- Time and cost make frequent group meetings unfeasible.
- A supplemental group communication process can increase the efficiency of face-to-face meetings. (p. 4)

Validity

Delphi techniques identify the reasons why there is a degree of disagreement among the experts and help to ascertain whether the nature of the disagreement is real or purely semantic (Helmer, 1983). Convergence, even when it happens, is not enough to validate the method because it should be convergence toward the correct value that counts (Helmer, 1983). Helmer (1983) stated that there are two reasons why relatively few experiments have been conducted to validate the predictive power of Delphi inquiries. One is that long-range forecasts cannot be verified until a sufficiently long time has elapsed. The other is that Delphi is a method pertaining to the utilization of expert opinions. Hence, to validate the method properly, experts would have to be used as laboratory subjects. Dalkey and Helmer (1983) have well documented that statistically the Delphi Techniques tend to produce not only convergence but also that

convergence is in the direction of the true value. Helmer (1983) pointed to the explicit evidence of the validity of the Delphi technique in producing relatively reliable forecasts.

Modified Delphi

The modified Delphi is an abbreviated version of the Delphi method. It is efficient in both group decision making situations and in other areas where order of magnitude estimates are required (Helmer, 1983). A Delphi study carried to the extreme degree could be an expensive undertaking in both time and money on the part of the researcher and the respondents (Flanders, 1988). The "True" Delphi technique involves three or more rounds with a panel of experts. In round one, the respondents are asked to develop the survey items (Linstone & Turoff, 1975). Each round is time consuming, making it increasingly difficult to keep an acceptable response rate (Flanders, 1988).

The Delphi technique has often been modified to meet specific needs and to avoid the problem of respondent attrition (Cetron, 1969). It is common to limit the Delphi technique to two rounds instead of three or more to conserve resources and to encourage continued participation by the respondents. In such cases the researcher prepares the Delphi items for the first round or utilizes an existing instrument (Uhl, 1983). In a modified Delphi study the respondents react to the items rather than generate them, in effect eliminating one round (Flanders, 1988).

Reeves and Jauch's (1978) study indicated that the value of more than two rounds in the Delphi process was questionable since few changes of opinion occur beyond round two. In this study the researcher decided to utilize a structured task list and a two-round Delphi design based on the above-cited research.

Criticism of Delphi

Delphi appears to be a straightforward approach to doing research in the area of forecasting and for building consensus. Researchers, at first glance, think of Delphi as a simple technique that can be done easily. However, one must carefully consider the problems associated with Delphi before designing a Delphi study (Linstone & Turoff, 1975). Linstone and Turoff (1976) suggested that there are five common reasons for Delphi to fail:

1. Imposing monitor views and preconceptions of a problem upon the respondent group by over specifying the structure of the Delphi and not allowing for contribution of other perspectives related to the problem.
2. Assuming that Delphi can be a surrogate for all other human communications in a given situation.
3. Poor techniques of summarizing and presenting the group response and ensuring common interpretations of the evaluation scales utilized in the exercise.
4. Ignoring and not exploring disagreement so that discouraged dissenters drop out and an artificial consensus is generated
5. Understanding the demanding nature of a Delphi and the fact that the respondents should be recognized as consultants and properly compensated for their time if the Delphi is not an integral part of their job function. (p. 19)

Delkey (1972) pointed out that Delphi is not sufficient to be a defining property for an uncertain question because the expert's cultural bias can lead to similar answers to some questions which in fact are poorly known; or there could be an instance where the experts legitimately do not know the answer. According to Linstone and Turoff (1975), the "virtual" problems do not affect the utility of Delphi but rather how to select the respondent group.

Agreement in Literature

Helmer (1983) agreed that Delphi is a technique frequently used for eliciting consensus from within a group of experts that has application in reliability and has many advantages over other methods of using panel decision making. Helmer (1983) agrees with Linstone and Turoff (1975) in regards to the application of Dephi. Helmer (1983), Linstone and Turoff (1975), and Dalkey (1972) all found that one of the major advantages of using Delphi as a group response is that consensus will emerge with one representative opinion from the experts. Mitroff and Turoff (1975) stated:

> It should be borne in mind as we proceed that the question of concern is not how we can determine or agree on the meaning of "truth" with perfect or complete certainty, for put in this form, the answer is clearly that we cannot know anything with perfect certainty. We cannot even know with perfect certainty that 'we cannot know anything with perfect certainty'. The real question is what can we know and even more to the point, how we can justify what we think we can know. It is on this very issue that the difference between the various Inquiring Systems arises and the utility or value of the Delphi Technique depends. (p. 20)

Chapter 3

METHODOLOGY

Problem Statement

The current educational reform movement has been ongoing for over 15 years. As a result, teacher education programs are changing. However, clinical experiences both early field and student teaching in agricultural teacher education programs are structured, by and large, as they were 75 years ago. An increasing number of students enrolled in agricultural education not have limited practical experiences in agriculture or have never been enrolled in a high school agricultural program. This situation presents new challenges for the profession in the area of preparation of these students. Moreover, little research has been conducted to examine how preservice clinical experiences should be modeled to meet the needs of today's contemporary students.

Purpose and Objectives

The purpose of this study was to build a task list for the clinical experience program, both early field and student teaching, for the agricultural teacher education programs in North Carolina State University, Clemson University, and Virginia Tech.

The following specific objectives were established to guide in conducting this study:

1. Compile a list of clinical experiences, both early field and student teaching, that are currently provided in the clinical experiences for students of agricultural education in three-selected teacher education programs.
2. Use an expert panel to determine what should be included in early field experiences and student teaching experiences for students enrolled in the agricultural education program.

Instrumentation

This study initially used a structured instrument developed by the researcher. The initial instrument was developed by analyzing the requirements for clinical experiences for preservice agricultural teacher education programs from three cooperating institutions. These institutions are North Carolina State University, Clemson University, and Virginia Tech.

The researcher formed a validation panel that consisted of one agricultural teacher educator from each state. Dr. William Camp, Virginia Tech; Dr. Barbara Kirby, North Carolina State University; and Dr. Curtis White, Clemson University served as the validation panel. These three agricultural teacher educators have the responsibility of overseeing the clinical experiences program at their respected universities. The researcher collected documents outlining the current requirements for students in regard to early field experiences and student teaching in each of the three participating institutions. The researcher took the lists from the three institutions and compiled a master list of requirements, in which as many tasks as possible were combined without taking away from the meaning were combined. The researcher then mailed the list of requirements back to the validation panel for examination. The three agricultural teacher educators checked the list to insure that the intent and context of their institution's requirements had not been changed in the editing, thus providing the framework for the initial task list that was used in Round I. With this process, the modified Delphi technique will produce the data needed to answer the objectives of the study.

The researcher then developed the instrument based on the validation panel's suggestions for the task list and used a Likert-type scale for rating the tasks. The Delphi studies reviewed used a Likert-type agreement/disagreement scale with three or more points ranging from strongly agree to strongly disagree. Uhl (1983) stated that a five-point scale would be acceptable. The

task in this study was to establish a five-point scale with each point coded as follows: SD for Strongly Disagree, D for Disagree, NS for Not Sure, A for Agree, and SA for Strongly Agree. The researcher used a numerical code for tabulation purposes, 1 for Strongly Disagree to 5 for Strongly Agree.

Prior to mailing, the instrument was pilot tested on five graduate students in Vocational and Technical Education at Virginia Tech. The pilot test was utilized to ensure readability, clarity, and correctness.

Population

The population for this study consisted of agricultural teacher educators, agricultural education field staff, agriculture teachers, and secondary school administrators, from North Carolina, South Carolina, and Virginia. For details on numbers in each category see Figure 1.

States	Agricultural Teachers	Agricultural Teacher Educators	State Field Staff	Secondary School Administrators	Grand Totals
North Carolina	370	4	5	117	496
South Carolina	110	2	3	70	185
Virginia	310	3	1	91	405
Total	790	9	9	278	1086

Figure 1. Total Population Numbers

Size of Panel

According to Sutphin (1981), there are no specific criteria for determining sample size when using the Delphi technique. Early studies used small numbers of respondents. Sutphin (1981) further stated that project Delphi used 4 experts. Norton (1970) used 1185 individuals in 30 subgroups, while Cypert and Grant (1971) identified a sample of 42. Brooks (1973) included

100 participants. The number of experts will depend on the specific study. Bunning (1979) stated that “no guidelines exist that indicated the most appropriate number of experts to select for Delphi process” (p. 180). Dalkey (1969) reported an increase in reliability of group responses with increasing group size. Reliability with a correlation coefficient approaching .9 was found with a group size of 13. Shinn (1998) reported when the number of participants was greater than 13, questions of process reliability were satisfactorily answered.

