PERCEIVED EDUCATIONAL NEEDS/PLANS OF OKLAHOMA AGRICULTURAL EDUCATION TEACHERS

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CHAPTER I

INTRODUCTION

Due to rapidly changing times, agricultural education teachers (hereafter referred to as teachers) are consistently faced with the task of updating their skills and competencies. Two traditional methods to satisfy these needs have been non-formal (in-service) and formal (graduate college) education. However, a need has been documented for instituting a different approach. Castetter (1981) contended that value trends in personnel development were moving away from in-service training and moving toward staff development. Also, values and trends were moving away from strictly formal approaches, toward a combination of both formal and non-formal approaches.

In the past, non-formal educational methods were often employed to enhance the technical competence and classroom skills of the teachers. A few of the non-formal teaching methods utilized were workshops, clinics, and seminars. Individuals who delivered this non-formal instruction were university faculty, state extension specialists, department of vocational-technical staff, and secondary agricultural education teachers.

Generally, the formal educational methods have been delivered by university faculty at on-campus sites. Graduate degrees such as the Master of Agriculture, Master of Science, Education Specialist, and the Doctorate have been obtained by many teachers in Oklahoma.

A majority of the teachers chose to take graduate courses in various disciplines in the Colleges of Agriculture and/or Education. In the College of Agriculture, courses taken in the disciplines of Agricultural Education, Agricultural Economics, and Agronomy have been popular. As well, in the College of Education courses in the disciplines of Educational Administration, Curriculum and Instruction, Occupational and Adult Education, and Applied Behavioral Sciences have been favored.

Traditionally, graduate level courses have been taken by the teachers to fulfill personal and/or professional needs. However, many teachers have been unable to pursue graduate studies. A limiting factor for many of these teachers appeared to be the distance from their home to campus. This distance factor limited many teachers to take courses only in the summer session. As well, job related activities prevent many teachers from pursuing graduate course work during the summer months.

Public school systems in Oklahoma, as in many other states, appeared to be pressed to find time and funds for freeing their personnel for professional development. Castetter (1981) asserted that school systems have previously been faced with the task of finding time, other than in the summer months, to free their personnel for updating their competencies. However, the author noted that progressive school districts have found a solution to this problem. Many schools subsidize the time of personnel in the form of paid leave of absence, time off with pay, or time off during the school day without extra pay.

Teachers have encouraged Oklahoma State University to offer courses at more opportune times and locations. The Oklahoma Department of Vocational and Technical Education allows the teachers three weeks annual leave for professional improvement in lieu of two weeks for a personal vacation. The Agricultural Education Department at Oklahoma State University teaches two and three week block courses to accommodate the teachers during the summer semester. Numerous teachers move to the Stillwater area and take as many graduate courses as they can during this time frame. For various teachers, summer session courses were the only opportunities to take courses for graduate credit. Pursuing graduate studies during the summer session only may deter teachers from obtaining an advanced degree.

Rationale for the Study

The Oklahoma State University (OSU) and the Oklahoma Department of Vocational and Technical Education needed to know more about the educational needs and/or plans of the teachers in order to be a "better job" of meeting the educational needs of the teachers. It was determined that based upon the input of the teachers, recommendations could be shared with the following educators and/or administrators: (1) the state director and the supervisory staff of the Oklahoma Department of Vocational and Technical Education (Agricultural Education Division); (2) The associate dean of academic programs; and (3) Faculty members from the Agricultural Education and Educational Administration departments; and (3)

Selected department heads in the Colleges of Agriculture and Education.

Upon determining the teachers needs, sufficient program modifications perhaps could result in an increased enrollment in the Graduate College and the concomital obtaining of advanced degrees by the teachers would result. Also, specific topics for in-service education courses that keep the teachers up-to-date and competent in regard to technical and/or teaching skills, could be determined. Finally, it was further anticipated that specifically designed courses which are congruent with the new Agricultural Education curriculum could be developed and offered which would enhance the teachers technical and/or teaching skills.

Statement of the Problem

Due to the recent modernization (revision and/or implementation of new curriculum) of agricultural education programs in the public schools by the Oklahoma Department of Vocational and Technical Education's Division of Agricultural Education and concurrently with a genuine interest of the Graduate College, College of Agriculture, and College of Education at Oklahoma State University to respond to the educational plans and/or needs of those teachers who teach agricultural education, it was deemed to be essential to conduct research which would enable the aforementioned to determine specifically which academic disciplines and/or courses and/or graduate degree programs would be of most benefit to the teachers. Furthermore, to enable the aforementioned an opportunity to

determine the time of day(s) and specific day(s), week(s), etc. which would be most convenient for them to attend courses, workshops, and/or in-service meetings. Finally, to enable the aforementioned to determine form among all current traditional or advanced methods of delivery systems, the most appropriate teaching delivery method in order to meet the educational needs of the teachers.

Purpose of the Study

The purpose of this study was to determine the perceived educational needs/plans of Oklahoma Agricultural Education teachers.

Objectives of the Study

The following specific objectives were developed in order to accomplish the purpose of this study:

1. To determine the current status and intention concerning graduate study, as well as to determine the degree program the teachers are likely to pursue or are currently pursuing, and more specifically to determine when they may pursue graduate studies.

2. To determine which specific public school administrator certification programs that teachers may be pursuing, as well as specific topics relative to enhancing the technical competence and teaching skills of the teachers that could be most beneficial to them as part of their graduate studies and/or in-service education.

3. To determine the level of benefit of Agricultural Education course topics as perceived by the teachers, both personally and/or

professionally.

4. To determine the level of agreement or disagreement as perceived by the teachers relative to predetermined statements which indicate their reason for pursuing graduate study.

5. To determine the teachers' perceptions pertaining to specific inhibitors which may cause them to not pursue a graduate degree.

6. To determine the teachers' perceptions pertaining to:

   a. The instructional delivery methods for graduate courses that are of most interest to them;

   b. The time schedules that would be most convenient to them pertaining to formal course work;

   c. The course length that would be most appealing to them pertaining to graduate studies;

   d. Whether or not they are interested in intersession courses;

   e. The maximum distance they would be willing to drive (one-way) to attend formal courses;

   f. The number of days per week they would be willing to drive to Stillwater to attend formal courses; and

   g. The level of competence for each new Agricultural Education curriculum area and more specifically if a graduate course should be offered to enhance technical competence.

7. To determine a city or town within each Agricultural Education Supervisory District that the teachers would be willing to commute to in order to receive off-campus instruction.

8. To determine how Oklahoma State University (OSU) can be of better service to the teachers.

9. To elicit selected demographic information which will enable the researcher to characterize the typical respondent.

Assumptions of the Study

For the purpose of this study the following assumptions were accepted:

1. The questionnaire developed would elicit the information needed to satisfy the objectives; and

2. All the teachers fully understood the questions asked and responded in a genuine manner which was both honest and sincere.

Scope of the Study

The scope of this study included all (442) teachers, under public school contracts, teaching agricultural education courses in Oklahoma during the academic school year, 1990-1991.

Definition of Terms

The following terms are presented as applied to this study.

1. Agricultural Education Teachers - Refers to those individuals who teach junior high and secondary level agricultural education courses in Oklahoma public schools.

2. Non-Formal Education - Refers to those courses taken where graduate credit is not awarded.

3. Formal Education - Refers to those courses taken in which graduate college credit is awarded.

4. Workshops - Refers to non-formal educational delivery formats in which the students work cooperatively to solve problems.

5. Degree Program - Refers to a formal contract, between the student and the graduate college, that details a list of courses that the student intends to pursue.

6. Master of Agriculture - Refers to a specific degree program with three option areas. The three option areas are as follows: (1) Option "A" - 32 approved semester credit hours of work including a formal report; (2) Option "B" - 36 approved semester credit hours of work including a creative component; and (3) Option "C" - 36 approved semester credit hours of work, which includes six hours of credit for a professional internship.

7. Master of Science - Refers to a degree program that requires 30 approved semester credit hours of work, which includes six hours for a formal thesis.

8. Educational Specialist - Refers to a degree program that requires 60 hours of approved semester hours beyond the Bachelor's degree.

9. Doctorate - Refers to a degree program that requires 60 hours of approved semester credit hours beyond the Master's degree.

10. Intersession - Refers to two time frames between university semesters. The approximate time frames of the intersessions are as follows: (1) between the Fall and Spring semesters (late December through early January) and (2) between the Spring and Summer semesters (late May).

11. Delivery Methods - Refers to potential and current mediums and approaches available for course instruction.

12. Inhibitors - Refers to financial, personal and/or institutional items that may deter a teacher from pursuing their formal education.

13. Agricultural Education Supervisory District - Refers to five geographic areas in the State of Oklahoma that agricultural education programs have been segregated into.

14. Teaching Skills - Refers to those topics that are designed to improve the classroom instruction, as well as those factors which directly relate to duties of an agricultural education teacher (classroom/time management, audio/visual operation, student recruitment, etc.).

15. Teaching Competence - Refers to those topics that are specifically designed to enhance technical skills and competencies (using computers, beef production, forestry production, marketing strategies, etc.) of teachers.

16. Pubic School Administration/Certification Programs - Refers to the graduate level offerings leading to certification as a public school administrator (elementary school principal, high school principal and superintendent of schools), school counselor, and

school psychologist.

17. Alternative Campus - Refers to locations for courses other than the parent campus at Stillwater. Examples of locations are as follows: The University Center at Tulsa, OSU Tech in Oklahoma City, and Area Vocational and Technical Schools throughout Oklahoma.

18. Oklahoma Higher Education Television Instruction System - Refers to a delivery method that is often referred to as Talk Back Television. Students can receive instruction by commuting to more than the 64 receiving sites throughout Oklahoma.

19. Satellite Instruction - Refers to a delivery method that is offered to students in which the student can pick up lectures, via the use of electronic transmission received at a distant site by a satellite dish.

20. Open Entry Open Exit Format - Refers to a delivery format which is similar to an ongoing problems course. The students could enroll and complete the course at any point during an academic year/term.

21. Interactive Video - Refers to a delivery method in which courses or lessons are preprogrammed on VCR tapes and microcomputer software. The students respond to questions and problems by utilizing a microcomputer that is linked to a VCR.

22. Traditional Delivery System - Refers to a format or a medium of instruction that has been utilized in the past to bring instruction to graduate students. An example would be a lecture course taught at the parent campus.

23. In-service - Refers to a type of non-formal educational teaching method that enhances the classroom skills and technical competence of teachers.

24. Electronic Mail - Refers to an instructional delivery system in which the teacher(s) and the student(s) communicate through the use of computer modems.

CHAPTER II

REVIEW OF LITERATURE

Due to rapidly changing times, agricultural education teachers (hereafter referred to as teachers) were faced with the task of updating their skills and competencies. Two ways teachers have previously addressed this problem were through formal and non-formal education. A review of literature was undertaken to form a foundation for the purpose and objectives of the study. If the educational needs of the teachers were to be met, a rational investigation of various educational components was warranted.

This review of literature was divided into six major sections. The sections were adult education, formal education, educational delivery approaches of universities, innovative delivery methods at Oklahoma State University, distance education and computerized instruction, and inservice as non-formal education.

Adult Education

Teachers appear to be faced with diverse educational needs. As adult learners, it was therefore warranted to investigate certain elements of adult education in order to better understand the educational needs of the teachers. The various subheadings were included in order to provide a detailed look at adult education. The subheadings addressed the following topics: (1) the definition of adult education; (2) the philosophy of adult education; (3) the

psychology involved with adult education; (4) the development of educational programs for adults; (5) the reasons adults participated in educational activities; and (6) the barriers that inhibited adults from participating in educational activities.

Definition

The teachers were classified as adult learners. However, before various adult activities were discussed, a definition for adult education was secured. "Adult education is concerned not with preparing people for life, but rather with helping people to live more successfully" (Darkenwald and Merriam, 1982, p. 9). The two authors further advanced that the functions of adult education were: (1) to assist adults to increase their competence; (2) to negotiate transitions in their social roles (worker, parent, retiree, etc.); (3) to help them gain greater fulfillment in their personal lives; and, (4) to assist them in solving personal and community problems.

Andragogy was referred to as the study of how adults learn. Many educational philosophers support the andragogy philosophy. The andragogy philosophy asserted that adults and children learn differently. Knowles (1980) defined andragogy as the art and science of helping adults learn. The author stated that andragogy was grounded on four assumptions. The four assumptions were:

> (1) As a person matures his or her self-concept moves from one of dependent personality toward one of a self-directed human being; (2) An adult accumulates a growing reservoir of experience, a rich resource for learning. For an adult, personal experiences establish self-identity and are highly valued; (3) The readiness of an adult to learn is closely related to the

> developmental tasks of his or her social role; and (4) There is a change in time perspective as individuals mature, from one of future application of knowledge to immediacy of application; thus an adult is more problem centered than subject centered in learning (pp. 144-145).

