

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

Thomas R. Dobbins
Clemson University
W.G. Camp

Virginia Polytechnic Institute and State University

Abstract

The purpose of this study was to build a task list for the clinical experience program 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%.

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.

Introduction /Theoretical Framework

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.

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)

The report found that agricultural literacy programs were not available for those preparing to teach, other than for individuals entering vocational education careers.

Agricultural 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.

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. 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.

Background

The focus of this study was 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 used behavioral learning theory, in particularly mastery learning, as its 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.

Fosnot (1996) outlined one aspect of behaviorism as it applies to instruction as "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).

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 & Crunkilton, 1984). Vocational education uses behaviorist 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.

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.

Methods/ 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 editorially 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 1). 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 in Round I. 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.

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.

Round III, produced three EFE tasks, which met consensus (Table 1).

Summary for Student Teaching Experiences

Of the 62 tasks listed in Round I, 44 tasks met consensus (see Table 2). As indicated by Shinn (1998), Round I in the modified Delphi technique can be expected to 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.

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 2).

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. The comments made during this study indicated that the tasks should be sequenced using the behavioral framework.

Table 1. 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.
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.

Table 1. Tasks That Met Consensus For Early Field Experience

Mean	Stan Dev	Round	Statement
			The student will:
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.
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	monitor 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.

Table 2. Tasks That Met Consensus For Student Teaching Experience

Mean	Stan Dev	Round	Statement
			The 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.
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 local FFA Chapter or an approved youth leadership organization to include the plan of activities, meetings, 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.

Table 2. Tasks That Met Consensus For Student Teaching Experience

Mean	Stan Dev	Round	Statement
			The student will:
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.
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.
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.
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/agric tech 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.

Table 2. Tasks That Met Consensus For Student Teaching Experience

Mean	Stan Dev	Round	Statement
			The student will:
4.29	0.64	I	grade student SAE record book.
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.
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.
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 assigned

Table 2. Tasks That Met Consensus For Student Teaching Experience

Mean	Stan Dev	Round	Statement
			The student will:
			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.
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.

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 comprehensive. 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.

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. 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.

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. Agricultural teacher educators should consider developing a general model for the clinical experience components of the agricultural education program in the three-state area, while maintaining appropriate flexibility for local program adaptations. 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.
2. 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.
3. Replication of this study should be conducted on a national level.
4. 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.

References

Aldrich, D.G. (1988). Committee on agricultural education in secondary schools. Understanding Agriculture: New Directions for Education. Washington, DC: National Academy Press.

Camp, W. G., & Bailey, B. F. (1999). Student teaching in agricultural education. Proceedings of the annual conference of the southern association of agricultural scientists. Memphis, Tennessee.

Camp, W. G., & Crunkilton, J. R. (1985). History of agricultural education in America: The great individuals and events. The Journal of the American Association of Teacher Educators in Agriculture, 28(1), 57.

Dybas, A. (1980). A Delphi approach to industrial arts teacher education electronics curriculum identification. Unpublished doctoral dissertation, The Ohio State University.

Fosnot, C. T. (1996). CONSTRUCTIVISM: Theory, perspectives, and practice. New York: Teachers College Press.

Gagne, R. M., & Driscoll, M. P. (1988). (I) Essentials of learning for instruction (2nd Ed.). Upper Saddle River, New Jersey: Prentice Hall.

Herring, D. R., & Norris, R. J. (1987). Shaping the future of vocational agriculture. The Agricultural Education Magazine, 60(4), 20-23.

Hostrop, R. (1975). Managing education for results. Homewood, IL: ETC Publications.

Linstone, H. A., & Turoff, M. (Eds.). (1975). The Delphi method: Techniques and applications. Reading, MA: Addison- Wesley.

McGhee, M. B., & Cheek, J. G. (1989). Assessment of the preparation and career patterns of agriculture education graduates. 1975-1985 Proceeding of the Sixteenth National Agriculture Education Research Meeting Southern Region Agriculture Education Conference (pp. 20-29), Orlando, FL.

McLean, R. C., & Camp, W. G. (1998). Exemplary agricultural teacher education programs in the United States. Proceedings of the annual conference of the Southern Association of Agricultural Scientists, Little Rock, Arkansas.

Schwartz, B. (1978). Psychology of learning and behavior. New York: W. W. Norton and Company, Inc.

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

A Critique

Carol A. Conroy
Cornell University

Dobbins and Camp identified an area of concern to teacher educators in agriculture, that of what tasks should be incorporated into pre-service clinical experiences. The authors identified a need for changes in how teachers are prepared, but could have provided more rationale. The Introduction and Background sections of the paper did not make a case as to why this study was important, and what it contributes to participating programs.

My initial reaction to the use of behaviorism as the theoretical framework for the study was concern; however, in examining the purpose of this study, it is appropriate. The authors could have enhanced the presentation of the theoretical framework by showing how it fit the objectives of the study. I would suggest that we need to re-examine the purpose of the clinical experience and how reflective models (Dewey, Mezirow) can be adapted to agriculture, given our movement to more science-based instruction.

The Methods selected to conduct this study seem appropriate, but they are not clearly outlined and are difficult to follow. It would have been helpful to describe events in chronology, particularly the development of the initial tasks lists as preliminary to the data collection, and the determination of consensus. I was not certain how comments were utilized to change non-consensus items for the next round. Also, there is an error in reporting the Likert scale, but I assumed meaning from the context.

The results are presented in a fairly straight-forward manner and it is unlikely that the authors could have avoided the use of lengthy tables. Results are easy to read, and the materials flow well. This section would have been enhanced with more in-depth discussion of the results in the context of the theoretical framework and literature related to changes in teacher education. As written, it was not easy to make linkages between the data and the front sections of the paper. Also relating the results of the study to RAE 2020 consortium activities would have provided insight into some of the vision the three states have for teacher education.

Recognizing that I might be pushing beyond the intentions of the study, I would ask the authors to consider the following questions, which have implications for how the results are utilized:

- The task lists are extensive and complete, and behaviorally sound. Activities and observations ensure a solid clinical experience. What is in place to ensure reflection on activities, their broad meanings, and how the "learnings" transfer to a new situation?
 - Is there room for a more constructivist approach to the preservice clinical experiences?
- All in all, I commend the authors for providing us with a useful tool when considering the design of preservice clinical experiences.