According to Sutphin (1981), the sample should be large enough to obtain the amount of expertise necessary to conduct the study effectively. Beyond this number the size should be held to a minimum to reduce cost or overabundance of data that becomes cumbersome and yields no additional information for the study. Nine experts were selected for this study from each of four groups: agricultural education teacher educators, secondary agriculture teachers, state supervisors, and secondary school administrators who had an interest in agricultural education. For a total panel size of 36

For the current study agricultural personnel in each of these states, nominated 12 experts to serve on the panel for a total of 36 members. Each state nominated 12 members; however, to ensure equal numbers the number that each state had in any category varied. Listed below are areas and numbers from each state:

Virginia

- 3 Teacher Educators
- 1 State Staff
- 4 Secondary Teachers
- 4 Secondary School Administrators

South Carolina

- 2 Teacher Educators
- 3 State Staff
- 4 Secondary Teachers
- 3 Secondary School Administrators

North Carolina

- 4 Teacher Educators
- 5 State Staff
- 1 Secondary Teacher
- 2 Secondary School Administrators

Panel Selection Process

The Delphi panel was a purposefully selected group of agricultural educators and secondary school administrators. The process of selection was intended to give balance and ensure that experts were identified. The expert panel was selected from the population of agricultural education teacher educators, secondary agriculture teachers, state supervisors of agriculture education, and secondary school administrators. Helmer (1975) indicated that panelists who were recognized as experts should be used. The definition of an expert in relationship to this study is an individual who has supervised, worked with, instructed, or been involved with field experiences in regard to teacher education. An agricultural teacher educator was selected from each state by the researcher to nominate experts in each of the four areas for membership to the expert panel. After receiving the nominations from the agricultural educators the researcher contacted the nominees to determine if they met the criteria for the study: 1) Do you consider yourself an expert of preservice clinical experiences for agriculture teachers? 2) Will you take the time out of your busy schedule to participate in this study? This selection

process was employed to guard against researcher selection bias. Only those who were nominated by a respected agricultural teacher educator and who expressed willingness to participate were included on the panel.

Only 1862 land-grant universities were included in this three-state study because the 1890 agricultural education programs were either searching for agricultural educators or had no programs at the time of this study.

Barbara Kirby (North Carolina State University), Curtis White (Clemson University), and John Hillison (Virginia Tech), all professors of Agricultural Education, were asked by the researcher to submit names of qualified experts from their respected states to serve on the panel. A letter explaining the study and an abstract were mailed to these individuals to aid in their nomination process (Appendix A).

Initial contacts to the nominated experts included: (a) a one-page cover letter, (b) a self-addressed, stamped return envelope, (c) purpose objectives of the study, and (d) a return form. The cover letter described the modified Delphi panel and asked the nominee a) if they considered themselves an expert in the area and b) if they would serve on the Delphi panel. The letter requested the nominee to fill out the form included in the mailing (Appendix B). Of the 36 potential panel members contacted, 34 elected to participate, so the actual panel size was 34.

Collection of Data

Round I

The 34 members of the Delphi panel were mailed a packet of material. The packet included a cover letter, a copy of the instrument printed on light green paper, a stamped self-addressed return envelope and a gift as a token of appreciation for responding to round one. The

cover letter described the nature of the study and the research technique and gave instruction for the task list (Appendix C).

Panel members were asked to return the instrument by mail within two weeks. According to Hostrop (1975) and Linstone and Turoff (1975), input into the Delphi should come from dedicated professionals, and should not require a follow-up mailing for non-respondents.

The instruments were coded to monitor response. Results from round one were summarized and depicted in the round two-task list by typed summary comments. A follow-up letter was mailed to the panel to encourage participation (Appendix D). The overall percentages of group agreement and disagreement were reported for each task. Comments were summarized for each task and recorded on the round two instruments as feedback to the experts. Comments from the round one instruments made by the expert panel members were incorporated by the researcher into the round two instrument.

Round II

An a priori decision was made to retain all statements that established consensus by establishing a standard deviation equal to or less than one. The round two task list described the mean group rating and standard deviation on each item that did not meet consensus from round one and provided each subject with their previous response in agreement or disagreement. After reading the information, the experts were asked to re-evaluate their stance on each task. Experts were able to change or retain their previous stance after considering the new data.

The round two mailing consisted of a cover letter, the round two instruments, a stamped self-addressed return envelope, and a thank you note from the researcher (Appendix E). The task list was printed on light orange colored paper. The change in color paper aided the researcher in distinction between rounds. The same appeal for responses used in round one was retained in

round two. Procedures for returning the instrument were also identical to round one. Experts were again asked to return the task list within a two-week time period. Expert response was again coded to aid the researcher in monitoring the instrument.

Round III

All tasks that reached strong majority in round two were removed from the instrument for round three as consensus items. The experts were provided with a list of tasks that reached agreement and the task rank. The round three task list described the mean group rating and standard deviation on each item that did not meet consensus from round one and provided each subject with their previous response in agreement or disagreement.

The round three mailing consisted of a cover letter, the round three instruments, a stamped self-addressed return envelope, and a thank you note from the researcher (Appendix F). The task list was printed on light yellow colored paper. The change in color paper aided the researcher in distinction between rounds. The same appeal for responses used in round two was retained in round three. Procedures for returning the instrument were also identical to round one and two. Experts were again asked to return the task list within a two-week time period. Expert response was again coded to aid the researcher in monitoring the instrument.

Analysis of Data

According to Flanders (1988), one criticism and recurring problem in using the Delphi method is that standard analysis procedures have not been established. Median score, means and standard deviations have been used in some combination in most Delphi studies. The researcher chose to use means and standard deviations for analysis in this study.

Each respondent on a five-point, Likert-type scale from Strongly Disagree to Strongly Agree rated the items on the Delphi instrument. The Likert-type scale was converted to a numerical scale for computation, using numerical values as follows:
Strongly Disagree (SD) = 1, Disagree (D) = 2, Not Sure (NS) = 3, Agree (A) = 4, and Strongly Agree (SA) = 5.

According to Hill and Fowles (1975), a more accurate conclusion and recommendations could be derived from the data if criteria for consensus were established for the study. For the purpose of this study, consensus was determined to be reached if two statistical criteria were met. Consensus was indicated on a task if:

1. A priori decision was made to retain all statements that established an agreement by two-thirds of the panel at levels 4 or 5 (agree-strongly agree).
2. A priori decision was made to reject all statements that established an agreement by two-thirds of the panel at levels 1 or 2 (strongly disagree-disagree).

The use of the mean score provided a measure of agreement or disagreement with each task. The range of the mean score reflects the real limits of the Not Sure category as suggested by Shavelson (1981). Figure 2 indicates the different phase in which the Delphi for this study was conducted.

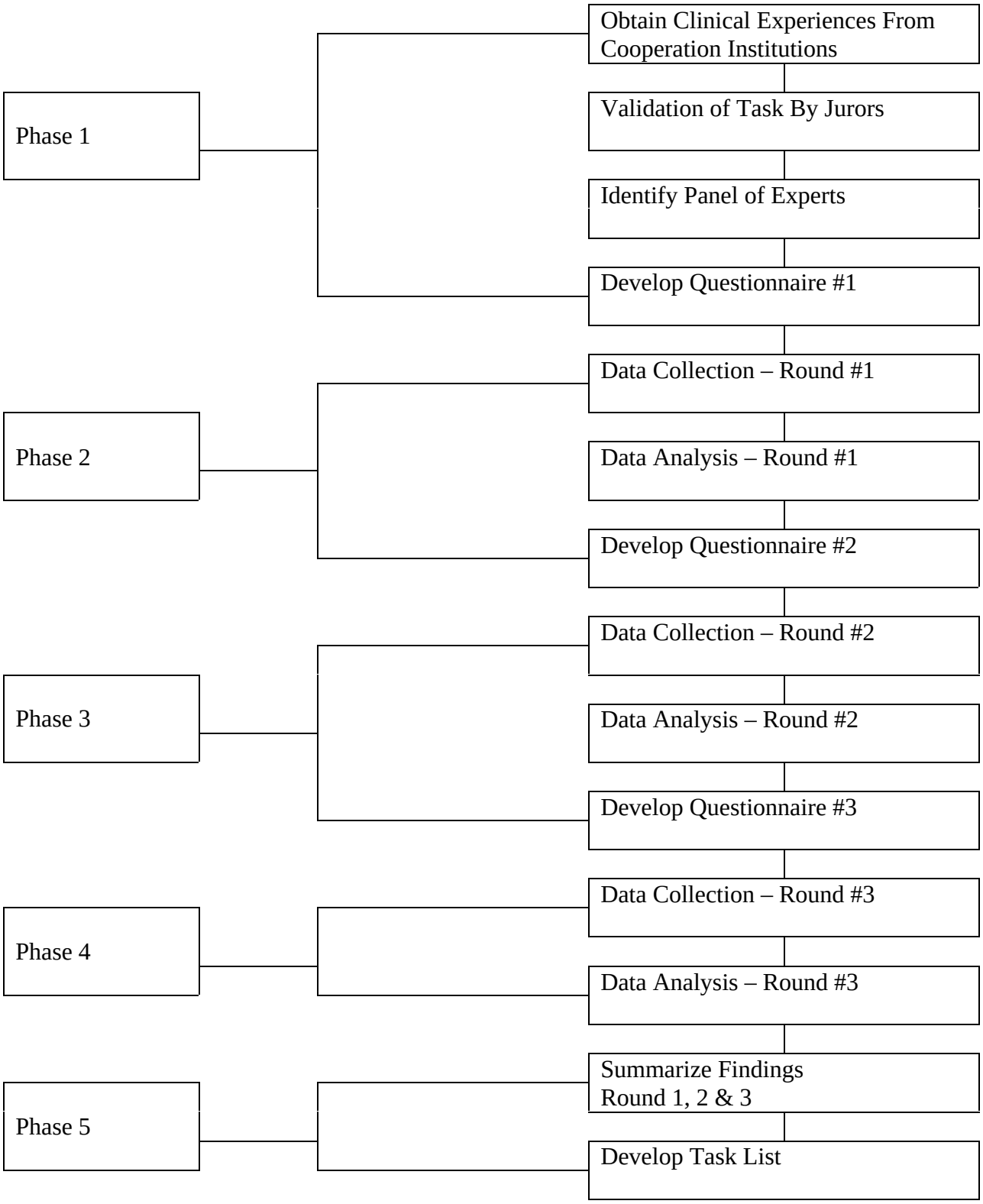

Figure 2. Phases Involved in the Modified Delphi Process

Chapter 4

PRESENTATION AND ANALYSIS OF DATA

This chapter contains findings to the objectives of the study. The findings were generated using a modified Delphi technique and three rounds of questionnaires. The findings are organized under the following headings: (1) Purpose and objective of the study, (2) Background information, (3) Results of Round I, Round II, and Round III.