Yet another definition of andragogy was offered by Donaldson and Scannell (1986). The two authors stated that "andragogy refers to the art and science of helping adults learn" (p. 101). Donaldson and Schannell reported that there were five andragogical theories of learning which made the following assumptions about adults: (1) The need to know - adults must understand the importance of the need to know; (2) The need to be self-directing - adults need to take responsibility for their own lives; (3) Experience - adults can help each other learn; (4) Readiness to learn - adults must know why a particular topic or session was included and why they were expected to learn a new skill, knowledge, or attitude; and, (5) Orientation to learning - real world attitudes and value relationships must be established.

Philosophy

After a definition of adult education was secured, a glance at the philosophical understanding of adult education was undertaken. Webster (1975, p. 854) defined philosophy as "an analysis of the grounds of and concepts expressing fundamental beliefs." An educator's attitude, choice of content and methodology, view of the learner and of the teacher; locally evolves from what one considers to be the overall purpose of the educational process (Darkenwald and

Merriam, 1982).

Darkenwald and Merriam (1982) discussed five philosophical emphases that were relative to content, the role of the teacher and learner, and the nature of the instructional process. The five emphases were: (1) the cultivation of the intellect (behaviorism); (2) personal development (humanistic/existential); (3) personal development and social progress (progressivism); (4) radical social change (value-laden); and, (5) organizational effectiveness.

The authors suggested that the progressive view of adult education was reflected by the major proportion of American educational philosophers. In this view, the aim of adult education was both personal development and social progress. The content of these courses appeared to be drawn from life situations, the preferred method was problem solving, and teachers and learners were partners in the task of learning.

Miller (1986) utilized the term pragmatism interchangeably with progressivism. Miller suggested philosophy should ask three fundamental questions. The questions were: (1) What is real (ontology); (2) What is true (epistemology); and (3) What is good (axiology). The author contended, relative to answering the three questions, that vocational education had strong ties in the pragmatic philosophy. According to the author, the pragmatist avowed that reality (ontology) was what we usually experience in life and that the learner and teacher were subject to change. As well, it was suggested that truth (epistemology) was tentative. Tentative truth was open-ended and ongoing, subject to error, and in

need of continuous re-evaluation. Finally, axiology (values) suggested that the person, society, and schools were inseparable. Learning by doing and preparing for life was the fundamental goal of education.

Psychology

Webster (1975, p. 923) defined psychology as "the study of mind and behavior in relation to a particular field of knowledge or activity." Darkenwald and Merriam (1982) described three psychological camps that educators follow. The three psychological camps were the behaviorist psychologist, gestalt psychologists, and cognitive theorists. According to Sherrod (1982) behaviorism was based on the assumption that people engaged in behavior in order to gain rewards or avoid punishment. Sherrod further advanced that the gestalt theory was based on the assumptions that people tend to organize their sensory perceptions of the world into orderly and meaningful patterns, even though the patterns may not necessarily exist.

Darkenwald and Merriam's (1982) description of the three groups were as follows: (1) the common point of reference for all behavioral psychologists was the attempt to explain a phenomena, particularly those of learning and motivation, in terms of the connection between stimuli and observable responses; (2) the gestalt psychologists would see life steadily and see it whole, rather than in individual parts; and (3) the cognitive theorists seek to understand the mental process or the thinking process of the

learner.

An example of the different learning philosophies of adults was offered by Whitbourne and Weinstock (1979). The two authors asserted that adults returning as students in graduate school were often very different in their approaches to their education as compared to students who have progressed straight through their education without involvement in the real world.

Program Development

The difference between training and education was directly related to the difference between formal and non-formal education. Nadler (1970) injected a time dimension to alienate the design of training and education. Training was to improve performance on the job the employee was presently holding. Education was based on the notion that the employee seeks education to secure a place in the organization, which is different from the one he or she previously held.

Nadler (1970) further advanced that program development was a broader design than education and training. The design of program development was to produce a flexible work force that could move with the organization as it developed, changed, or grew.

According to Darkenwald and Merriam (1982), program development was one of the four basic functions in adult education. The other three were instruction, counseling, and administration. Program development involved assessing learner needs, setting objectives, selecting learning activities and resources for learning, making and

executing decisions necessary for learning activities to take place, and evaluating outcomes.

While evaluating the professional competencies of teachers through continuing education, Blanton (1972) recommended that program developers integrate both technical programs and pedagogy programs to make them both more palatable and relevant. The author asserted that teachers were easily motivated to gain technical information, however, they appeared to be less motivated to study social sciences and pedagogy.

Darkenwald and Merriam (1982, p. 152) stated that "settings or contexts of adult education comprise a continuum, one end of which can be labeled highly informal and the other highly formal." The highly formal settings were those taught by people who were employed by colleges and members of professional organizations. The highly informal settings occurred in natural social settings and were perceived to be less urgent and serious.

Participation

"Participation is central to theory and practice in adult education because the great majority of adults are voluntary learners" (Darkenwald and Merriam, 1982, p. 117). The two authors advanced that educators must meet the individual needs and adopt programs and practices to the unique requirements and preferences for adult clientele. The effectiveness and the survival of educational programs was dependent on a thorough understanding of the needs, problems, attitudes, and preferences of its clienteles

and potential clienteles.

The two authors cited six factors concerning adult students' participation in educational programs. The first factor was the "who." The "who" was based on age, income, race, and schooling-the affluent, well educated participants were more likely to participate in adult education than others. The second factor was "trend"-the aging population will lead to increased participation in adult education. The third factor was "what adults learn"-freedom of choice in adult education was the major characteristic. The fourth factor was "locations for learning"-adults attended classes not only in school buildings, but in churches, homes, and hospitals. The fifth factor was "methods of learning"-methods that were employed almost solely in adult education included correspondence studies, on-the-job training, short term conferences, institutions, and workshops. The final factor was the "reasons for learning"-the major reasons for learning were to improve occupational performance and to enhance competence or satisfaction.

Houle (1961) expanded on the reasons for learning and identified three types of adult learners. These typelogies were the goal oriented, the activity oriented, and the learning oriented students. The goal oriented students were those who used education as a means of accomplishing fairly clear-cut objectives. The activity oriented students were those who participated because they liked to be active. The learning orientation students seek knowledge for its own sake.

Barriers to Participation

The two most frequently cited barriers to participation in educational activities were lack of time and cost of the education (Cross, 1979). The author asserted that these two were easily exaggerated. It appeared to be more convenient to use these as excuses rather than to admit to a lack of self-confidence or interest.

Cross (1979) reported that there were four general categories associated with the obstacles of participation. The four categories were situational, institutional, informational, and psychological. The situational obstacles related to the individual's life context at a particular time. The institutional barrier was created by learning institutions which exclude or discourage certain groups of learners because of such things as inconvenient schedules, full-time fees for part-time study, and/or restrictive locations. The informational barrier was due to the institution's failure to communicate learning opportunities to adults. The psychological barriers were individually held beliefs, values, attitudes, or perceptions that inhibited participation in organized learning activities.

Formal Education

Formal educational needs of teachers have previously been satisfied through the utilization of university graduate level courses. This section of the review of literature was divided into two subheadings. The subheadings were the structure of graduate

college programs and the assessment of the curriculum of graduate colleges.

Graduate College

Rapidly changing technological advances in agriculture, have forced teachers into a constant task of updating their skills and competencies. One way for teachers to face this challenge was through formal graduate school education.

Aldrich (1985) asserted that the philosophy of graduate school was to increase the depth in the area of specialization with greater concentration in the major field or an interdisciplinary area. The author went on to report that educated and trained people will be required to provide and disseminate new knowledge and technology, if the food and fiber needs of the United States and the world will be met today and in the future decades.

One scholar contended that graduate schools appeared to be concerned only with the research element (Sell, 1989). The author asserted that graduate programs were the gateways to academic careers. The author further advanced the discipline specialization, research design, and scholarly publication were far more dominant in graduate education than were the subject matter, methods, and skills associated with teaching.

The Oklahoma State University has previously established goals to help cope with problems presented by changing technological advances. Hayes (1990) indicated that the goals of Oklahoma State University were threefold. The first goal was to conduct research

about agriculture and the environment through the Oklahoma Agricultural Experiment Station. The second goal was to teach people of all ages and backgrounds in on-campus and field classrooms through the Oklahoma State University College of Agriculture (Resident Instruction). The third goal was to carry research-based information to all people who can use it through the Oklahoma Cooperative Extension Service. Due to these three goals, teachers had the opportunity to receive updated skills and competencies.

Curriculum

The curriculum that was taught to graduate and undergraduate students has played an important role in the shaping of the teacher's needs.

> As the complexity of agricultural and natural resource issues have intensified, and as student bodies have changed, graduates' educational needs have changed also. Because of these changes, curricula must be revitalized continually (Sledge and Wharton, 1987, p. 115).

Additional educators have called for the universities to take the initiative and plan for the future. Erpelding and Mugler (1987) asserted that the need to plan ahead requires faculty and administrators in land-grant universities and Colleges of Agriculture to make some assumptions and to predict the characteristics and competencies that agricultural graduates will need in the years ahead.

The assessment of the teachers' educational needs should formulate a rationale for a curricular assessment at the undergraduate level, as well as an in-depth look at courses to offer

on the graduate level. According to Sledge and Wharton (1987), national commissions and study groups have underscored the urgency for innovative curricular assessment.

According to Bjoraker (1987) student involvement in designing curriculum appeared to be critical. The students' involvement would ensure that students' needs were adequately considered, and would aid in the students' acceptance and support of proposed changes. Students and alumni represent a continuum for feedback from the present to the future. An organized effort should be made to solicit comments from alumni, who graduated from the institution at various times.

VanAusdale (1983) proposed an eight step strategy for planning post-secondary programs. The strategy was based on the foundations of needs assessment, strategic planning, and operational planning. The eight planning steps were as follows: (1) Conduct an environmental assessment; (2) Assess the institutional capabilities; (3) Review and update the mission or purpose statement; (4) Write the planning assumptions; (5) Specify the goals; (6) Specify the objectives; (7) Specify the program and planned outcomes; and (8) Specify resource requirements.

Merritt and Wilson (1990) asserted that the following key questions should be asked by university program review boards. The two authors proposed that the review process be focused around the questions what, why, who, and how. The two authors were quick to point out the "how" should be the last question asked by reviewers. The authors concluded that strong developmental programs can make a

significant contribution to preparing agricultural colleges and faculty to meet the challenges of emerging environmental forces.

Educational Delivery Approaches of Universities

The educational delivery systems in colleges and universities appeared to be progressive in nature. This section addressed the factors which would affect the educational delivery approaches of the future. As well, several conventional approaches, non-traditional approaches, and alternative approaches for the future were researched.

Sledge and Wharton (1987) contended that there were five factors that would affect the educational delivery system of the future. The five factors were as follows:

> (1) an increase base of information and knowledge that learners must gain access to; (2) an increased number of adults continuing their education or beginning their college/university education; (3) an increasing awareness and appreciation that learning can occur in places and in learning modes other than the conventional classroom and laboratory; (4) the realization that with the advent of telecommunications, the future development of fiber optics, and the use of such capabilities in the educational marketplace, the 'classroom' of the future may be profoundly different from the current concept of 'education taking place in residence;' and (5) the recognition that students are constantly learning-in the dormitory, in the fraternity or sorority, in the student organization-and that the faculty should maximize the learning opportunities toward the desired goals regardless of the location of learning (pp. 63-64).

Sledge and Wharton (1987) classified ten conventional or traditional approaches for learners. The conventional approaches were as follows: (1) Classroom lecture for a course; (2) Lecture/Laboratory for a course; (3) Classroom and/or laboratory demonstrations; (4) Lecture and discussion sections; (5) Seminars; (6) Field trips; (7) Experiential learning - internships, cooperative education, student teaching, practicums; (8) Special learning laboratory center instructional approaches; (9) Programed instructional units; and (10) Educational television networks/ educational cable video programming.

The two authors stated that:

> these traditional or conventional educational approaches rely heavily on the teacher transferring information to the learner(s) through formal courses taught in fairly typical classroom and laboratory settings, or through technological media that extend 'course content' to students at a place removed from the traditional classroom setting (p. 65).

The two authors proposed several questions that should be asked which would influence the educational approaches (formal and non-formal) among youth and adults in the future. Two questions were as follows: (1) Will satellite capabilities deliver education in times, and places, and forms different from the conventional ones today? and (2) Should the teaching/learning process for individual students be on a year-round process rather than being divided into segments and resulting in semester credits, quarter credits, or trimester credits?