Purpose and Objectives

The purpose of this study was to build a task list for the clinical experience program, both early field and student teaching, for the agriculture teacher education programs in North Carolina, South Carolina, and Virginia.

The following specific objectives were established to guide the study in conducting this research:

1. Compile a list of clinical experiences, both early field and student teaching, that currently is provided in the clinical experiences for students of agricultural education in three selected teacher education programs.
2. Use an expert panel to determine what should be included in early field experiences and student teaching experiences for students enrolled in the agricultural education program.

Background Information

Thirty-four of the thirty-six Delphi panel members nominated by the jurors agreed to serve on the panel. Thirty-two of the purposively selected thirty-four members responded to Round I of the modified Delphi study. Thirty-one of the questionnaires were determined to be usable and one was declared unusable, because it was received after the deadline. Thirty-three of the thirty-four panel members responded to Round II of the modified Delphi study. Twenty-nine

of the thirty-four members responded to Round III. The overall response rate for the three rounds of the Delphi study was 92%. One hundred-two tasks were accepted as meeting the criteria set forth by this study.

Panelists' Background Information

The respondents included eight secondary school administrators, nine agricultural education teachers, eight state agricultural education field staff, and nine agriculture teacher educators. The panel consisted of 30 males and four females. The agriculture teachers averaged 43.7 years old and 18.9 years of experience and the 93% had advanced degrees. This group had only three members who did not hold a graduate degree.

The secondary school administration average age was 49.9 years old with 27 years of educational experience, and their level of education was master's degree or higher. The agricultural education field staff average age was 42.1 years with 18.7 years of educational experiences, and their level of education was master's degree or higher. The agriculture teacher educators' average age was 48.6 years old with 25.3 years of experience, and their level of education was doctorate degree. The combined average age of all four groups was 45.9 years old, 22.3 years of experience, and the majority had a level of education above the bachelor's degree. Eighty-eight percent of the panel makeup was male.

Table I illustrates the demographics collected during Round I.

Table 1. Expert Panel Demographics

	Agriculture Teachers	Field Staff	Secondary School Admin.	Teacher Educators
Age (mean)	43.7	42.1	49.9	48.6
Teaching Exp. (mean)	18.9	18.7	27.0	25.3
Male (n)	7	8	6	6
Female (n)	2	0	2	1
BS (n)	3	0	0	0
MS (n)	5	3	1	0
EDS (n)	0	3	3	0
Doctorate	1	2	4	7

Questionnaire Information for Round I, II and III

In Round I the members of the panel of experts were asked to rate a list of 36 tasks for early field experiences and a list of 62 tasks for student teaching experiences. Each rating was based on a five point Likert-type scale. The five point Likert scale used the following ratings: 1 = strongly disagree, 2 = disagree, 3 = not sure, 4 = agree, and 5 = strongly agree. Standard deviations were used to determine consensus and refine the responses. Consensus for this study was reached if the standard deviation for a given task was equal to or less than one. The final phase of Round I involved developing The Round II Questionnaire from the suggested additional tasks and the items for which consensus was not achieved.

The 98-item questionnaire was mailed to the panel members on March 5, 1999 (Appendix C). The questionnaire was divided into five parts: Part I consisted of 36 tasks for early field experiences (EFE), Part II consisted of an area for additional comments for EFE, Part III consisted of 62 tasks for student teaching experiences (STE), Part IV consisted of an area for additional comments for STE, and Part V consisted of background information from each Delphi panel member. On March 19, a letter was mailed to those who had not returned the Round I instrument, (Appendix D). March 31, 1999 was set as the deadline for Round I. Thirty-one panel members had returned the questionnaire by the deadline for a 94% response rate. The researcher received one questionnaire after the deadline and declared the results of this questionnaire unusable because the Round II survey had already been mailed

The task list was amended for Round II. The researcher compiled all suggestions for each task in Round I. If the majority of comments suggested a change, the tasks were amended to reflect the majority opinion of the commentary. Round II questionnaire was mailed to the panel members on April 26, 1999 (Appendix E). By the deadline of June 7, 1999, 33 of the 34 panel

members had responded, for a 97% response rate. The researcher extended the deadline from two weeks to five weeks due to final exams and end of schools activities for a majority of the panel.

Round III was mailed to the Delphi panel on June 21, 1999 (Appendix G) with a response deadline of July 16, 1999. Twenty-nine of the 34 panel members responded to the questionnaire for an 85% response rate. The panel members rated 12 tasks using the same 5-point Likert scale as in the two previous rounds, on EFE and STE and voted to keep or delete the tasks.

Results for Early Field Experiences

Of the 36 EFE tasks listed in Round I, 20 tasks met consensus (consensus was met if the standard deviation was ≤ 1). The Delphi panel provided 422 additional comments, 407 comments in EFE, and 15 comments for new task in EFE. Table 2 lists all tasks that met consensus for EFE.

The comments for the task that met consensus were focused around three themes: time, planning, and cooperation. The majority of the Delphi panel suggested that 40 hours was too much time for the first field experience. They also suggested that field experiences be planned well in advance of actual time of experience. EFE should be done in two to five days rather than spread over a month. EFE must be planned with the cooperation of the teacher educator, student, agriculture teacher, and school administrator.

TABLE 2. Tasks That Met Consensus For Early Field Experience

Mean	Stan Dev	Round	Statement THE STUDENT WILL:
4.84	0.37	I	review the course of study and teaching calendar of cooperating teacher.
4.71	0.64	I	observe high school agriculture classes during instruction.
4.58	0.56	I	observe assigned teachers style of teaching.
4.55	0.68	I	jointly plan EFE with local agriculture teacher and university professor, prior to EFE.
4.55	0.51	I	become familiar with type(s) of program(s) in the assigned school.
4.45	0.57	I	learn grading system of assigned school.
4.39	0.84	I	identify the characteristics of good teaching and of competencies required of agricultural education instructors in a world of changing agricultural technology before starting EFE.
4.39	0.70	II	work with the university professor, local agriculture teacher and school administration on developing a written plan for EFE
4.35	0.95	I	conduct/observe assigned FFA meetings.
4.33	0.61	I	fill out relevant university forms.
4.32	0.75	I	identify principles and teaching strategies involved in developing and conducting agricultural education programs including integration of basic skills and academics before EFE.
4.27	0.67	II	perform tasks assigned by the agriculture teacher in relation to a plan developed by university professor, local agriculture teacher and school administrator.

TABLE 2 (Continued). Tasks That Met Consensus For Early Field Experience

Mean	Stan Dev	Round	Statement THE STUDENT WILL:
4.23	0.99	I	become familiar with agriculture teacher's role in public relations.
4.21	0.74	II	visit the designated school one time before EFE to meet with school officials and assigned cooperating teacher to get a feel for the school environment.
4.19	0.95	I	develop an understanding of the philosophy, goals, importance and relationship of agricultural education curricula within the local school.
4.17	0.87	II	observe different teaching and learning styles.
4.10	0.70	I	give a report on activities conducted by secondary agricultural education teachers in assigned school.
4.06	0.96	I	observe middle school agriculture classes during instruction.
4.06	1.00	I	visit key people in the community and become familiar with the community.
4.03	0.84	I	observe academic classes during instruction.
4.03	0.84	I	plan, develop, and teach a micro-lesson to secondary or middle school agriculture students incorporating motivational strategies.
4.03	0.68	II	identify motivation techniques used by teachers.
3.94	1.00	I	promote a sensitivity for the needs of special populations and multicultural education; being sensitive to the educational needs of a rural population during EFE.
3.91	0.78	II	will develop a time schedule that meets the local agriculture teacher's approval on how and when the EFE is to be done.

TABLE 2 (Continued). Tasks That Met Consensus For Early Field Experience

Mean	Stan Dev	Round	Statement THE STUDENT WILL:
3.81	0.87	I	complete and document a minimum of 40 clock hours of EFE.
3.78	0.83	II	meet/interview vocational administrator, guidance counselors and department advisory committee.
3.77	0.91	III	learn the components of a complete agricultural education middle and secondary school curriculum, including scope, sequence and accountability measures.
3.73	0.78	III	provide individualized instruction to students while supervising agricultural experience programs conducted by students.
3.71	0.90	I	observe non-ag vocational classes during instruction.
3.71	0.76	II	work with the local agriculture teacher on his/her grading system in relationship to homework/tests and grade several exercises.
3.64	0.90	II	become familiar with adult education program.
3.52	0.91	III	mointor class during testing.
3.50	0.92	II	discuss with the local agriculture teachers, how the local agriculture programs meet State Department of Education requirements.
3.48	0.97	II	become familiar with professional development activities available during the summer months.
3.38	0.96	II	give a written critique of the local agriculture program as the final part of EFE.
3.07	0.87	II	attend a local school board meeting.

Part II of Round I provided six additional tasks in early field experience for Round II. These task were derived after combining recommended tasks from Part III of the Round I questionnaire. The six task new task for EFE developed from Round I are listed below:

The student will:

- Attend a local school board meeting
- Observe different teaching and learning styles.
- Identify motivation techniques used by teachers.
- Will develop a time schedule that meets the local agriculture teacher's approval on how and when the EFE is to be done.
- Discuss with the local agriculture teachers, how the local agriculture programs meet the State Department of Education requirements.
- Meet / interview vocational administrator, guidance counselors and department advisory committee.