Sledge and Wharton (1987) proposed several alternative approaches for the future. These approaches were as follows:

(1) Continuation and enhancement of current educational delivery procedures, with employment of new and innovative alternatives; (2) Separation of three to five credit courses into three to five individual modular instructional units; (3) Multidisciplinary agroecosystem analysis approach, in which, "team educators," representing a variety of individualized disciplines, teach by course materials related to various physical, biological, social, and economic factors on an integrated system basis; (4) An education utility system; (5) Increased emphasis on three critical conditions of excellence of undergraduate education as recommended in the Mortimer report; and (6) Combination of conventional methods and use of existing technologies to reach a larger student clientele.

Innovative Delivery Methods at Oklahoma State University

Oklahoma State University appeared to be a leader in providing students access to innovative educational delivery systems. According to the Oklahoma State University Faculty Council Minutes, October 9, 1990, the decline in traditional student enrollment, linked with increasing cost and admissions requirements, have virtually assured that sufficient numbers of 17-19 year-olds would not be available to maintain constant enrollments. It was reported that the aforementioned factors presented OSU with a challenge to explore new opportunities to improve student enrollment; by focusing on part-time students, returning students, non-traditional (23 years and older) students, distance-bound students, and military

personnel. It was further indicated that OSU has the infrastructure to increase student enrollment through non-traditional instructional delivery methods, external degree programs, and the University Center at Tulsa. Finally, key issues that were summarized included:

> (a) utilization of faculty and university facilities; (b) teaching and instructional resources to meet students' needs; (c) faculty input relative to admission and enrollment criteria for adult students; (d) consideration of extension credit for fulfillment of academic requirements; (e) alternative teaching and instructional delivery methods; (f) adequate compensation for faculty who participate in University Extension; and (g) tenure and promotion criteria related to teaching extension courses (pp. 1-2).

The following subheadings were formed to address the non-traditional delivery systems that were offered at Oklahoma State University. The subheadings were Oklahoma Higher Education Televised Instruction System, Oklahoma State University telecourses, compressed video, and satellite video conferencing.

Oklahoma Higher Education Televised Instruction System

The Oklahoma Higher Education Televised Instructional System (Talkback Television) was instituted in 1971 with 20 course offerings (Anderson and Knight, nd). Anderson and Knight described the format of talkback television, as well as its advantages to vocational education. The format was described as instruction being transmitted from a teaching location to remote receiving classrooms, via closed circuit microwave relay. Each receiving classroom was supplied with TV receiving and microwave audio-communication

equipment. The use of television for vocational education was deemed to be very useful due to its special attributes such as slow motion and fast motion. Besides the more technical advantages, it was also useful for the dissemination of philosophy and in teaching values and attitudes. The two authors continued by indicating that talkback television was accessible in 64 receiving classroom locations, in places such as high schools, vocational-technical schools, and public libraries.

Students taking courses via the televised instruction program from Oklahoma State University must satisfy the same admission requirements of the institution as on-campus students (Oklahoma Higher Education Televised Instruction Systems Bulletin, 1990). College courses, short courses, seminars and conferences, and special programs have been offered for both undergraduate and graduate level credit from a wide range of fields.

There appeared to be both advantages and disadvantages in this mode of instruction. The Greater Oklahoma News (1975) reported three advantages and one disadvantage of this type of delivery method. The first advantage was that it saved commuting time. The second advantage reported was that off-campus students were able to take required classes during the academic year. Thirdly, the classes counted as resident instruction. The disadvantage reported was that faulty sound was encountered at times due to technical difficulties.

Oklahoma State University Telecourses

According to an Oklahoma State University Independent and Correspondence Study Department Bulletin (1990), the Oklahoma Education Television Authority (OETA) has provided students the opportunity to earn resident credit away from campus. Throughout the past five years several thousand students have earned resident credit for courses offered by the telecourse format.

The Oklahoma State University Independent and Correspondence Study Department Bulletin (1990) summarized the format for telecourses, as well as the advantages of telecourses. The students were required to enroll in one of the telecourses offered on the OETA channels and meet with their instructors on three Saturdays. The advantages of telecourses appeared to be threefold. The first advantage was that it offered students the convenience of independent study, yet required a minimum amount of campus visits. The second advantage was that it appealed to non-traditional students who have work schedules or other commitments. The third advantage was that it provided the student the opportunity to interact with their professors on a face-to-face basis.

Compressed Video

According to The Oklahoma Stater (1990) compressed video appeared to be one of the latest technological advances, in education, at Oklahoma State University. The Oklahoma Stater (1990) briefly described the format for compressed video.

Compressed video changes traditional television signals to fiber optic telephone lines which can be sent to classrooms throughout Oklahoma. The Spring of 1990 marked the first time compressed video was offered at Oklahoma State University. In a joint venture with Oklahoma University, students from both universities completed a landscape architecture class simultaneously.

Satellite Video Conferencing

The W. K. Kellogg Foundation and Oklahoma State University conducted an evaluation of the satellite video conferencing for the Oklahoma Cooperative Extension Service (A Final Report-W. K. Kellogg Foundation and Oklahoma State University, 1989). The evaluation revealed that satellite video conferencing programs appeared to be a promising format for educational instructional programs. Other factors that should be considered were timelines of the information, time available for dissemination, program complexity, and the size of audience reached.

The Kellogg report summarized that in some cases, satellite video conferencing was a more cost effective choice than other methods studied. The students indicated that they received valuable information and they overwhelmingly accepted satellite video conferencing as a delivery method.

Distance Education and Computerized Instruction

The utilization of correspondence study and computer conferencing by teachers has caused non-traditional student enrollment to rise in the past few years. As well, the non-traditional delivery methods in public schools has substantially impacted the educational profession.

Sleight and Long (1985) reported that Utah State University implemented ten telecommunication centers for inservice of teachers, which appeared to be successful. The author contended that as the telecommunication systems are extended, the potential for a Master of Science degree in agricultural education for educators or agribusinessmen would be possible. The following topics, regarding distance education and computerized instruction, were included in this section: correspondence study, computer conferencing, and public schools.

Correspondence Study

The implementation of correspondence study was established because many students could not commute to campus on a regular basis. The Oklahoma State University Access Bulletin (1990) reported the link of correspondence study to distance education, as well as the advantages of correspondence study.

According to The Oklahoma State University Access Bulletin (1990), correspondence study was the beginning of a now vastly diverse concept often referred to as distance education. Distance

education became an accepted mode of learning for millions of students. This past year more than 330,000 persons enrolled in university-based correspondence study courses.

Also, the major advantage of correspondence study was that students were considered a class-one, whereby they benefited from direct communication with their instructors. As a class-one, the student received personalized conferences with the course instructor. It was concluded by The Oklahoma State University Access Bulletin (1990) that correspondence courses have recently been revolutionized to keep up-to-date with current technological advances. Many courses had been developed by utilizing audio, video, or computer components, in addition to the traditional print materials.

Computer Conferencing

Computer conferencing was a non-traditional educational delivery system which appeared to have merit. A Centergram Bulletin (1980) briefly discussed the history, delivery approach, and advantages of computer conferencing.

According to the Centergram Bulletin, the availability of computers and the ease of their use have contributed greatly to the use of computer conferencing as a communication and learning technique.

The Centergram Bulletin summarized the format of computer conferencing. The student and the instructor and/or the student and other students communicated to each other through the use of a

microcomputer system. Computer conferencing appeared to make it possible for a student to be a part of a supportive, interactive college classroom structure with limited disruption to the student's normal routine.

The advantages of computer conferencing, as reported in the Centergram Bulletin were fourfold. The first advantage was that it enhanced communication among people who may not otherwise interact. The second advantage was the opportunities for immediate feedback to responses and questions. The third advantage was that it saved time and expense by reducing travel. The final advantage cited was that computer conferencing provided a printed dialogue for the students to use as a reference.

Public Schools

Heinich, Molenda, and Russell (1982) asserted that the pervasiveness of mass media technology in everyday life, tended to obscure the fact that it was a relatively new phenomenon. The authors indicated that the implications of mass media technologies to education were only beginning to be fully understood and appreciated.

The three authors identified four electronic delivery systems used to enhance instruction. These electronic delivery systems were open broadcast by radio and television stations, microwave systems, satellite, and closed-circuit systems, such as cable television, and the telephone. The authors continued by stating that the advantages of electronic delivery were:

> There is presently a trend toward wider applications of closed distribution systems-microwave, closed circuit, satellite-unlike open systems-have the advantage of being able to transmit a number of instructional programs simultaneously. In addition, they have the significant advantage of being able to overcome broadcast television inherent limitations in the coverage area . . . teleconferencing can provide an interactive learning experience between instructors and students without the instructor (or other resource person) having to leave his or her base (p. 332).

The combination of microcomputers and distance education were proven to be useful in public school education. The ERIC Digest (1989) briefly discussed the purpose and format of telecommunications in public schools.

The ERIC Digest suggested that improvements in telecommunications have made it increasingly easy to transmit instructionally useful images and sounds over former forbidden geographical distances. Microcomputers were considered to be traditional rather than non-traditional delivery systems.

The ERIC Digest (1989) concluded that numerous technological advances have made it possible to join geographically separated students and teachers. This appeared to be very beneficial in small school systems that could not afford to hire additional teachers, to teach a specialized subject. Schools and classes were linked together through the use of telephone lines, cables, and radio and television waves of various kinds to provide two-way interative instructional television in specialized subjects. One specific example cited was foreign language.

Additional research was reported in the ERIC Clearinghouse on Rural Education and Small Schools (nd). This research suggested

several applications of distance learning. One application was that many schools across the United States have been using distance learning technologies to help them meet new state mandated curriculum requirements and/or to offer elective or long standing required courses, for which a certified teacher was not available. An additional application was for providing teacher inservice training. As well, instructional television which permits two-way video and two-way audio interaction between the cooperating school districts. This was noted as one of the fastest growing and most promising distance learning alternatives. Finally, it was reported that microcomputer networks and electronic mail systems were commonplace in many schools.

According to the University Computer Center Newsletter, November, 1990, there were three basic categories of electronic mail: (1) messages, memos, reminders, notes, letters-all generally one-on-one types of communication; (2) administrative messages, memos, letters, policies - all typically directed to a group; and, (3) textual data in the form of documents, reports, manuals, and files. Also, the vast majority of universities, and many high schools and industries nationwide also have electronic mailing addresses.

Inservice as Non-Formal Education

The body of research in agricultural education was well documented with articles concerning the perceptions of teachers relative to undergraduate course work. However, the literature

appeared to be limited, in regard to teachers' perceptions of graduate courses. Journal articles directly related to the teachers' perceptions of the various components of undergraduate course work were as follows: Hillison (1988), bin Yahya and Burnett (1987), Moss and Borne (1988), Chesnut (1985), Deeds and Barrick (1985), Beitia and Riesenberg (1988), and Deeds (1986).

The following topics regarding inservice education, were included in this section of the review of literature: the purpose and structure of inservice, inservice training of beginning teachers, who should teach and where should inservice be taught, and how to identify inservice needs.

Purpose and Structure of In-Service

Pals and Crawford (1980) reported that the major purposes of inservice were twofold. One purpose was for the improvement of teaching. The second was for the improvement of teaching. The second purpose was for self-growth and experience. As well, the two authors reported that the least important purposes of inservice were for an increase in salary and the meeting of recertification requirements. Aboiaji and Reneau (1988) asserted that agricultural education in high schools required professional teachers who understand the psychology, principles and techniques of teaching, as well as the learning process. Aboiaji and Reneau (1988, p. 43) continued by stating that "teachers need to improve their knowledge and competency on the job beyond what was required for initial certification in order to become effective professionals."

The major focus of inservice education was to keep teachers up-to-date in rapidly changing technological advances. The impact of technological advances created a need in several states to change the agriculture curriculum at the secondary level. Oklahoma and Texas were two states that have implemented new technological courses, as well as, updating traditional courses by incorporating technological advances in the curriculum.

Shelhamer (1983) contended that teachers must receive training from knowledgeable instructors in the new areas of development and they should receive support from someone during the implementation of the new knowledge. The author continued by calling for teachers and teacher educators to fulfill their responsibilities to utilize inservice training in order to bring about changes in the local program.

Brown and Shinn (1983) reinforced this proposition. The two authors asserted that the over riding goal of an inservice program should be to maintain a pool of competent and capable teachers. The two authors continued by indicating that the reasons to conduct inservice education programs were for technical competence, to enhance teaching skills, incorporate new techniques in agriculture and education, and to update teachers on new technology.