In Round II for EFE the panel members used the same five-point Likert scale as in Round I, 1 = strongly disagree, 2 = disagree, 3 = not sure, 4 = agree, and 5 = strongly agree. Consensus was met if standard deviation was equal to or less than 1. Table 2 illustrates the panels rating of the 16 tasks for EFE, seven of those tasks met consensus. The mean ranged from 3.48 - 4.39.

The majority of the commentary from Round I suggested that nine tasks from EFE be included on the task list for STE. The researcher decided to allow the panel members to vote on these nine tasks. The voting procedure had three options: 1) move to STE, 2) leave in EFE, or 3) delete the task. The panel voted to move six EFE tasks to STE, and leave two tasks in EFE. Table 4 indicates the outcome of the panel vote.

Table 2 illustrates the outcome of Part II of the Delphi questionnaire rated six new EFE tasks developed from suggestions from Round I. Consensus was met on all tasks. The mean ranged from 3.07 - 4.17. A total of 13 EFE tasks met consensus in Round II.

Round III used the same Likert -type scale as in the two previous rounds. Table 2 illustrates the outcome of Round III for EFE. Three EFE tasks met consensus during that round. Table 4 illustrates that panel voted to remove one EFE task. A total of 38 EFE task met consensus during the three rounds of this study.

Results for Student Teaching Experience

The STE parts of Rounds I, II, and III used the same rating scale as in EFE. Each rating was based on a five point Likert-type scale. The five point Likert scale used the following ratings: 1 = strongly disagree, 2 = disagree, 3 = not sure, 4 = agree, and 5 = strongly agree. Of the 62 STE tasks listed in Round I, 44 tasks met consensus (consensus was met if the standard deviation was ≤ 1). The Delphi panel provided 545 additional comments in STE, and 27 suggestions for new tasks in STE. Table 3 illustrates the results for Student Teaching Experiences (STE) from Round I, in which 45 tasks met consensus. Table 3 also shows results for Rounds II and III. Forty-five STE tasks had means of 4.0 or greater.

TABLE 3. Tasks That Met Consensus for Student Teaching Experience

Mean	Stan Dev.	Round	Statement STUDENT WILL:
4.87	0.34	I	for at least part of the internship, have a full teaching load and perform all of the associated duties of a teacher.
4.84	0.58	I	plan, in conjunction with the cooperating teacher, a teaching calendar for the time period of the STE.
4.84	0.37	I	keep accurate records and prepare appropriate reports as requested by the cooperating teacher, cooperating school district, and/or Agricultural Education Department.
4.84	0.37	I	plan and deliver effective instruction about agriculture to secondary or middle school students.
4.84	0.37	I	attend school faculty meeting in the assigned school.
4.81	0.40	I	jointly plan the STE with the cooperating teacher and university supervisor.
4.74	0.44	I	develop and use instructional aides to match the learning environment and learning needs of individuals and groups.
4.65	0.55	I	supervise student agricultural experience programs (SAE).
4.58	0.56	I	become familiar with the policies and procedures of the assigned local school's agricultural education department documented by the completion of specified activities and reports required by the Agricultural Education Department.
4.58	0.72	I	perform non-instructional duties that may be assigned to the cooperating teacher(s).
4.58	0.62	I	attend an area or district Agricultural Education meeting.

TABLE 3 (Continued). Tasks That Met Consensus for Student Teaching Experience

Mean	Stan Dev.	Round	Statement STUDENT WILL:
4.55	0.62	I	self-evaluate their performance as a teacher using an approved form issued by the agricultural education program.
4.55	0.62	I	coach a team or an individual for a career development event (CDE).
4.55	0.57	I	meet professional agriculture personnel in community.
4.53	0.78	I	advise the local FFA Chapter or an approved youth leadership organization to include the plan of activities, meetings, special activities, and achievement recognition as documented by the completion of specific activities and reports.
4.52	0.51	I	Examine an Individualized Instruction Plan (IEP) and discuss with a special needs teacher.
4.48	0.63	I	interview one guidance counselor – discuss Agricultural Education and guidance programs.
4.45	0.85	I	demonstrate effective communications with students, peer teacher, parents, and community leaders substantiated by the completion of specific written documents and reports as required by the agricultural education program.
4.45	0.81	I	recruit students for agriculture classes.
4.42	0.62	I	participate in a post-internship seminar designed primarily to promote continued professional growth through reflective practice. (university)
4.42	0.62	I	observe the teaching techniques of the cooperating teacher in both secondary and adult instruction and complete a teaching observation report for each observation.
4.42	0.67	I	attend the agriculture advisory council meeting for their assigned program.

TABLE 3 (Continued). Tasks That Met Consensus for Student Teaching Experience

Mean	Stan Dev.	Round	Statement STUDENT WILL:
4.41	0.50	II	plan, present, evaluate and demonstrate teaching practices that are generally carried out in a laboratory setting.
4.38	0.62	I	demonstrate positive public relations through planned publicity for the assigned agriculture program and students. Public relations should not be limited to youth leadership recognition. Documentation should include media releases, photographs, and work samples.
4.35	0.55	I	develop and demonstrate a reflective approach to professional practice during STE. (* reflective approach – after each day reflect back over the days activities and how to's)
4.35	0.75	I	maintain a daily and weekly journal of reflective exercises during STE.
4.35	0.88	I	supervise the completion of one award application for FFA or approved youth group.
4.34	0.60	II	use new computer/agriculture technology in classroom instruction.
4.32	0.87	I	clock a minimum of 150 hours of supervised classroom and laboratory teaching experience during the student teaching experience.
4.32	0.70	I	plan a series of related learning experiences designed to strengthen their professional and technical background during STE. As one component of this series of learning activities, you will observe a variety of teachers and teaching settings and analyze them as they provide implications for their own teaching and professional development.
4.29	0.64	I	grade student SAE record book.

TABLE 3 (Continued). Tasks That Met Consensus for Student Teaching Experience

Mean	Stan Dev.	Round	Statement STUDENT WILL:
4.26	0.86	I	plan and conduct activities with a non-vocational teacher designed to integrate core courses and agricultural education.
4.26	0.82	I	plan FFA week activities.
4.26	0.96	I	read professional journals.
4.25	0.62	II	have a meaningful experience planning classroom instruction that will culminate with a laboratory activity.
4.23	0.76	I	demonstrate an acquaintance with the school and community as documented by the completion of specific activities and reports as required by university and secondary or middle school.
4.19	0.78	II	develop and teach integrated lesson with academic (core subject matter) teacher.
4.19	0.63	III	encourage and expose student teacher to the professional organizations that has ties with agricultural education.
4.13	0.86	I	plan, manage and evaluate school and community services such as the greenhouse, land laboratory or other community resources as documented by the completion of specific activities and reports.
4.13	0.66	II	develop classroom management experiences/options.
4.06	0.77	I	review the permanent records of five students in their agriculture classes.
4.06	0.66	II	develop a teaching calendar based on the needs of the agriculture program at the local high school.
4.03	0.77	II	visit farmers and agribusinesses in the local area.

TABLE 3 (Continued). Tasks That Met Consensus for Student Teaching Experience

Mean	Stan Dev.	Round	Statement STUDENT WILL:
4.03	0.92	II	after completion of a successful student teaching experience, write a newspaper article in regards to the assigned agriculture program.
4.00	0.82	I	demonstrate special methods and techniques for adult learners in both group and individual instruction.
3.97	0.95	I	evaluate the local Agricultural Education Department including the secondary and adult instructional programs as documented by the completion of specific activities and reports as required by the agricultural education program.
3.97	0.87	I	complete one State Department of Education form in relation to agricultural education.
3.94	0.85	I	observe and evaluate an adult class being taught using an approved evaluation form by agricultural education.
3.91	0.89	II	conduct an examination of how the Agricultural Education Program serves the school/community.
3.88	0.78	III	observe a class in another department in the assigned school.
3.85	0.62	II	interview student/teacher about a cooperative work experience contract if appropriate.
3.84	0.82	I	conduct in-depth case studies of students, including students identified as having special needs.
3.83	0.99	I	assist the cooperating teacher(s) in planning an adult course of study.
3.82	0.95	II	assist the local agriculture teacher in conducting adult education class if appropriate for school in which student teaching experience is being conducted.

TABLE 3 (Continued). Tasks That Met Consensus for Student Teaching Experience

Mean	Stan Dev.	Round	Statement STUDENT WILL:
3.78	0.91	II	interview the local vocational director to determine procedures of personnel, financial and facilities management.
3.74	0.96	I	compare and contrast the development of adolescents and adults, and identify effective instructional strategies to meet individual and group learning needs.
3.74	0.73	I	tutor a special needs student.
3.74	0.95	II	conduct a mock interview with appropriate school officials.
3.69	0.79	III	attend/observe the young farmer chapter meeting if appropriate.
3.62	0.98	I	conduct a case study on a secondary or middle school agricultural student.
3.58	0.97	II	meet local media representatives or district communication department staff who can assist in public relations.
3.58	0.87	II	attend local civic activities in the assigned location.
3.52	0.97	II	live in the community while student teaching if appropriate and housing is available.
3.36	0.90	II	interview a social case worker in relation to classroom activities for special needs students if appropriate.
3.34	0.90	II	develop a list of addresses of magazine subscriptions and catalogs used at the school so the student teacher can use them as a resource when they become teachers.
3.15	0.91	II	conduct an agriculture/agribusiness case study.

In the comment section of Part III, the major themes were time and appropriateness. The panel expressed concern over the amount of time it would take the student to do a task during their student teaching experience. They felt that the majority of a student's time should be placed on “classroom teaching” rather than on tasks that deal with outside activities, such as meeting community leaders. The second concern was related to the first concern dealing with appropriateness. A majority of the panel members felt that each cooperating school would be able to meet a majority of the tasks that were recommended, however, it would be unfair to the student if the teacher education program required adult education and the cooperating school offered no adult education program. The majorities of the comments were positive and were given to aid in strengthening the tasks for Round II.