Inservice Training of Beginning Teachers

Inservice training was referred to as non-formal education. A substantial pool of research studies have revealed that the inservice needs of beginning teachers appeared to be different than

for those of experienced teachers. In one study, Kahler (1974) concluded that the needs of beginning teachers were found to be somewhat different than those of experienced teachers. Hachmeister (1981) suggested several specific areas that needed to be addressed for beginning teachers in Kansas. The areas identified were curriculum and lesson plan development, time management, and student rapport building.

Birkenholz and Harbstreit (1985), in a study of beginning teachers in Missouri, recommended that inservice programs should be provided for skill development in the area of using a microcomputer in the classroom, agribusiness management, electricity skills, training contest teams, and keeping SOEP records. The two authors continued by recommending topics that should be avoided. The topics that should be avoided were operating audio visual equipment, participating in professional vocational education activities, and planning and conducting student field trips.

Claycomb and Petty (1983) conducted a three year longitudinal study of the perceived needs for assistance of teachers. The two authors remarked that as a teacher becomes more experienced with program administration, there was less of a need for inservice education in that area. The patterns of needs for inservice changed with maturity and professional development of teachers.

In contrast to the above mentioned literature, numerous research studies revealed that there were no differences between teachers' inservice needs, regardless of the years of teaching experience. Rawls and Fatunsin (1985) conducted a study of the

importance and utilization of professional education competency areas needed by vocational educators. The study concluded that years of experience in teaching vocational agriculture does not significantly affect the perceived importance or utilization of the professional education competencies. The two authors recommended that further research be conducted to determine how professional education competencies could more effectively be taught. Pals and Burton (1989) asserted that the teachers disagreed about whether or not young inexperienced teachers utilized inservice activities more than experienced teachers did.

A project from the Southern Research Conference in Agricultural Education (1976) reported the perceived needs of beginning teachers. The beginning teachers revealed that teaching students (in regard to specific teaching situations) with low academic ability and coordinating activities of an active young farmer organization would be valuable inservice topics. The highest mean ranking for inservice in the program planning area was in the category of making the agriculture program a career preparation program, rather than just a general agricultural program.

Who Should Teach and Where Should In-service be Taught

Bowen and Shinn (1983) indicated that several universities conducted successful non-credit workshops that involved the colleges of agriculture, education, business and industry, veterinary, and the extension service. Barrick, Ladewig, and Hedges (1983) revealed

that one function of university agricultural education departments has been to identify the most relevant topics to provide teachers during various inservice education workshops.

Pals and Crawford (1980) contended that vocational agricultural instructors and teacher educators in agriculture should have the greatest responsibility in initiating and coordinating inservice education. It was further noted, by the two authors, that teachers wanted to be part of the planing inservice education activities.

Bowen and Shinn (1983) indicated that state and area extension personnel and agricultural industry personnel should have some responsibility in providing agricultural subject matter. However, teacher educators should have the primary responsibility for providing the agricultural subject matter and the instructional methodology for inservice education. The most preferred location for instructional methodology was the area community/technical college, however, the favored location for agricultural subject matter was the university campus.

Tenney and Frank's (1981) research further supported where and when inservice should be conducted. The two authors contended that workshops for inservice should be held within one hour's drive for all teachers in order to obtain a high attendance and that workshops should be held early during the school year.

How to Identify Inservice Needs

Previous research has supported many ways to identify inservice education needs of teachers. A predominant way was an attitude

survey of the perceived needs of teachers. An innovative method discovered was by utilizing the Borich Needs Assessment Model. The Borich Needs Assessment Model was tested to determine its merit as an indicator for inservice needs (Barrick, Ladewig, and Hedges, 1983). This model was initially intended to conduct follow-up studies of inservice training. Borich (1980) based the model upon the difference of what-is and what-should-be, which in turn prioritized needs based on more than just desired or perceived needs of teachers. Barrick, Ladewig, and Hedges (1983) conducted inservice education research using the Borich Needs Assessment Model as an indicator for the teachers' needs. The authors concluded that the Borich Needs Assessment Model appeared to be a promising model.

Tenney and Frank (1981), in a study of inservice education needs for New York teachers, indicated that the involvement of teachers who shared their best ideas and techniques in workshops proved to be a beneficial way to employ quality inservice education.

Summary

The six major sections in the review of literature were adult education, formal education, educational delivery approaches of universities, innovative delivery methods at Oklahoma State University, distance education and computerized instruction, and inservice as non-formal education. A summary of each section follows.

The adult education section focused on the definition of adult education, as well as the term andragogy. The philosophy and

psychology involved in the education of an adult was addressed. Attempts were made to determine the overall purpose of education relative to the philosophical and psychological theories. Program development involved the usages of training and education, as well as determining the setting for the program (formal or informal). The factors which influenced adult learners to participate in educational activities, as well as selected participation barriers were included.

The formal educational needs of teachers largely depended upon the graduate college courses. Graduate course structure and the goals of the graduate school greatly influence the end product of the educational process. The curriculum structure of higher education institutions must constantly be revitalized to change with the continuing diversity of the students.

The educational delivery approaches of universities were influenced by several factors. As well, conventional and alternative approaches to the university educational delivery systems were addressed.

Innovative delivery methods at Oklahoma State University appeared equipped with state of the art technology. The usage of fiber optics and microwave instructions enabled a greater number of non-traditional students to be reached.

Distance education and computerized instruction has extended technologies from the past and bolted these technologies to the future. Traditional correspondence study was previously used as a method to reach non-traditional students. The usages of computers

in the classroom has created a computer network which enabled students and teachers, from vastly different geographic locations, to communicate simultaneously in a structured class setting. The public schools were utilizing state of the art mass media technology to meet the raised curriculum standards set by state agencies.

Inservice education was a traditional approach used to update the teachers competencies and skills. The cooperation between students and program planners should be encouraged to bring the most relevant topics to the teachers. The inservice needs of beginning and experienced teachers should be addressed independently or in conjunction with one another, dependent upon what literature source was investigated. The location where inservice training should be conducted appeared to be limited to the type of program that was offered, as well as the individuals who delivered the instruction. Typically, the needs of the teachers were determined based on the personal perceived needs studies of the teachers. However, more complex models, such as the Borich Needs Assessment Model have been utilized in regard to determining actual, not the perceived, inservice educational needs of teachers.

CHAPTER III

DESIGN AND CONDUCT OF THE STUDY

The purpose of this chapter is to describe the steps utilized to accomplish the objectives of the study. The steps of the study were carried out with the purpose of the study in mind. The purpose of this study was to determine the perceived educational needs/plans of Oklahoma Agricultural Education teachers (here-after referred to as teachers). The objectives of the study were as follows:

1. To determine the current status and intention concerning graduate study, as well as to determine the degree program the teachers are likely to pursue or are currently pursuing, and more specifically to determine when they may pursue graduate studies.

2. To determine which specific public school administrator certification programs that teachers may be pursuing, as well as specific topics relative to enhancing the technical competence and teaching skills of the teachers that would be most beneficial to them as part of their graduate studies and/or in-service education.

3. To determine the level of benefit of Agricultural Education course topics as perceived by the teachers, both personally and/or professionally.

4. To determine the level of agreement or disagreement as perceived by the teachers relative to predetermined statements which indicate their reasons for pursuing graduate study.

5. To determine the teachers' perceptions pertaining to specific inhibitors which may cause them to not pursue a graduate degree.

6. To determine the teachers' perceptions pertaining to:

   a. The instructional delivery method for graduate courses that are of most interest to them;

   b. The time schedules that would be most convenient to them pertaining to formal course work;

   c. The course length that would be most appealing to them pertaining to graduate studies;

   d. Whether or not they are interested in intersession courses;

   e. The maximum distance that they would be willing to drive (one-way) to attend formal courses;

   f. The number of days per week they would be willing to drive to Stillwater to attend formal courses; and

   g. The level of competence for each new Agricultural Education curriculum area and more specifically if a graduate course should be offered to enhance technical competence.

7. To determine a city or town within each Agricultural Education Supervisory District that the teachers would be willing to commute to in order to receive off-campus instruction.

8. To determine how OSU can be of better service to the teachers.

9. To elicit selected demographic information which will enable the researcher to characterize the typical respondent.

Institutional Review Board (IRB)

Federal regulations and Oklahoma State University policy require review and approval of all research studies that involve human subjects before investigators can begin their research. The Oklahoma State University Office of University Research Services and the IRB conduct this review to protect the rights and welfare of human subjects involved in biomedical and behavioral research. In compliance with the aforementioned policy, this study received the proper surveillance and was granted permission to continue.

Scope of the Study

The population of the study included teachers who were under contract to public schools in Oklahoma for the school year 1990-1991. The population of the study included 442 teachers. The total number in the population was based on information gathered from the Oklahoma Department of Vocational and Technical Education, Agricultural Education Division.

Development of the Instrument

In order to obtain data that were deemed to be of high quality and accuracy, an investigator designed questionnaire was developed

for the study (See Appendix A). According to Orlich, et al. (1981) questionnaires can be an efficient means by which to gather data if they are constructed to address well established criteria or specific objectives.

Table I includes the respondents and non-respondents to the questionnaire. A total of 355 (80.32 percent) of the teachers responded to the questionnaire. Eighty-seven (19.68 percent) of the teachers were non-respondents.

TABLE I

RESPONDENTS TO QUESTIONNAIRE

	Frequency Distribution	
	N	%
Respondents	355	80.32
Non-Respondents	87	19.68
Total	442	100.00

Numerous individuals were contacted concerning the design and content of the instrument. Kirby Barrick of The Ohio State University was contacted and information was secured concerning an in-service education research study he conducted using the Borich Needs Assessment Model. Wes Holly, Assistant Dean of Resident

Instruction at Oklahoma State University, provided suggestions concerning questions relative to curriculum implementation. Greg Pierce, then Coordinator of the Curriculum and Instruction Materials Center at the Oklahoma Department of Vocational and Technical Education, provided background knowledge on the implementation of the new curriculum program areas in public school agricultural education programs. Richard Makin, Director of Research at the Oklahoma Department of Vocational and Technical Education, provided information concerning recent research studies conducted by his staff. Sharon Nevins, Associate Director of the University Extension Program at Oklahoma State University, was contacted concerning their assessment of program offerings. A staff member of Oklahoma State University in the Educational Television Services Department provided information concerning how they directed a needs assessment of program offerings. Brenda Stacy, Director of Evaluation and Testing at the Oklahoma Department of Vocational and Technical Education, was contacted concerning evaluation instruments utilized in that department.

In order to achieve validity, the question content and format of the instrument were reviewed by a panel of experts from Oklahoma State University in the Colleges of Agriculture and Education during the third week of May, 1990. On Thursday, August 2, 1990, a round table discussion of the instrument was conducted. Members of the round table discussion included the researcher, members of the researchers graduate committee, and Paul Hummer, Associate Dean for the College of Agriculture at Oklahoma State University. After

a detailed analysis of the instrument, modifications were made in regard to format and question content.

Reliability of the instrument was achieved by conducting pilot tests of the instrument. The instrument was pilot tested June 8, 1990, by ten members of the Agricultural Education 5980 class, Research Design in Occupational Education. After input from the class, the instrument was modified as well. A second pilot test was conducted on June 14, 1990, by 23 members of the Educational Administration and Higher Education 6263 class in Supervision. The instrument was once again modified for question clarity and format based on this pilot study.

After reliability and validity of the instrument were established, the questionnaire was developed into a booklet format by the Oklahoma State University Extension Duplicating Service. It was decided that the booklet format would give a professional appearance to the questionnaire. The length of the booklet totaled nine pages.

Conduct of the Study

Permission was granted by the State Director of Agricultural Education, Eddie Smith, for the six district supervisors, from the Division of Agricultural Education at the Oklahoma Department of Vocational and Technical Education, to distribute the booklets during the first-round of professional improvement meetings of the Fall of 1990. Since the researcher was not able to attend each meeting, it was deemed necessary to include detailed instructions

for the teachers to follow at the beginning of the booklet. The purpose of the study was included with the instructions. The district supervisors carefully monitored teachers while they responded to the questionnaires.

The district supervisors provided the researcher with information concerning the number of teachers in each district (See Appendix C). Stick-on labels, which were segregated by district, were attached to each booklet. The number of booklets were distributed as follows: Southeast District, 98; Northeast District, 99; Northwest District, 66; Southwest District, 89; Northcentral District, 24; and Southcentral District, 66. To insure that each district supervisor had an adequate amount of booklets, three additional booklets were given to each district supervisor. There was a total of 24 professional improvement groups in the State (See Appendix C). Each professional improvement group had four meetings scheduled for the Fall semester.

A personal letter was forwarded to each district supervisor (See Appendix B). The personal letters were written on letterhead stationary from the Oklahoma State University Agricultural Education Department. The letter informed each supervisor of the purpose of the study and instructions for them to follow when they distributed the booklets. The letters were co-signed by the researcher and the dissertation adviser for the study.