Additional comments from Part IV added eight new tasks for Round II. These new tasks dealt with “the art of teaching,” integration of academics, and working with school administration. The eight new tasks are listed below:

The student will:

- interview the local vocational director to determine procedures of personnel, financial and facilities management.
- plan, present, evaluate, and demonstrate teaching practices that are generally carried out in a laboratory setting.
- have a meaningful experience planning classroom instruction that will culminate with a laboratory activity.
- use new computer/agriculture technology in classroom instruction.
- teach the cooperating teacher new ag technologies.
- develop classroom management experiences/options.

- develop and teach integrated lessons with academic (core subject matter) teacher.
- develop a list of addresses of magazine subscriptions and catalogs used at the school so the student teacher can use them as a resource when they become a teacher.

Round II used the same Likert-type rating scale as in the previous round and Table 3 illustrates the outcomes. Part III of the Delphi questionnaire consists of the rating of 17 revised STE tasks. Thirteen STE tasks met consensus in Round II. The mean ranged form 3.15 - 4.06.

Table 3 illustrates the outcome of Part IV of the Delphi questionnaire rated eight new STE tasks developed from Round I suggestions. Seven of these new STE tasks met consensus. The mean ranged from 3.34 - 4.41. Twenty STE tasks met consensus and six EFE tasks were moved into the STE task list during Round II.

Round III provided three additional tasks for STE. Tables 3 and 4 illustrates the outcome of the ratings of Round III with the following results: three tasks met consensus and had a mean range of 4.19 - 3.69. Table 4 illustrates that four tasks were removed by the method of voting. The two remaining tasks that were left did not meet consensus and were removed from the task list. A total of 74 STE tasks met consensus during the three rounds.

The panel members provided valuable information throughout the entire process in their commentary, which will have an impact on future studies in the area of clinical experiences. This study has provided 110 tasks for clinical experiences. The overall response rate of 92% indicated the importance of this study for the panel members.

TABLE 4. Results of Round II & III – Delphi Vote

Round	Statement THE STUDENT WILL:	Move to STE	Leave in EFE	Do Away With This Task
II	set up laboratory demonstration at assigned school.	13	5	3
II	learn the components of a complete agricultural education middle and secondary school curriculum, including the scope, sequence and accountability measures.	16	5	
II	acquaint secondary students with the application of instructional technology in agriculture.	15	4	1
II	Identify state and national trends including pertinent legislative actions associated with agricultural education programs and education as a profession.	18	4	1
II	provide individualized instruction to students while supervising experience programs conducted by students.	13	5	8
II	develop a plan for a complete summer program in agricultural education.	17	5	
II	plan and conduct activities for FFA members during the summer months.	5	13	4
II	assist students in filling out FFA Foundation Awards.	7	11	1

TABLE 4 (Continued). Results of Round II & III – Delphi Vote

Mean	Statement THE STUDENT WILL:	Keep Task	Do Away With This Task
III	plan and conduct activities for FFA members during the summer months.	12	15
III	develop a plan for a complete summer program in agricultural education.	13	14
III	teach the cooperating teacher new ag technologies.	11	16
III	recruit students for agriculture class.	13	14

Chapter 5

SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS

This chapter contains the summary, conclusions, and recommendations that were generated from the findings of the study. The chapter is organized under the following headings: (1) Purpose and objectives of the study, (2) Summary of research procedures, (3) Summary and discussion of findings, (4) Conclusions, and Recommendations.

Purpose and Objectives

The purpose of this study was to build a task list for the clinical experience program, both early field and student teaching, for the agriculture teacher education programs in North Carolina, South Carolina, and Virginia.

The following specific objectives were established to guide the study in conducting this research:

1. Compile a list of clinical experiences, both early field and student teaching, that currently are provided in the clinical experiences for students of agricultural education in three selected teacher education programs.
2. Use an expert panel to determine what should be included in early field experiences and student teaching experiences for students enrolled in the agricultural education program.

Summary of the Research Procedures

A modified Delphi technique was used to generate a task list for clinical experiences, including both early field experience and student teaching experience. As a result of the panel members' variations in their familiarity with education methodologies and accompanying terminology, a modified Delphi approach was used to refine and narrow the data after the initial list of tasks was developed by the three cooperating agricultural education programs at land-

grant universities. The initial task list was developed by using the three cooperating agricultural education program's existing requirements for clinical experiences. The researcher combined similar tasks. To ensure the intent of the combined task were not altered the researcher formed a jury with one agricultural educator from each of the cooperating programs to ensure content validity and guard against researcher bias. Data were collected by three mailed questionnaires over a five-month period in 1999.

The population for this study consisted of 8 agricultural teacher educators, 9 agricultural education field staff, 790 agriculture teachers, and 278 secondary school administrators from North Carolina, South Carolina, and Virginia. The researcher selected these three states because they were already working together as a consortium on reinventing agricultural education for the year 2020. The researcher asked three teacher educators, one from each of the cooperating land-grant universities, to nominate experts from each of the categories from their state. Thirty-six experts were nominated and 34 agreed to serve on the panel.

In Round I, the panel of experts responded to the first questionnaire that contained the original list of tasks developed from the three cooperating agriculture teacher education programs at the land-grant universities. This questionnaire included:

1. 36 tasks for early field experiences (EFE),
2. a space for additional comments for EFE,
3. 62 tasks for student teaching experiences (STE),
4. a space for additional comments for STE and
5. questions to identify background information about the panel members.

In Round II, the researcher incorporated commentary for those tasks that did not meet consensus from Round I, the panel of experts responded to the revised task list. The questionnaire included:

1. 16 total tasks for early field experiences, for 9 of the items panel members were also asked to select from among 3 options: move to STE, leave in EFE, or do away with this tasks;
2. 6 new tasks for EFE developed from Round I;
3. 17 tasks in STE; and
4. 8 new tasks for STE developed from Round I,
5. a space for additional comments.

In Round III the panel of experts responded to a task list made up of tasks that did not meet consensus in Round II. The questionnaire contained 1) 12 tasks for EFE and STE, and 2) the option to vote to remove, or keep each task.

Data collected from the three questionnaires were analyzed using standard deviation and mean scores. The tasks were rated using a five point, Likert-type scale: 1 = strongly agree, 2 = disagree, 3 = not sure, 4 = agree and 5 = strongly agree. Consensus was met for this study if the standard deviation was equal to or less than one.

Summary and Discussion of Findings

Summary for Early Field Experiences

Of the 36 tasks listed in Round I, 20 tasks met consensus (see Table 2). As indicated by Shinn (1998), Round I in the modified Delphi technique will produce the greatest number of consensus items on important issues. Round I produced 422 additional comments. These comments were used to enhance the tasks that did not meet consensus in Round I.

Three themes arose from the comments. They were time, planning, and cooperation. Two groups, the agriculture teachers and secondary school administrators, seemed to echo these themes. However, these two groups felt 40 hours was too much time spent while teacher educators felt that 40 hours was the correct amount of time for the EFE experience. The commentary indicated that planning and cooperation were two practices that could not be separated. All four groups felt that planning and cooperation were vital and that they should occur before EFE. One example used was that EFE should be a contractual agreement between the student, agriculture teacher, teacher educator, and school administrator.

Round I produced six new tasks for EFE. The six tasks in EFE evolved around school, agriculture teacher, and state department of education. The new task are listed below.

The student will:

- Attend a local school board meeting
- Observe different teaching and learning styles.
- Identify motivation techniques used by teachers.
- Will develop a time schedule that meets the local agriculture teacher's approval on how and when the EFE is to be done.
- Discuss with the local agriculture teachers, how the local agriculture programs meet the State Department of Education requirements.
- Meet / interview vocational administrator, guidance counselors and department advisory committee.

In Round II, the panel members were asked to rate 16 tasks, seven met consensus. According to Hostrop (1975) and Linstone and Turoff (1975), the data should converge toward the majority opinion on Round II more so than any other round. The general consensus among comments received back from Round II was "all the EFE tasks are very important, however does the student have the time to complete all these tasks?"

Also, in Round II, the experts were given the opportunity to vote on nine EFE tasks. The experts could vote to, move the task to STE, leave the task in EFE, or delete the task. The reason for voting was because many of the comments received in Round I suggested moving certain tasks out of EFE into STE. Six tasks were moved to STE, one task remained in EFE and one task met consensus, (Tables 2 and 4).

Round III, produced three EFE tasks, which met consensus (Table 2). Table 4 indicates that one task was deleted from the task list by the method of voting.

Summary for Student Teaching Experiences

Of the 62 tasks listed in Round I, 44 tasks met consensus (see Table 3). As indicated by Shinn (1998), Round I in the modified Delphi technique will produce the greatest number of consensus items on important issues. Round I produced 545 additional comments. These comments were used to enhance the tasks that did not meet consensus in Round I.

Three themes arose from the comments. They were time, planning, and cooperation. Two groups, the agriculture teachers and secondary school administrators, seemed to echo these themes. During STE, the agriculture teachers and school administrators felt that the majority of time should be on “classroom teaching.” Teacher educators and field staff felt a mixture of teaching, FFA, and community activities should occur during the STE.

The commentary indicated that planning and cooperation were two practices that could not be separated. All four groups felt that planning and cooperation were vital and that they should occur before STE. One example used was that STE should be a contractual agreement between the student, agriculture teacher, teacher educator, and school administrator.

Round I produced eight new tasks for STE. These eight new STE tasks addressed the importance of planning, teaching, and interviewing. Listed below are the eight recommended tasks from Round I.

The student will:

- interview the local vocational director to determine procedures of personnel, financial and facilities management.
- plan, present, evaluate, and demonstrate teaching practices that are generally carried out in a laboratory setting.
- have a meaningful experience planning classroom instruction that will culminate with a laboratory activity.
- use new computer/agriculture technology in classroom instruction.
- teach the cooperating teacher new ag technologies.
- develop classroom management experiences/options.
- develop and teach integrated lessons with academic (core subject matter) teacher.
- develop a list of addresses of magazine subscriptions and catalogs used at the school so the student teacher can use them as a resource when they become a teacher.

During Round II, 17 of the revised STE tasks were rated, 13 STE tasks met consensus. Of the eight new tasks recommended by the panel members seven met consensus. According to Hostrop (1975) and Linstone and Turoff (1975), the data should converge toward the majority opinion on Round II more so than any other round. The general consensus among comments received back from Round II was "all the tasks are very important, however does the student have the time to complete all these tasks?" Another area of concern that came out of Round II was the adult education program and young farmer program. North Carolina does not have either of these programs and Virginia middle school agriculture teachers do not have these programs. Respondents from these two groups rated tasks associated with adult education and/or young farmers as a low priority.

Round III provided three additional tasks for STE, (Table 3). Three tasks were removed from consideration from the task list by the method of voting, (Table4).

To summarize the findings, According to Hostrop (1975) and Linstone and Turoff (1975), little additional movement toward consensus occurs after this round. With regard to panel movement toward consensus on the tasks, the greatest movement occurred between Round I and Round II. This phenomenon is similar to that reported by other Delphi studies (Hostrop, 1975). Minimal additional movement toward consensus was obtained between Round II and Round III as anticipated. According to Sutphin (1981) other studies have shown that after three round of the Delphi little to no movement toward consensus will be gained. A fourth round was not deemed necessary since minimal shift in panel perception was reported between rounds two and three. Of the tasks rated in Rounds I, II, and III, 111 of these tasks met consensus and were included on the task list.

It was evident, from the commentary that the Delphi panel struggled with the tasks they believed to be out of sequence, e.g. tasks listed in EFE that some members believed should be included in STE. According to one panel member, "you are getting the cart before the horse." Another replied with, "the student must crawl before he/she walks." The order of tasks became increasingly important to the panel members as the process progressed. One agriculture teacher suggested in his Round III comments that another study should be done to place the tasks in order of importance and to sequence them from easy to difficult. According to Anderson (1995), “Skinner believed most complex behaviors to be a sequence of responses, each response setting the context for the next. A complex behavior could be taught by beginning with the first step and teaching each element of the chain until the whole sequence was completed”, (p.23). The comments made during this study indicated that the tasks should be sequenced using the behavioral framework.

Conclusions

Based on the findings of this study, EFE and STE are essential components of the preservice program. The overall response rate of 92% indicated the importance of this study to the panel of experts. A comprehensive task list was compiled during the three rounds of the Delphi. The Delphi technique proved to be an excellent research technique for this type of study.

The task list developed during this study is a comprehensive list of tasks. This list should be flexible to meet the needs of the students and the agricultural programs involved in the implementation of the tasks. The task list will be beneficial for the planning, implementation, and evaluation of both types of clinical experiences. The primary concern echoed by all four groups during this process was the student's time. In order for the student to meet the demands of the tasks for early field and student teaching, they must have a detailed program of work. This

program of work must have input from the student, agriculture teacher, teacher educator, and secondary school administrators.

The task list can help university faculty members determine preservice course requirements for students enrolled in agriculture teacher education programs. In order for the student to accomplish the tasks during their clinical experiences, they must have an understanding of the following areas: curriculum development, learning styles, technical areas, teaching methods, teaching techniques, and academic integration methods.

The Delphi technique was an excellent method to obtain the objectives of this study. Since the Delphi technique was employed, slightly unequal balance between groups gave no individual or group an advantage in the decision and discussion process (Dybas, 1980). Each panel member discussed and provided feedback on the tasks that they supported strongly and/or disagreed with strongly.

Hastrop (1975) stated that "the Delphi technique is not a panacea for curing all of education's ills, nor is it a helpful method for making a quick decision" (p. 72). Round I was mailed on March 5, 1999 and the last questionnaire from Round III was received on July 16, 1999. The process took time to collect, revise, interpret data, and provided feedback to the panel. The task list developed by this process has the potential to enhance the requirements for clinical experiences required by the three cooperating departments of Agricultural Education. The tasks with a group mean of 4.0 or greater could be the starting point for each institution to build a strong clinical experience program for their students.

The findings of this study can provide an overall framework for clinical experiences. It can also enhance the nature of cooperation the institutions.

Recommendations

The recommendations listed in this section are based upon findings of this study and impressions gained by the researcher while conducting the study.

1. The agricultural teacher educators' profession should consider developing a general model with regards to the clinical experience components of the agricultural education program in the three-state area, while maintaining appropriate flexibility for local program adaptations. Tasks on which the Delphi panel attained consensus in this study could provide a basis upon which to build a model. Involving "experts" from teacher education, agriculture teachers, state field staff, and secondary school administrators would be useful in establishing credibility for a model guiding clinical experiences for agricultural education.
2. Teacher educators in each state involved in the study should take the findings of this study and consider formulating tasks that specifically address issues important to the future of agricultural education in the respective state. For example, North Carolina has no young farmer programs; the tasks addressing young farmer programs would not be appropriate for their students.
3. Each state involved in this study should consider using the tasks with a group mean of 4.0 or greater as a starting point in building the programs clinical experience component.
4. Agricultural educators should do future research on the task list compiled during this study. The commentary from the study suggested that additional research be conducted on the task list to establish the ranking of importance.

5. Graduate and undergraduate students should utilize the task list to form focal points for discussion and further study.
6. Replication of this study should be conducted on a national level.
7. Replication of this study should be conducted for the cooperative extension services in this region to determine the task needs of the extension program.
8. The agricultural education profession should develop specific efforts to continually study, discuss, and identify issues of importance in relationship to preservice curriculum and specifically clinical experiences.

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Appendix A

December 19, 1998

Dear

Thank you for agreeing to nominate experts from your state to serve on the Delphi panel, which will determine clinical experiences, needed for agricultural education.

For the purpose of this study, the following definition will be used to define expert: An individual who has supervised, worked with, instructed or been involved with field experience in regards to teacher education. Enclosed with this letter are the following items:

- Purpose and Objectives
- Table of the number of experts needed from each state

Please e-mail me with your nomination within two weeks. Include the number of the nominee, area of expertise, address and phone number.

Thank you again for your assistance.

Sincerely,

Thomas R. Dobbins
Graduate Assistant

DEPARTMENT OF BIOLOGY INSTRUCTION & AGRICULTURAL EDUCATION
College of Agriculture, Forestry & Life Sciences 109 Barre Hall Clemson, SC 29634-0325
864.656.3300 FAX 864.656.5675

Purpose and Objectives

The purpose of this study was to build a task list for the clinical experience program, both early field and student teaching, for the agricultural teacher education programs in North Carolina State University, Clemson University, and Virginia Tech.

The following specific objectives were established to guide in conducting this study:

1. Compile a list of clinical experiences, both early field and student teaching, that are currently provided in the clinical experiences for students of agricultural education in three-selected teacher education programs.
2. Use an expert panel to determine what should be included in early field experiences and student teaching experiences for students enrolled in the agricultural education program.

For the current study agricultural personnel in each of these states, nominated 12 experts to serve on the panel for a total of 36 members. Each state had 12 members; however, to ensure equal numbers the number that each state had in any category varied. Listed below are areas and numbers from each state:

Virginia

- 3 Teacher Educators
- 1 State Staff
- 4 Secondary Teachers
- 4 Secondary School Administrators

South Carolina

- 2 Teacher Educators
- 3 State Staff
- 4 Secondary Teachers
- 3 Secondary School Administrators

North Carolina

- 4 Teacher Educators
- 5 State Staff
- 1 Secondary Teacher
- 2 Secondary School Administrators

Appendix B

January 26, 1999

«Prefix» «FirstName» «LastName»
«OrganizationName»
«Address»
«City», «State» «PostalCode»

Dear «Prefix» «LastName»:

The program of Agricultural Teacher Education at Virginia Tech, North Carolina State University and Clemson University nominated you as an expert in the area of preservice clinical experiences, to participate in a research project. The research project will use the Delphi method to collect data. This method will be used to gain consensus on a task list for preservice clinical experiences needed by Agricultural Education students in a three-state area, North Carolina, South Carolina and Virginia. There should be no more than three rounds in this process. Each round should take you no more than one hour to complete:

Two questions must be answered before you accept or decline the opportunity to participate in the study:

The definition of expert as used by this study is: An individual who has supervised, worked with, instructed or been involved with field experience in regards to teacher education.

1. Do you consider yourself an expert of preservice clinical experiences for agricultural teachers?

2. Will you take the time out of your busy schedule to participate in this study?

Please review the following items attached to the letter:

- Purpose of the study
- Objectives of the study
- Definition of the Delphi Method
- Post card to be filled out or reply by e-mail to TDBBNS@CLEMSON.EDU

Thank you in advance for your consideration to serve on the panel.

Sincerely,

Thomas R. Dobbins
Graduate Student

Curtis D. White, Ph.D.
Clemson University

William G. Camp, Ph.D.
Virginia Tech

Barbara Kirby, Ph.D.
North Carolina State University

TRD:cps
Enclosures

DEPARTMENT OF BIOLOGY INSTRUCTION & AGRICULTURAL EDUCATION
College of Agriculture, Forestry & Life Sciences 109 Barre Hall Clemson, SC 29634-0325
864.656.3300 FAX 864.656.5675

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2. Use an expert panel to determine what should be included in early field experiences and student teaching experiences for students enrolled in the agricultural education program.