The researcher collected the booklets from the district supervisors each week. The first professional improvement meeting (of the first-round) was held August 13, 1990 and the last meeting

(of the first-round) was held September 13, 1990. However, one of the district supervisors opted to distribute the booklets to the teachers during the meeting conducted in the second-round. The researcher collected the final booklets on October 9, 1990.

Analysis of the Data

The booklets consisted of 19 questions. The questions were developed to elicit both quantitative and qualitative data. A majority of the questions in the instrument addressed the formal educational (graduate college) needs/plans of the teachers. Some of the questions addressed the non-formal (in-service) educational needs of Oklahoma Agricultural Education teachers. As well, two questions were asked to solicit selected demographic information from the teachers. The following discussion is a detailed analysis, question by question, relative to how the data were analyzed.

Question one addressed the current status of the teachers with regard to graduate studies. The teachers were permitted to check only one of two responses. If the teachers checked that they were currently pursuing graduate studies, they were then asked to proceed to question number three. However, if the teachers indicated that they were not currently pursuing graduate studies, they were then directed to the next question. Responses were calculated using frequency counts and percentages.

Question two addressed the teachers' intention concerning graduate studies. If the teachers checked that they were planning to pursue graduate studies they were asked to indicate when by

checking a box. If the teachers indicated that they were not planning to pursue graduate studies they were asked to please explain why not and they were then directed to question four. The write-in responses were treated as qualitative data and summarized by the researcher. The check box responses were calculated by frequency counts and percentages.

Question three asked the teachers to indicate the degree program that they planned to pursue or were currently pursuing. The responses received were calculated by frequency counts and percentages.

Question four addressed the teachers' interests in public school administrator programs. Responses were calculated by frequencies and percentages. The open-end responses were treated as qualitative data and the research grouped similar responses.

Question five asked the teachers to identify topics they believe should be emphasized more in order to further develop their teaching skills. Also, the teachers were asked to identify topics that would enhance their technical competence. In both categories (teaching skills and technical competence) the teachers were asked to list the topics for graduate level courses separately from the in-service and/or workshop topics. Responses were treated as qualitative data and the researcher grouped similar responses.

Question six addressed how beneficial the teachers perceived selected course topics to be. A four point Likert type scale was developed for this question. To permit statistical treatment of the data, numerical values were assigned to categories, thus permitting

mean and standard deviations to be calculated. This was accomplished according to the following pattern:

Level of Benefit	Value	Range for Mean Responses
High	4	3.5 - 4.00
Moderate	3	2.5 - 3.49
Slight	2	1.5 - 2.49
None	1	1.0 - 1.49

Question seven contained a list of statements that have been recognized as playing an important role in the decision for students to pursue graduate study. A four-point Likert type scale was developed for this question. To permit statistical treatment of the data, numerical values were assigned to categories, thus permitting mean and standard deviations to be calculated. The following pattern was developed for the question:

Level of Benefit	Value	Range for Mean Responses
Strongly Agree	4	3.5 - 4.00
Moderately Agree	3	2.5 - 3.49
Slightly Agree	2	1.5 - 2.49
Disagree	1	1.0 - 1.49

As well, a space was provided for the teachers to write in reasons that were not identified on the questionnaire. These responses were treated as qualitative data and the researcher grouped the similar items.

Question eight included a list of questions designed to determine the extent to which certain items inhibit teachers from pursuing graduate studies. A four point Likert type scale was developed for this question. To permit statistical treatment of the data, numerical values were assigned to categories, thus permitting mean and standard deviations to be calculated. The following was

the pattern developed for this question:

Level of Inhibitors	Value	Range for Mean Responses
High	4	3.5 - 4.00
Moderate	3	2.5 - 3.49
Slight	2	1.5 - 2.49
None	1	1.0 - 1.49

As well, a space was provided for the respondents to write-in other inhibitors that were not identified on the questionnaire. These responses were treated as qualitative data and the similar responses were grouped by the researcher.

Question nine addressed potential and currently offered instructional delivery methods for graduate courses that the teachers preferred. The teachers were asked to rank the delivery methods one through eight. An average rank was calculated for each delivery method.

Question ten was divided into two sections. The first section addressed time schedules that the teachers perceived to be the most convenient during the Fall/Spring semesters. In this section, the teachers were asked to check only one of four time schedules. Responses were calculated by using frequencies and percentages. The second section asked the teachers if they prefer two courses offered back-to-back on the same day for the Fall/Spring semesters. The respondents were asked to check only one of the three responses. Responses were calculated by using frequencies and percentages. A blank line was provided for the teachers to write in the time frames they prefer (other than the ones listed). These responses were treated as qualitative data, therefore, the researcher grouped similar responses.

Question 11 asked the teachers to indicate the course length which was most convenient for them to attend classes at OSU during the Summer session. The teachers were asked to check only one of eight responses. Responses were calculated using frequency counts and percentages. As well, a blank line was provided for the teachers to write in a specific course length. The researcher grouped similar responses.

Question 12 addressed the teachers' interest in semester intersession courses. This question was divided into two parts. In both parts, the respondents were asked to indicate their interest in taking courses during two specific intersession time frames. Responses were calculated by frequencies and percentages.

Question 13 addressed the maximum distances the teachers would be willing to drive to attend Fall/Summer semester courses and/or a Summer session course in Stillwater. The teachers were asked to check only one of the six responses in the Fall/Spring semester section and only one of six responses in the Summer session section. Responses were calculated using number frequencies and percentages.

Question 14 was developed to ascertain the maximum number of days per week the teachers were willing to drive to Stillwater to attend graduate courses at Oklahoma State University. The teachers were asked to check only one of six responses. Responses were calculated using frequency numbers and percentages.

Question 15 asked the teachers to identify a city or town, within their Agricultural Education Supervisory District, they would be willing to commute to in order to receive off-campus instruction.

A blank space was provided for the teachers to write in. The write-in responses were treated as qualitative data, therefore the researcher grouped similar responses.

Question 16 asked the teachers how OSU could be of better service to them. Three blank lines were provided for the teachers to write in. Responses were treated as qualitative data, thus similar responses were grouped together.

Question 17 pertained to the revised curriculum in Agricultural Education for the Oklahoma public schools. The teachers were asked to indicate their perceived level of competence for each of the 12 areas, as well as to indicate whether or not a graduate course should be offered in each area to enhance the teachers' technical competence. A four point Likert type scale was developed to ascertain competence. To permit statistical treatment of the data, numerical values were assigned to categories, thus permitting mean and standard deviations to be calculated. The following was the pattern developed for this question:

Level of Competence	Value	Range for Mean Responses
High	4	3.5 - 4.00
Moderate	3	2.5 - 3.49
Slight	2	1.5 - 2.49
None	1	1.0 - 1.49

The teachers were asked to check yes and no boxes relative to whether or not a graduate course should be offered to enhance their technical competence in each of the 12 program areas. These responses were calculated using frequency numbers and percentages.

Question 18 asked the teachers to check the highest educational level that they had completed. Responses were calculated using

frequency numbers and percentages.

Question 19 asked the teachers to indicate the approximate number of hours of graduate course work they had completed beyond their last degree. The responses were calculated using number frequencies and percentages.

Computer Analysis

Via the use of Oklahoma State University's IBM mainframe 3090 computer, the Statistical Analysis System (SAS) was utilized to manipulate the quantitative data. The following types of data were analyzed: frequencies, percentages, and means and standard deviations. It was deemed necessary, due to the nature of the study, to accomplish separate analysis for each of the five Agricultural Education Supervisory districts.

CHAPTER IV

PRESENTATION AND ANALYSIS OF DATA

Introduction

The purpose of this chapter is to analyze the perceived educational needs/plan of the Oklahoma Agricultural Education teachers' (hereafter referred to as teachers) and to present the findings. The population of the study included all teachers (442) under public school contract, in the State of Oklahoma, during the 1990-1991 school year. Each teacher present was asked by their respective District Agriculture Education Supervisor to complete his/her questionnaire during a professional improvement meeting which was conducted during the Fall semester of 1990. The dates the meetings were conducted and the questionnaires were completed ranged from August 13, 1990 to October 15, 1990. Of the 442 teachers included in the study population, 355 (80.32 percent) attended the meetings and responded to the questionnaire.

Findings of the Study

The following section was included to present the analysis of the data collected relative to each of the objectives of the study.

The distribution of teachers status and intent concerning graduate studies by district is reported in Table II. In the

TABLE II

DISTRIBUTION OF TEACHERS STATUS AND INTENT CONCERNING GRADUATE STUDIES BY DISTRICT

	Current Status (N=324) Frequency Distribution						Intent (N=276) Frequency Distribution					
	Currently Pursuing		Not Currently Pursuing		Subtotal		Plan to Pursue		Do Not Plan to Pursue		Subtotal	
District	n	%	n	%	n	%	n	%	n	%	n	%
Northwest	13	26.00	37	74.00	50	100.00	16	37.21	27	62.79	43	100.00
Northeast	11	18.03	50	81.97	61	100.00	17	29.82	40	70.18	57	100.00
Central	17	20.48	66	79.52	83	100.00	29	46.71	33	55.23	62	100.00
Southwest	12	17.39	57	82.61	69	100.00	20	33.33	40	66.67	60	100.00
Southeast	7	11.48	54	88.52	61	100.00	16	29.63	38	70.37	54	100.00
Total (N%)	60	18.51	264	81.49	324	100.00	98	35.50	178	64.50	296	100.00

Northwest district, 13 (26.00 percent) of the teachers were currently pursuing graduate studies and 37 (74.00 percent) were not currently pursuing graduate studies. As well, 16 (37.21 percent) of the teachers in the Northwest district plan to pursue graduate studies and 27 (62.79 percent) do not plan to pursue graduate studies. Eleven (18.03 percent) of the teachers in the Northeast district were currently pursuing graduate studies while 50 (81.97 percent) were not. Seventeen (29.82 percent) of the Northeast district teachers plan to pursue graduate studies, while 40 (70.18 percent) do not plan to pursue graduate studies. In the Central district 17 (20.48 percent) of the teachers were currently pursuing graduate studies and 66 (79.52 percent) of the teachers were not. Twenty-nine (46.77 percent) of the Central district teachers plan to pursue and 33 (53.23 percent) do not plan to pursue graduate studies. Twelve (17.39 percent) of the teachers in the Southwest district were currently pursuing and 57 (82.61 percent) were not currently pursuing graduate studies. Twenty (35.33 percent) of the Southwest district teachers plan to pursue graduate studies, whereas 40 (66.67 percent) of the teachers do not. Finally, seven (11.48 percent) of the teachers in the Southeast district were currently pursuing graduate studies and 54 (88.52 percent) teachers were not. Sixteen (29.63 percent) of the Southeast district teachers plan to pursue and 38 (70.37 percent) teachers do not plan to pursue graduate studies. In summary, of the 324 teachers who responded, 60 (18.51 percent) were currently pursuing graduate studies and 264 (81.49 percent) were not. Also,

of the 276 teachers who indicated whether or not they intend or plan to pursue graduate studies, 98 (33.50 percent) plan to and 178 (64.50 percent) do not plan to.

In order to determine why teachers do not plan to pursue graduate studies they were asked an open-ended question and space was provided for them to respond. A total of 111 teachers indicated at least one response. In fairness to all respondents and to ensure that their opinions would be reported, it was deemed necessary to include every response. The researcher was able to group similar responses by the number of respondents who wrote similar or like responses. The groupings were presented as follows:

1. Forty-one teachers indicated they will not pursue graduate studies because they currently have a Master's degree.

2. Twenty teachers indicated that they did not have enough time;

3. Twelve teachers reported that they were too old and near retirement;

4. Ten teachers indicated that it cost too much and ten teachers indicated that they were not interested;

5. Six teachers suggested that they were not located close enough to Oklahoma State University (OSU);

6. Three teachers indicated that they just got out of school;

7. Two teachers indicated that it was too expensive to attend relative to the amount of pay increase that they would receive. As well, two teachers suggested that too much red tape was associated with attending; and

8. Six teachers reported the following responses: satisfied at present, not in my plans, unsure of requirements, location of teaching, tired of school, and thesis requirement.

Figure 1 illustrates the teachers' status and intent concerning graduate studies. The number of teachers currently pursuing and not currently pursuing graduate studies were segregated by districts. As well, the number of teachers that plan to pursue graduate studies and those that do not plan to pursue graduate studies were segregated by districts.

Table III reports the distribution by when teachers plan to pursue graduate studies. Only the 67 teachers who indicated they plan to pursue graduate studies were asked to respond to this question.