Modified Delphi

The modified Delphi is an abbreviated version of the Delphi method. It is efficient in both group decision making situations and in other areas where order of magnitude estimates are required (Helmer, 1983). A Delphi study carried to the extreme degree could be an expensive undertaking in both time and money on the part of the researcher and the respondents (Flanders, 1988). The “True” Delphi technique involves three or more rounds with a panel of experts. In round one, the respondents are asked to develop the survey items (Linstone & Turoff, 1975). Each round is time consuming, making it increasingly difficult to keep an acceptable response rate (Flanders, 1988).

The Delphi technique has often been modified to meet specific needs and to avoid the problem of respondent attrition (Cetron, 1969). It is common to limit the Delphi technique to two rounds instead of three or more to conserve resources and to encourage continued participation by the respondents. In such cases the researcher prepares the Delphi items for the first round or utilizes an existing instrument (Uhl, 1983). In a modified Delphi study the respondents react to the items rather than generate them, in effect eliminating one round (Flanders, 1988).

Appendix C

March 4, 1999

«Prefix» «FirstName» «LastName»
«OrganizationName»
«Address»
«City», «State» «PostalCode»

Dear «Prefix» «LastName»:

Thank you for agreeing to serve on the Delphi Panel in regards to clinical experiences for agricultural education. This panel consists of thirty-nine outstanding individuals in the field of education. Your work on this panel will add to the knowledge base for teacher education.

Again, thank you.

Sincerely,

Thomas R. Dobbins
Graduate Student

TRD:cps
Enclosure

DEPARTMENT OF BIOLOGY INSTRUCTION & AGRICULTURAL EDUCATION
College of Agriculture, Forestry & Life Sciences 109 Barre Hall Clemson, SC 29634-0325
864.656.3300 FAX 864.656.5675

March 5, 1999

Dear

Thank you for agreeing to serve on the Delphi panel. Enclosed please find the following items:

- Round I Questionnaire
- Self-Addressed, Stamped envelope
- A gift

I would appreciate your prompt attention to this questionnaire. I would like to have the questionnaires mailed back to me by March 20, 1999. I would like to encourage you to make as many comments as needed to get your point across clearly for each task. I will use the comment section to improve the tasks for Round II.

Thank you for agreeing to serve.

Sincerely,

Thomas R. Dobbins
Graduate Student

TRD:cps

DEPARTMENT OF BIOLOGY INSTRUCTION & AGRICULTURAL EDUCATION
College of Agriculture, Forestry & Life Sciences 109 Barre Hall Clemson, SC 29634-0325
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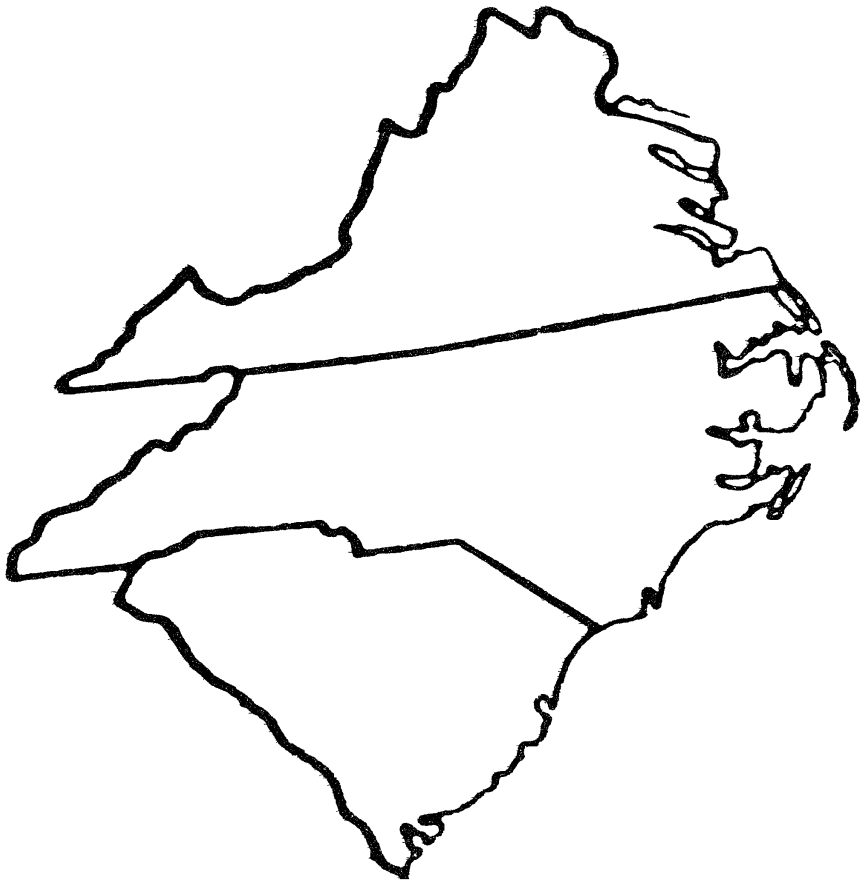
Building a Task List for Clinical Experiences for Agricultural Teacher Education Programs in North Carolina, South Carolina, and Virginia: Using a Delphi Technique



Delphi Panel Questionnaire
By

Thomas R. Dobbins
March 5, 1999

March 5, 1999

Dear Delphi Panel Member:

Thank you again for agreeing to serve on this very important Delphi panel. As a juror you will make a GREAT contribution to educational research in the area of clinical experiences.

Please fill out this questionnaire and return it to me in the self-addressed stamped envelope. I realize that you are very busy, however; it will speed up this process greatly if you can return this questionnaire within seven days.

If you rate an item NS = Not Sure, D = Disagree, or SD = Strongly Disagree, please give a reason why. **This will help me make round two more meaningful for you the panel members. Again, thank you so much for being on this panel.**

Sincerely,

Thomas R. Dobbins

Clinical Experiences for Agricultural Education Delphi Study

THOMAS R. DOBBINS

PART I: Early Field Experiences - **(EFE) are those that are characterized by careful planning, stipulated goals, required activities, projected performance levels, and evaluation of growth.**

Directions: Please rate the following statements in regards to early field experiences. Please feel free to make any comments regarding the statement in the space provided. Use the following rating scale:

EXAMPLE:

Rating	Statement	Your Comments
	THE STUDENT WILL*:*	
	have a 4.0 GPA before starting STE.	

1 = Strongly Disagree, 2 = Disagree, 3 = Not Sure, 4 = Agree, or 5 = Strongly Agree

Rating	Statement	Your Comments
	THE STUDENT WILL*:*	
	1. Visit the designated school site at least two times before beginning experience.	
	2. Observe high school agriculture classes during instruction.	
	3. Observe middle school agriculture classes during instruction.	
	4. Observe non-ag vocational classes during instruction.	
	5. Observe academic classes during instruction.	
	6. Complete and document a minimum of 40 clock hours of EFE.	
	7. Jointly plan EFE with local agriculture teacher and university professor, prior to EFE.	

1 = Strongly Disagree, 2 = Disagree, 3 = Not Sure, 4 = Agree, or 5 = Strongly Agree

Rating	Statement	Your Comments
	THE STUDENT WILL*:*	
	8. prepare written plan for obtaining experience and have approved by university professor and local agriculture teacher.	
	9. fill out relevant university forms.	
	10. learn grading system of assigned school.	
	11. observe assigned teachers style of teaching.	
	12. grade homework/tests for assigned teacher.	
	13. monitor class during testing.	
	14. conduct/observe assigned FFA meetings.	
	15. set up laboratory demonstration at assigned school.	
	16. perform tasks assigned by the agriculture teacher.	
	17. become familiar with type(s) of program(s) in the assigned school.	
	18. review the course of study and teaching calendar of cooperating teacher.	
	19. visit key people in the community and become familiar with the community.	

1 = Strongly Disagree, 2 = Disagree, 3 = Not Sure, 4 = Agree, or 5 = Strongly Agree

Rating	Statement	Your Comments
	THE STUDENT WILL*:*	
	20. assist students in filling out FFA Foundation Awards.	
	21. become familiar with agriculture teacher's role in public relations.	
	22. become familiar with Young Farmer Association.	
	23. give a report on activities conducted by secondary agricultural education teachers in assigned school.	
	24. provide individualized instruction to students while supervising agricultural experience programs conducted by students.	
	25. plan and conduct activities for FFA members during the summer months.	
	26. develop a plan for a complete summer program in agricultural education.	
	27. participate in professional development activities available to agricultural education teachers during summer months.	
	28. develop an understanding of the philosophy, goals, importance and relationship of agricultural education curricula within the local school.	
	29. identify state and national trends, including pertinent legislative actions, associated with agricultural education programs and education as a profession before starting EFE.	
	30. learn the components of a complete agricultural education middle grades and secondary school curriculum, including the scope, sequence, and accountability measures before starting EFE.	

1 = Strongly Disagree, 2 = Disagree, 3 = Not Sure, 4 = Agree, or 5 = Strongly Agree

Rating	Statement	Your Comments
	THE STUDENT WILL*:*	
	31. identify the characteristics of good teaching and of competencies required of agricultural education instructors in a world of changing agricultural technology before starting EFE.	
	32. acquaint secondary students with the application of instructional technology in agriculture during EFE.	
	33. promote a sensitivity for the needs of special populations and multicultural education; being sensitive to the educational needs of a rural population during EFE.	
	34. identify principles and teaching strategies involved in developing and conducting agricultural education programs including integration of basic skills and academics before EFE.	
	35. Plan, develop, and teach a micro-lesson to secondary or middle school agriculture students incorporating motivational strategies.	
	36. Develop evaluative procedures for use in strengthening agricultural education programs designed to meet student needs.	