Of the 23 teachers who plan to pursue graduate studies in the Spring of 1991 two (8.70 percent) were from the Northwest district, six (26.09 percent) were from the Northeast district, five (21.74 percent) were from the Central district, seven (30.43 percent) were from the Southwest district, and three (13.04 percent) were from the Southeast district.

Of the 25 teachers who plan to pursue graduate studies in the Summer of 1991 four (16.00 percent) were from the Northwest district, four (16.00 percent) were from the Northeast district, 11 (44.00 percent) were from the Central district, four (16.00 percent) were from the Southwest district, and two (8.00 percent) were from the Southeast district.

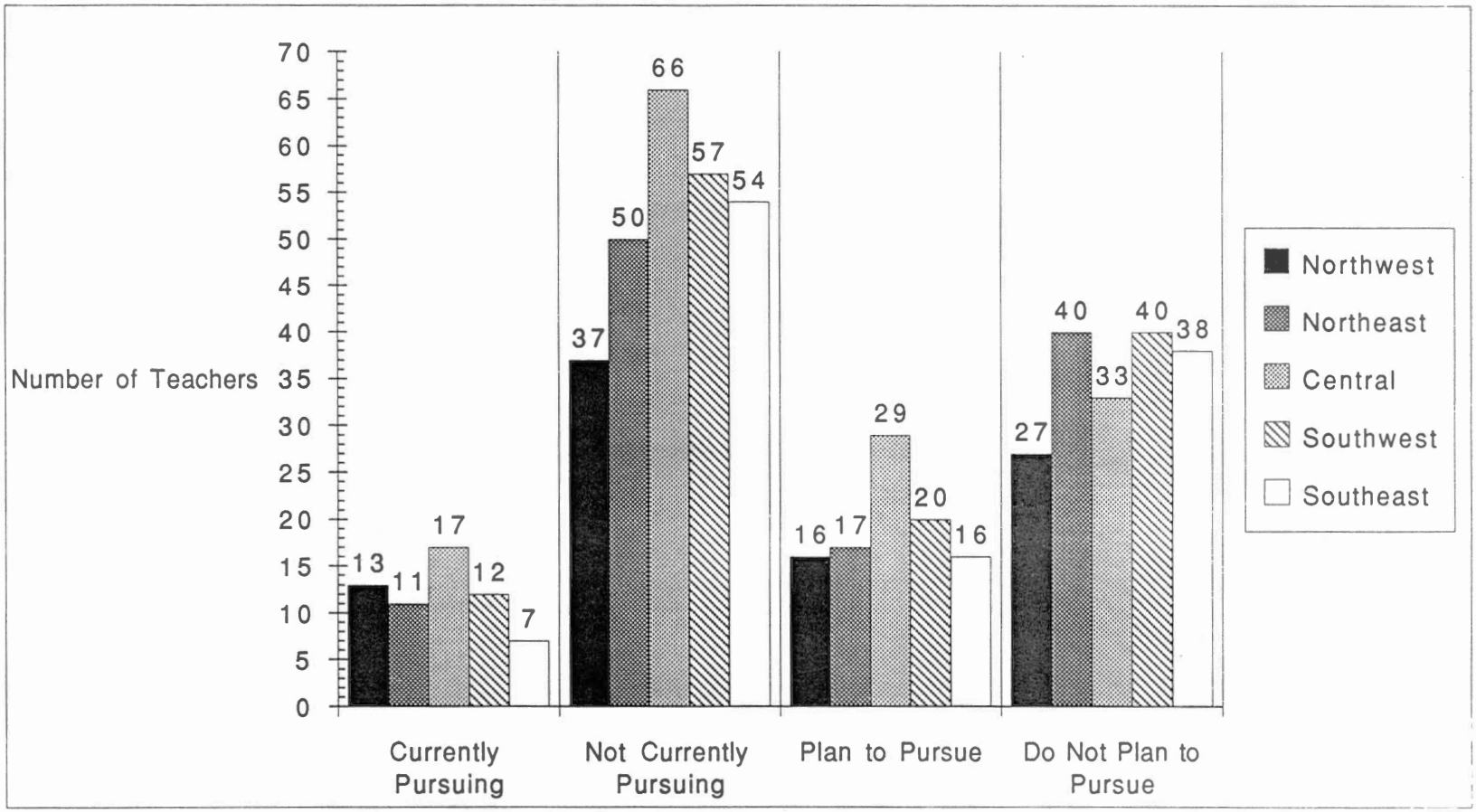

Figure 1. Status and Intent Concerning Graduate Studies

TABLE III

DISTRIBUTION OF RESPONDENTS BY WHEN THEY PLAN TO PURSUE GRADUATE STUDIES

	Frequency Distrubution											
	Northwest		Northeast		Central		Southwest		Southeast		Total	
Semester/Year	n	%	n	%	n	%	n	%	n	%	N	%
Spring 1991	2	8.70	6	26.09	5	21.74	7	30.43	3	13.04	23	100.00
Summer 1991	4	16.00	4	16.00	11	44.00	4	16.00	2	8.00	25	100.00
Fall 1991	1	14.29	1	14.29	2	28.57	2	28.57	1	14.29	7	100.00
Spring 1992	3	75.00	1	25.00	0	0.00	0	0.00	0	0.00	4	100.00
Summer 1992	0	0.00	1	16.67	2	33.33	2	33.33	1	16.67	6	100.00
Fall 1992	0	0.00	1	50.00	1	50.00	0	0.00	0	0.00	2	100.00
Total	10	14.92	14	20.89	21	31.34	15	22.38	7	10.47	67	100.00

Of the seven teachers who plan to pursue graduate studies in the Fall of 1991, one (14.29 percent) was from the Northwest district, one (14.29 percent) was from the Northeast district, two (28.59 percent) were from the Central district, two (28.59 percent) were from the Southwest district and one (14.29 percent) was from the Southeast district.

Of the four teachers who plan to pursue graduate studies in the Spring of 1992, three (75.00 percent) were from the Northwest district and one (25.00 percent) was from the Northeast district.

Of the six teachers who plan to pursue graduate studies in the Summer of 1992, one (16.67 percent) was from the Northeast district, two (33.33 percent) were from the Southwest district, and one (16.67 percent) was from the Southeast district.

Of the two teachers who plan to pursue graduate studies in the Fall of 1992, one (50.00 percent) was from the Northeast district and one (50.00 percent) was from the Central district.

Finally, since very few teachers indicated they plan to pursue graduate studies during the years of 1993, 1994, and 1995, it was deemed non-relevant to report the findings within Table III; however, it should be reported that four teachers plan to pursue graduate studies in 1993, four other teachers plan to pursue graduate studies in 1994, and six teachers are planning to do so in 1995.

Table IV reports the distribution of university degree programs by the university discipline which the teachers plan to pursue.

TABLE IV

DISTRIBUTION OF UNIVERSITY DEGREE PROGRAMS BY THE UNIVERSITY DISCIPLINES WHICH THE TEACHERS PLAN TO PURSUE

	Frequency Distrubution									
	Master of Agriculture		Master of Science/Education		Educational Specialist		Doctorate		Total	
Discipline	n	%	n	%	n	%	n	%	N*	%
Agricultural Education	33	67.35	10	20.40	5	10.20	1	2.05	49	100.00
Agricultural Economics	0	0.00	4	100.00	N/A	N/A	0	0.00	4	100.00
Agricultural Engineering	N/A	N/A	0	0.00	N/A	N/A	1	100.00	1	100.00
Agronomy	1	50.00	1	50.00	N/A	N/A	0	0.00	2	100.00
Animal Science	2	40.00	3	60.00	N/A	N/A	0	0.00	5	100.00
Biochemistry	N/A	N/A	1	1.00	N/A	N/A	0	0.00	1	100.00
Entomology	0	0.00	1	100.00	N/A	N/A	0	0.00	1	100.00
Forestry					N/A	N/A	N/A	N/A		
Plant Pathology	0	0.00	1	100.00	N/A	N/A	0	0.00	1	100.00
Applied Behavorial Sciences	N/A	N/A	0	0.00	1	100.00	0	0.00	1	100.00

TABLE IV (Continued)

Discipline	Frequency Distrubution									
	Master of Agriculture		Master of Science/Education		Educational Specialist		Doctorate		Total	
	n	%	n	%	n	%	n	%	N*	%
Curriculum and Instruction	N/A	N/A	1	50.00	1	50.00	0	0.00	2	100.00
Educational Administration and Higher Education	N/A	N/A	31	79.49	7	17.95	1	2.56	39	100.00
Occupational and Adult Education	N/A	N/A	0	0.00	2	50.00	2	50.00	4	100.00

* N varies because teachers selected only the field of study and degree program they planned to pursue.

In the discipline of Agricultural Education 33 (67.35 percent) of the teachers plan to pursue the Master of Agriculture degree. As well, ten (20.40 percent) of the teachers plan to pursue the Master of Science/Education degree, five (10.20 percent) teachers plan to pursue the Educational Specialist degree, and one (2.05 percent) plans to pursue the Doctorate degree.

In the discipline of Agricultural Economics, four (100.00 percent) of the teachers plan to pursue the Master of Science/Education degree. One (100.00 percent) of the teachers plans to pursue the Doctorate degree in the Agricultural Engineering discipline. One (50.00 percent) of the teachers plans to pursue the Master of Agriculture degree and one (50.00 percent) plans to pursue the Master of Science/Education degree in the Agronomy discipline. In the Animal Science discipline, two (40.00 percent) of the teachers plan to pursue the Master of Agriculture degree and three (60.00 percent) plan to pursue the Master of Science/Education degree. One (100.00 percent) of the teachers plans to pursue the Master of Science/Education degree in the Biochemistry discipline. One (100.00 percent) of the teachers plan to pursue the Master of Science/Education degree in the Plant Pathology discipline.

In the Applied Behavioral Science discipline, one (100.00 percent) of the teachers plans to pursue the Education Specialist degree. One (50.00 percent) of the teachers plans to pursue the Master of Science/Education degree and one (50.00 percent) plans to pursue the Educational Specialist degree in the Curriculum and Instructional discipline. In the Educational Administration and

Higher Education discipline, 31 (79.49 percent) of the teachers plan to pursue the Master of Science/Education degree, seven (17.95 percent) plan to pursue the Educational Specialist degree, and one (2.56 percent) plans to pursue the Doctorate degree. In the Occupational and Adult Education discipline, two (50.00 percent) of the teachers plan to pursue the Educational Specialist degree and two (50.00 percent) plan to pursue the Doctorate degree.

Space was provided for the teachers to include disciplines and degrees that were not listed on the questionnaire. A total of four teachers responded. Two teachers indicated that they planned to pursue a degree in Law. One teacher indicated plans to pursue a Business degree and other indicated plans to pursue a Real Estate degree.

In summary, it should be noted that a total of 49 teachers indicated they planned to pursue graduate studies in Agricultural Education and 39 of the teachers indicated they planned to pursue graduate studies in Educational Administration and Higher Education. The third leading discipline of choice by the teachers, who responded, was Animal Science.

The distribution of university degree programs by the university disciplines which the teachers are currently pursuing is reported in Table V.

For the Agricultural Education discipline, nine (45.00 percent) of the teachers were currently pursuing the Master of Agriculture degree, eight (40.00 percent) were currently pursuing the Master of

TABLE V

DISTRIBUTION OF UNIVERSITY DEGREE PROGRAMS BY THE UNIVERSITY DISCIPLINES WHICH THE TEACHERS ARE CURRENTLY PURSUING

	Frequency Distrubution									
	Master of Agriculture		Master of Science/Education		Educational Specialist		Doctorate		Total	
Discipline	n	%	n	%	n	%	n	%	N*	%
Agricultural Education	9	45.00	8	40.00	0	0.00	3	15.00	20	100.00
Agricultural Economics	1	50.00	0	0.00	0	0.00	1	50.00	2	100.00
Agricultural Engineering	N/A	N/A			N/A	N/A				
Agronomy					N/A	N/A				
Animal Science	0	0.00	1	100.00	N/A	N/A	0	0.00	1	100.00
Biochemistry	N/A	N/A			N/A	N/A				
Entomology										
Forestry					N/A	N/A	N/A	N/A		
Plant Pathology					N/A	N/A				
Applied Behavorial Sciences	N/A	N/A								

TABLE V (Continued)

Discipline	Frequency Distrubution									
	Master of Agriculture		Master of Science/Education		Educational Specialist		Doctorate		Total	
	n	%	n	%	n	%	n	%	N*	%
Curriculum and Instruction	N/A	N/A								
Educational Administration and Higher Education	N/A	N/A	17	77.27	4	18.18	1	4.55	22	100.00
Occupational and Adult Education										

* N varies because the teachers selected only the field of study they were currently pursuing.

Science/Education degree, and three (15.00 percent) were currently pursuing the Doctorate degree.

In the Agricultural Economics discipline, one (50.00 percent) of the teachers was currently pursuing the Master of Agriculture degree and one (50.00 percent) was currently pursuing the Doctorate degree. One (100.00 percent) of the teachers was currently pursuing the Master of Science/Education degree in the Animal Science discipline.

In the Educational Administration and Higher Education discipline, 17 (77.27 percent) of the teachers were currently pursuing the Master of Science/Education degree, four (18.18 percent) were currently pursuing the Educational Specialist degree, and one (4.55 percent) was currently pursuing the Doctorate degree.

In summary, 20 teachers indicated that they were currently pursuing graduate degrees in Agricultural Education and 22 indicated their pursuit of a graduate degree in Educational Administration and Higher Education. Other graduate degrees currently being pursued were in the disciplines of Agricultural Economics and Animal Science.

Table VI reports the distribution of teachers by the public school administration certification program they might pursue and/or are currently pursuing. Due to the similarities of the frequency distributions between the districts, only the state totals are presented here. For all the districts combined, 216 (85.38 percent) of the teachers indicated they might pursue and 37 (14.62 percent) of the teachers indicated they were currently pursuing a

TABLE VI

DISTRIBUTION OF RESPONSES BY PUBLIC SCHOOL ADMINISTRATION CERTIFICATION PROGRAMS THE TEACHERS MIGHT PURSUE AND/OR ARE CURRENTLY PURSUING

	Frequency Distrubution											
	Northwest District		Northeast District		Central District		Southwest District		Southeast District		Total	
Programs:	n	%	n	%	n	%	n	%	n	%	N	%
Might Pursue	31	12.25	45	12.25	57	22.53	48	18.97	35	13.83	216	85.38
Currently Pursuing	8	3.16	8	3.16	7	2.77	6	2.37	8	3.16	37	14.62
Totals	39	15.42	53	20.95	64	25.30	54	21.34	43	17.00	253	100.00
Public School Administrator	31	10.20	30	9.87	45	14.80	39	12.83	26	8.55	171	56.25
School Counselor	3	0.99	10	3.29	6	1.97	2	0.66	10	3.29	31	10.20
School Psychologist	2	0.66	2	0.66	4	1.32	2	0.66	1	0.33	11	3.62
Not Interested	13	4.26	23	7.57	21	6.91	17	5.59	14	4.61	88	28.95
Other	0	0.00	1	0.33	0	0.00	1	0.33	1	0.33	3	0.99
Totals	49	16.12	66	21.71	76	25.00	61	20.07	52	17.11	304	100.00

certification program. As well, 171 (56.25 percent) of the teachers specified public school administrator certification program as their goal, 31 (10.20 percent) indicated a certification program in school counseling as their pursuit, and 11 (3.62 percent) selected a school psychologist certification program as their pursuit. Also, 88 (28.95 percent) of the teachers indicated that they were "not interested" in public school administration program, and three (0.99 percent) teachers indicated "other" types of certification programs as an area of interest.

Space was provided for the teachers to indicate "other certification" programs. A total of two teachers responded. One teacher listed a curriculum and instruction certification program and one listed a vocational and technical education administration certification program.

Figure 2 was developed to provide a composite illustration of the public school administration programs the teachers might pursue and/or are currently pursuing. The responses were segregated, by district, as follows: (1) public school administrator; (2) school counselor; (3) school psychologist; (4) not interested, and (5) other.

The mean responses of the level of benefit of Agricultural Education graduate course topics are reported in Table VII. The teachers indicated that "moderately important" course topics were as follows: Guidance and Leadership Development of Agriculture Youth (X=3.16); Leadership Styles (X=3.13), Advanced Methods of Teaching Agriculture (X=3.08), Organizing Curriculum and Programs in

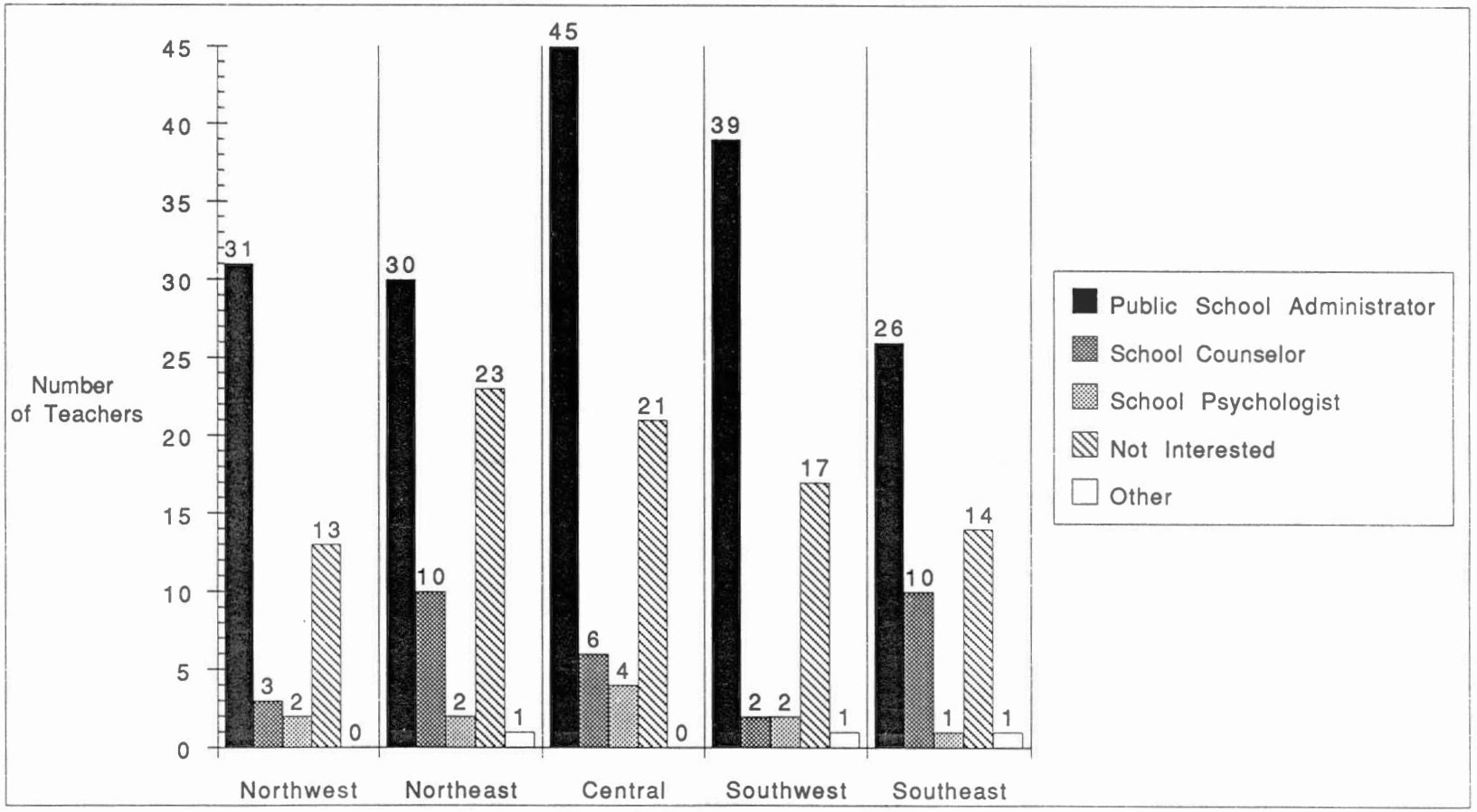

Figure 2. Public School Administration Certification Programs the Teachers Might Pursue and/or are Currently Pursuing

TABLE VII

MEAN RESPONSE OF THE LEVEL OF BENEFIT OF AGRICULTURAL EDUCATION GRADUATE COURSE TOPICS

Course Topics:	State Total N*	$\bar{X}$	SD	Interpretation (N=355)
Organizing Curriculum and Programs in Agricultural Education	313	3.00	.78	Moderate
Organization and Methods of Adult Education	313	2.82	.81	Moderate
Extension Teaching Methods	310	2.44	.81	Slight
Young Farmer Organizations	311	2.82	.86	Moderate
Directing Programs of Supervised Training in Agriculture	311	2.90	.77	Moderate
Guidance and Leadership Development of Agriculture Youth	314	3.16	.82	Moderate
History, Function, and Objectives of the Extension Service	314	2.03	.84	Slight
Advanced Methods of Teaching Agriculture	311	3.08	.86	Moderate
Leadership Styles	309	3.13	.82	Moderate
Educational Aspects of Occupational Behavior	311	2.54	.81	Moderate
Agricultural Education Workshop	313	2.82	.85	Moderate
Curriculum Design for Alternative Approaches in Agriculture	311	2.93	.87	Moderate
Research Design in Occupational Education	309	2.54	.79	Moderate
Independent Studies in Agricultural and Extension Education	311	2.44	.83	Slight
Developments in Agricultural and Extension Education	312	2.48	.83	Slight
Teaching Agriculture in Higher Education	311	2.64	.93	Moderate
County Extension Program Development	310	2.13	.87	Slight
Assessment and Evaluation of Educational Programs in Agriculture	311	2.51	.82	Moderate

* N varies because some teachers chose not to respond to each course topic.

Agricultural Education ($\bar{X}$=3.00); Curriculum Design for Alternative Approaches in Agriculture ($\bar{X}$=2.93); Directing Programs of Supervised Training in Agriculture ($\bar{X}$=2.90); Organization and Methods of Adult Education ($\bar{X}$=2.82); Young Farmers Organizations ($\bar{X}$=2.82); Agricultural Education Workshop ($\bar{X}$=2.82); Teaching Agriculture in Higher Education ($\bar{X}$=2.64); Educational Aspects of Occupational Behavior ($\bar{X}$=2.54); Research Design in Occupational Education ($\bar{X}$=2.54); and, Assessment and Evaluation of Educational Programs in Agriculture ($\bar{X}$=2.51). The teachers indicated that the "slightly important" topics were as follows: Independent Studies in Agricultural and Extension Education ($\bar{X}$=2.48); Extension Teaching Methods ($\bar{X}$=2.44); County Extension Program Development ($\bar{X}$=2.13); and, History, Functions, and Objectives of the Extension Service ($\bar{X}$=2.03).

Table VIII is composed of mean responses of reasons why teachers pursue graduate study. The teachers "Strongly Agree" with the statement "It could increase my salary" ($\bar{X}$=3.51). Statements with which the teachers "Moderately Agree" were as follows: "Could lead to a new job" ($\bar{X}$=3.27) "Enables me to obtain an additional degree" ($\bar{X}$=3.17); "Could lead to a promotion in my present job" ($\bar{X}$=3.05); "Enables me to obtain an additional certification" ($\bar{X}$=3.05); "Makes me better informed" ($\bar{X}$=2.93); "Satisfies my curiosity for knowledge" ($\bar{X}$=2.70); and, "Enables me to meet the educational standards set by my employer" ($\bar{X}$=2.66). Statements the teachers "Slightly Agree" with were "Provides me with an opportunity to meet new people" ($\bar{X}$=2.21) and "Allows me to feel a sense of

TABLE VIII

MEAN RESPONSES OF REASONS WHY TEACHERS PURSUE GRADUATE STUDY

Reasons	State Total N*	$\bar{X}$	SD	Interpretation (N=355)
Provides me with an opportunity to meet people	293	2.21	0.89	Slightly Agree
Allows me to feel a sense of belonging	291	2.08	0.85	Slightly Agree
Enables me to meet educational standards set by my employer	289	2.66	0.89	Moderately Agree
Makes me better informed	291	2.93	0.86	Moderately Agree
Satisfies my curiosity for knowledge	289	2.70	0.85	Moderately Agree
Could lead to a new job	289	3.27	0.83	Moderately Agree
Could lead to a promotion in my present job	290	3.05	0.97	Moderately Agree
Enables me to obtain an additional certification	289	3.05	0.89	Moderately Agree
Enables me to obtain an additional degree	293	3.17	0.87	Moderately Agree
Could increase my salary	288	3.51	0.74	Strongly Agree

* N varies because some teachers chose not to respond to each reason.

belonging" ($\bar{X}$=2.08).

Space was provided for the teachers to list "other" reasons why they pursue graduate studies. A total of five teachers responded. The responses were as follows: (1) provides more opportunity; (2) student teaching center possibility; (3) long term goal; (4) for enrichment and enhancement of teaching; and, (5) atmosphere.