PART II: Additional Comments for EFE

Directions: Please list any additional experiences not listed that you feel need to be added to the next round
of questions.

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PART III: Student Teaching Experiences

Directions: Please rate the following statements in regards to student teaching experiences (STE). Please feel free to make any comments regarding the statement in the space provided. Use the following rating scale:

1 = Strongly Disagree, 2 = Disagree, 3 = Not Sure, 4 = Agree, or 5 = Strongly Agree

Rating	Statement	Your Comments
	THE STUDENT WILL:	
	1. jointly plan the STE with the cooperating teacher and university supervisor.	
	2. plan, in conjunction with the cooperating teacher, a teaching calendar for the time period of the STE.	
	3. for at least part of the internship, have a full teaching load and perform all of the associated duties of a teacher.	
	4. clock a minimum of 150 hours of supervised classroom and laboratory teaching experience during the student teaching experience.	
	5. plan a series of related learning experiences designed to strengthen their professional and technical background during STE. As one component of this series of learning activities, you will observe a variety of teachers and teaching settings and analyze them as they provide implications for their own teaching and professional development.	
	6. conduct in-depth examinations of the community, school, fellow teachers, and students during their STE.	
	7. develop and demonstrate a reflective approach to professional practice during STE. (* reflective approach – after each day reflect back over the days activities and how to's)	
	8. maintain a daily and weekly journal of reflective exercises during STE.	
	9. participate in a post-internship seminar designed primarily to promote continued professional growth through reflective practice. (university)	

1 = Strongly Disagree, 2 = Disagree, 3 = Not Sure, 4 = Agree, or 5 = Strongly Agree

Rating	Statement	Your Comments
	THE STUDENT WILL:	
	10. demonstrate an acquaintance with the school and community as documented by the completion of specific activities and reports as required by university and secondary or middle school.	
	11. become familiar with the policies and procedures of the assigned local school's agricultural education department documented by the completion of specified activities and reports required by the Agricultural Education Department.	
	12. observe the teaching techniques of the cooperating teacher in both secondary and adult instruction and complete a teaching observation report for each observation.	
	13. demonstrate appropriate methods and techniques for group, small group, and individual instruction as demonstrated by an approved state evaluation instrument and an oral evaluation of the teaching/learning activities.	
	14. develop and use instructional aides to match the learning environment and learning needs of individuals and groups.	
	15. demonstrate special methods and techniques for adult learners in both group and individual instruction.	
	16. develop a curriculum framework for the community in which the preservice teaching will be performed.	
	17. compare and contrast the development of adolescents and adults, and identify effective instructional strategies to meet individual and group learning needs.	
	18. demonstrate effective communications with students, peer teacher, parents, and community leaders substantiated by the completion of specific written documents and reports as required by the agricultural education program.	
	19. keep accurate records and prepare appropriate reports as requested by the cooperating teacher, cooperating school district, and/or Agricultural Education Department.	

1 = Strongly Disagree, 2 = Disagree, 3 = Not Sure, 4 = Agree, or 5 = Strongly Agree

Rating	Statement	Your Comments
	THE STUDENT WILL:	
	20. demonstrate positive public relations through planned publicity for the assigned agriculture program and students. Public relations should not be limited to youth leadership recognition. Documentation should include media releases, photographs, and work samples.	
	21. plan, manage and evaluate school and community services such as the greenhouse, land laboratory or other community resources as documented by the completion of specific activities and reports.	
	22. evaluate the local Agricultural Education Department including the secondary and adult instructional programs as documented by the completion of specific activities and reports as required by the agricultural education program.	
	23. plan and deliver effective instruction about agriculture to secondary or middle school students.	
	24. conduct in-depth case studies of students, including students identified as having special needs.	
	25. supervise student agricultural experience programs (SAE).	
	26. plan and conduct activities with a non-vocational teacher designed to integrate core courses and agricultural education.	
	27. observe and evaluate an adult class being taught using an approved evaluation form by agricultural education.	
	28. assist the cooperating teacher(s) in planning an adult course of study.	
	29. recruit five members for an adult agriculture class.	

1 = Strongly Disagree, 2 = Disagree, 3 = Not Sure, 4 = Agree, or 5 = Strongly Agree

Rating	Statement	Your Comments
	THE STUDENT WILL:	
	30. observe and evaluate an adult class being taught.	
	31. plan and conduct agriculturally related programs for adults.	
	32. teach an adult class.	
	33. advise the young farmer chapter at one meeting.	
	34. perform non-instructional duties that may be assigned to the cooperating teacher(s).	
	35. self-evaluate their performance as a teacher using an approved form issued by the agricultural education program.	
	36. conduct a case study on a secondary or middle school agricultural student	
	37. advise the local FFA Chapter or an approved youth leadership organization to include the plan of activities, meetings, special activities, and achievement recognition as documented by the completion of specific activities and reports.	
	38. coach a team or an individual for a career development event (CDE).	
	39. plan FFA week activities.	
	40. supervise the completion of one award application for FFA or approved youth group.	

1 = Strongly Disagree, 2 = Disagree, 3 = Not Sure, 4 = Agree, or 5 = Strongly Agree

Rating	Statement	Your Comments
	THE STUDENT WILL:	
	41. establish one student's cooperative work experience contract.	
	42. conduct an agribusiness case study.	
	43. grade student SAE record book.	
	44. complete one State Department of Education form in relation to agricultural education.	
	45. attend the agriculture advisory council meeting for their assigned program.	
	46. recruit students for agriculture classes.	
	47. review the permanent records of five students in their agriculture classes.	
	48. interview one guidance counselor – discuss Agricultural Education and guidance programs.	
	49. examine an Individualized Instruction Plan (IEP) and discuss with a special needs teacher.	
	50. interview a social case worker in relation to classroom activities for special needs students.	
	51. tutor a special needs student.	

1 = Strongly Disagree, 2 = Disagree, 3 = Not Sure, 4 = Agree, or 5 = Strongly Agree

Rating	Statement	Your Comments
	THE STUDENT WILL:	
	52. meet professional agriculture personnel in community.	
	53. meet local mass media representatives.	
	54. write a newspaper article in regards to the assigned agriculture program.	
	55. live in community while student teaching.	
	56. participate in civic activities in the assigned location.	
	57. attend school faculty meeting in the assigned school.	
	58. teach a class in another department in the assigned school.	
	59. become a member of a professional organization that has ties with agricultural education.	
	60. attend an area or district Agricultural Education meeting.	
	61. hold a mock job interview with a school administrator.	
	62. read professional journals.	

PART IV: Additional Comments for Student Teaching

Directions: Please list any additional experiences not listed that you feel need to be added to the next round of questions.

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PART V: Background Information

Directions: The following are general demographic items regarding agricultural educators who have been involved with clinical experiences for students of agricultural education. Please CIRCLE the appropriate response or FILL IN the information in the blank provided. All information will be held in the strictest of confidence.

1. What is your age (as of January 1999)? _____ years

2. Professional experience (as of January 1, 1999).
   Public School Teaching _____ years
   Public School Administration _____ years
   University Teaching _____ years
   Other Professional Experience _____ years

3. What is your gender?
   a. Male b. Female

4. What is the highest level of education you have completed?
   a. BS Degree
   b. Masters Degree
   c. Educational Specialist
   d. Doctorate

5. Please indicate your current position:
   a. Secondary Agriculture Teacher
   b. State/Field Staff – Agricultural Education
   c. Administrator – Secondary Education
   d. Teacher Educator

Appendix D

March 22, 1999

«Prefix» «FirstName» «LastName»
«OrganizationName»
«Address»
«City», «State» «PostalCode»

Dear «Prefix» «LastName»:

This letter is in regards to the Round I questionnaire mailed on March 5, 1999. If you have not received the questionnaire, please notify me immediately. If you have already completed and mailed, please accept my gratitude. However, if you have not completed the questionnaire, please do so at your earliest convenience. Thank you again for your assistance.

Sincerely,

Thomas R. Dobbins
Graduate Student

TRD:cps

DEPARTMENT OF BIOLOGY INSTRUCTION & AGRICULTURAL EDUCATION
College of Agriculture, Forestry & Life Sciences 109 Barre Hall Clemson, SC 29634-0325
864.656.3300 FAX 864.656.5675

Appendix E

CLEMSON
UNIVERSITY

April 21, 1999

«Prefix» «FirstName» «LastName»
«OrganizationName»
«Address»
«City», «State» «PostalCode»

Dear «Prefix» «LastName»:

Thank you very much! You are great! The response to Round I of the Delphi study was 92%. Because of your response this will be a very beneficial research project. Not only did you respond, but you also gave good comments and recommendations.

Round II - Enclosed is the list of tasks that met consensus. (This researcher decided that consensus was met if the standard deviation was less than or equal to one). The tasks that did not meet this standard were restated using suggestions that you made. These suggestions are included in this packet.

Please rate these tasks as indicated on the scale. **Early Field Experiences** section has 9 tasks that allow you to "vote" to move this task to the student teaching section. The reason for this is due to your suggestions to move the task. Also included is the "New" area, which are your recommendations. Please rate these items using the same scale.

Your ratings of Round I along with the mean and standard deviation are included. Please compare your rating. If you feel very strongly about task either strongly agree or strongly disagree, please state your concern.

There were numerous comments on preparing the student in the area of lesson plans and curriculum. These areas should be addressed before student teaching; however, make sure that each Agricultural Teacher Education Program is informed of your concern.

Again, thank you and I look forward to receiving the results of Round II.

Sincerely,

Thomas R. Dobbins
Graduate Student

TRD:cps
Enclosure

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