The mean responses of inhibitors to pursuing a graduate degree as perceived by the teachers are reported in Table IX. The teachers indicated "Lack of time due to job related activities" as the greatest inhibitor to their pursuit of a graduate degree ($\bar{X}$=3.55), followed by: "Cost of tuition/fees/texts, etc." ($\bar{X}$=3.45); "Personal priority to spend additional time with family" ($\bar{X}$=3.27); "Inconvenient course schedules" ($\bar{X}$=3.11); "Campus location" ($\bar{X}$=3.09); "Time limit for program completion" ($\bar{X}$=2.92); "Thesis/dissertation requirement" ($\bar{X}$=2.77); and, "Enrollment procedures" ($\bar{X}$=2.66). The inhibitors which followed and were interpreted as "Slight" were: "Inadequate information concerning course schedules" ($\bar{X}$=2.35); "Wrong time in my life" ($\bar{X}$=2.35); "Graduate school entrance requirements" ($\bar{X}$=2.22); "Lack of course relevance to my job" ($\bar{X}$=2.16); "Minimum grade point requirement" ($\bar{X}$=1.96); "Personal problems" ($\bar{X}$=1.92); and, "Lack of self confidence" ($\bar{X}$=1.66).

Space was provided for the teachers to list "other reasons" that might inhibit them from pursuing a graduate degree. A total of seven teachers responded. Three teachers indicated that they

TABLE IX

MEAN RESPONSES OF INHIBITORS TO PURSUING A GRADUATE DEGREE AS PERCEIVED BY THE TEACHERS

Inhibitors	State Total N*	$\bar{X}$	SD	Interpretation (N=355)
Cost of tuition/fees/texts, etc.	307	3.45	0.80	Moderate
Enrollment procedures	305	2.66	0.98	Moderate
Campus location	302	3.09	1.07	Moderate
Inconvenient course schedules	305	3.11	0.93	Moderate
Graduate school entrance requirements	303	2.22	1.01	Slight
Minimum Grade Point Requirements	304	1.96	0.95	Slight
Thesis/Dissertation requirement	302	2.77	1.04	Moderate
Time limit for program completion	301	2.92	0.98	Moderate
Lack of time due to job related activities	306	3.55	0.75	High
Personal priority to spend additional time with my family	304	3.27	0.86	Moderate
Lack of encouragement from my Administration	304	2.21	0.97	Slight
Personal problems	304	1.92	0.97	Slight
Inadequate information concerning course schedules	304	2.35	1.02	Slight
Wrong time in my life	302	2.35	1.13	Slight
Lack of course relevance to my job	302	2.16	1.02	Slight
Lack of self confidence	300	1.66	0.95	Slight

* N varies because some teachers chose not to respond to each inhibitor.

already have their Master's degree. Two teachers indicated that the distance to class was inhibiting. The cost of school and lack of time were each listed one time.

Table X contains average ranks of current and potential delivery methods preferred, by the teachers, for graduate courses. Due to the similarities of the responses between the districts, only the combined responses of the teachers are reported. A rank of combined means for all the districts were as follows: Number one- "Courses Offered at an Alternative Location" (N=263, $\bar{X}$=3.25); Number two -"Courses Offered by Satellite" (N=262, $\bar{X}$=3.82); Number three- "Courses Offered through Oklahoma's Higher Education Televised Instruction System" (N=260, $\bar{X}$=4.18); Number four -"Courses offered by Interactive Video" (N=259, $\bar{X}$=4.43); Number five "Courses offered by Oklahoma Educational Television Authority" (N=262, $\bar{X}$=4.53); Number six- "Courses Offered in an Open Entry and Open Exit Format" (N=259, $\bar{X}$=4.58); Number seven- "Courses Offered on the OSU Campus in Stillwater" (N=263, $\bar{X}$=4.61); and Number eight- "Courses Offered by Electronic Mail" (N=259, $\bar{X}$=6.35).

In order for the teachers to specifically identify an alternative location, space was provided for the teachers to respond. A total of 101 teachers responded. Fifteen teachers from the Northwest district identified the following cities: Alva (eight); Woodward (five); Enid (one); and Tonkawa (one). The following cities were identified by 24 teachers from the Northeast district: Tulsa (18); Muskogee (three); Miami (two); and Bartlesville (one). The cities identified by 23 Central district

TABLE X

AVERAGE RANK OF CURRENT AND POTENTIAL DELIVERY METHODS PREFERRED BY THE TEACHERS FOR GRADUATE COURSES

Methods	n*	$\bar{x}$	SD	Average Rank
Northwest District				
Courses offered on the OSU Campus in Stillwater	39	3.89	2.78	3
Courses offered at an alternative location	41	3.31	2.31	1
Courses offered through Oklahoma's Higher Education Televised Instruction System	40	4.15	1.96	4
Courses offered by Satellite	40	3.80	2.15	2
Courses offered by Oklahoma Educational Television Authority	40	4.90	1.95	6
Courses offered by Interactive Video	40	4.57	1.70	5
Courses offered in an Open Entry and Open Exit Format	39	4.94	2.16	7
Courses offered by Electronic Mail	40	6.17	2.17	8
Northeast District				
Courses offered on the OSU Campus in Stillwater	54	4.68	3.02	6
Courses offered at an alternative location	55	3.05	2.40	1
Courses offered through Oklahoma's Higher Education Televised Instruction System	53	4.09	1.87	3
Courses offered by Satellite	54	3.77	1.60	2
Courses offered by Oklahoma Educational Television Authority	54	4.33	1.65	4
Courses offered by Interactive Video	52	4.63	1.81	5
Courses offered in an Open Entry and Open Exit Format	54	4.70	2.28	7
Courses offered by Electronic Mail	54	6.31	1.91	8

TABLE X (Continued)

Methods	n*	$\bar{x}$	SD	Average Rank
Central District				
Courses offered on the OSU Campus in Stillwater	85	4.35	2.92	5
Courses offered at an alternative location	82	3.45	2.33	1
Courses offered through Oklahoma's Higher Education Televised Instruction System	81	4.19	2.06	3
Courses offered by Satellite	82	4.10	1.97	2
Courses offered by Oklahoma Educational Television Authority	83	4.46	2.02	6
Courses offered by Interactive Video	83	4.51	1.93	7
Courses offered in an Open Entry and Open Exit Format	81	4.35	2.17	4
Courses offered by Electronic Mail	82	6.32	1.77	8
Southwest District				
Courses offered on the OSU Campus in Stillwater	56	5.12	2.77	7
Courses offered at an alternative location	56	3.08	2.36	1
Courses offered through Oklahoma's Higher Education Televised Instruction System	56	4.32	2.20	3
Courses offered by Satellite	56	3.51	1.69	2
Courses offered by Oklahoma Educational Television Authority	56	4.37	1.78	5
Courses offered by Interactive Video	56	4.35	1.61	4
Courses offered in an Open Entry and Open Exit Format	56	4.71	2.25	6
Courses offered by Electronic Mail	56	6.48	1.85	8

TABLE X (Continued)

Methods	n*	$\bar{x}$	SD	Average Rank
Southeast District				
Courses offered on the OSU Campus in Stillwater	29	5.20	2.96	7
Courses offered at an alternative location	29	3.34	2.15	1
Courses offered through Oklahoma's Higher Education Televised Instruction System	30	4.10	1.97	4
Courses offered by Satellite	30	3.73	1.83	2
Courses offered by Oklahoma Educational Television Authority	29	4.86	1.57	6
Courses offered by Interactive Video	28	3.78	2.09	3
Courses offered in an Open Entry and Open Exit Format	29	4.24	2.37	5
Courses offered by Electronic Mail	27	6.48	1.98	8
Districts Combined	N*	$\bar{x}$	SD	Average Rank
Courses offered on the OSU Campus in Stillwater	263	4.61	2.90	7
Courses offered at an alternative location	263	3.25	2.32	1
Courses offered through Oklahoma's Higher Education Televised Instruction System	260	4.18	2.02	3
Courses offered by Satellite	262	3.82	1.85	2
Courses offered by Oklahoma Educational Television Authority	262	4.53	1.84	5
Courses offered by Interactive Video	259	4.43	1.83	4
Courses offered in an Open Entry and Open Exit Format	259	4.58	2.23	6
Courses offered by Electronic Mail	259	6.35	1.89	8

* N Varies because some respondents chose not to rank each delivery method.

teachers were as follows: Oklahoma City (six); Duncan (four); Ardmore (three); Norman (three); Wayne (two); Shawnee (two); Lawton (one); Ada (one); and Chickasha (one). Twenty-nine teachers from the Southwest district identified the following cities: Lawton (ten); Altus (seven); Weatherford (six); Burns Flat (four); Sayre (one); and, Oklahoma City (one). Finally, ten Southeast district teachers listed the following cities: Wilburton (three); Ada (three); Seminole (two); Durant (one); and, Idabel (one).

Figure 3 was developed to provide a composite illustration of desirable locations considered to be alternate as perceived by at least four teachers. The alternative locations identified were Alva, Woodward, Weatherford, Burns Flat, Altus, Lawton, Oklahoma City, Duncan, and Tulsa.

The distribution of teachers by their perceived most convenient time to attend classes at OSU during the Fall/Spring semester are presented in Table XI. The Late Afternoon Classes Beginning at 4:30 p.m. choice was the most convenient time indicated by 49 (18.56 percent) of the teachers. Also, 74 (28.03 percent) of the teachers indicted that Evening Classes Beginning at 6:30 p.m. was the most convenient time. Seventy-three (27.65 percent) of the teachers indicted that Evening Classes Beginning at 7:00 p.m. was the most convenient time. Finally, 68 (25.76 percent) of the teachers indicated that Saturday Classes Only was the most convenient time.

Table XII reports the distribution of the teachers perceptions of offering two classes back-to-back by district. In the Northwest district 26 (9.67 percent) of the teachers indicated "Yes" and 16

Figure 3. Desirable Locations Considered to be Alternate by Teachers

TABLE XI

DISTRIBUTION OF TEACHERS BY THE MOST CONVENIENT TIME TO ATTEND CLASSES AT OSU DURING THE FALL/SPRING SEMESTER

Time	Frequency Distribution	
	State N	Total %
Late afternoon classes beginning at 4:30	49	18.56
Evening classes beginning at 6:30	74	28.03
Evening classes beginning at 7:00	73	27.65
Saturday classes only	68	25.76
Total	264	100.00

TABLE XII

DISTRIBUTION OF TEACHERS PERCEPTIONS OF OFFERING TWO CLASSES BACK-TO-BACK BY DISTRICT

District	Frequency Distribution							
	Yes		No		Other Time Frames		Subtotal	
	n	%	n	%	n	%	n	%
Northwest	26	9.67	16	5.95	0	0.00	42	15.61
Northeast	38	14.13	19	17.06	1	0.37	58	21.56
Central	54	20.07	22	8.18	3	1.12	79	29.37
Southwest	39	14.50	15	5.58	4	1.49	58	21.56
Southeast	24	8.92	7	2.60	1	0.37	32	0.37
Total (N%)	181	67.29	79	29.37	9	3.35	269	100.00

(5.95 percent) of the teachers indicated "No." Also, 38 (14.13 percent) of the teachers in the Northeast district responded "Yes," 19 (17.06 percent) responded "No," and one (0.37 percent) indicated "other time frames." The teachers in the Central district responded as follows: 54 (20.07 percent) responded "Yes," 22 (8.18 percent) responded "No," and three (1.12 percent) indicated "other time frames." Thirty-nine (14.50 percent) of the teachers in the Southwest district responded "Yes," 15 (5.58 percent) responded "No," and four (1.49 percent) indicated "other time frames." Finally, the teachers in the Southeast district responded as follows: 24 (8.92 percent) responded "Yes," seven (2.60 percent) responded "No," and one (0.37 percent) indicated "other time frames."

In summary, 181 (67.29 percent) of the teachers indicated a preference for two classes back-to-back whereas 79 (29.37 percent) did not prefer two classes back-to-back. Also, nine (3.35 percent) preferred "other time frames."

Space was provided for the teachers to list "other time frames." A total of three teachers chose to respond. The responses were as follows: 4:00 p.m. and 9:00 p.m., 7:00 p.m. and 9:00 p.m., and Saturdays.

The distribution of teachers by the most convenient course length for the Summer semester is reported in Table XIII. Due to similar responses between the districts, only the total teacher responses are presented here. Pertaining to the "Two Week Block in June" course length, 103 (38.15 percent) of the teachers indicated

TABLE XIII

DISTRIBUTION OF TEACHERS BY THE MOST CONVENIENT COURSE LENGTH FOR THE SUMMER SEMESTER (BY DISTRICT)

	Frequency Distribution											
	Northwest		Northeast		Central		Southwest		Southeast		State Total	
Course Length	n	%	n	%	n	%	n	%	n	%	N	%
Two week block in June	12	4.44	25	9.26	32	11.85	22	8.15	12	4.44	103	38.15
Two week block in July	11	4.07	9	3.33	7	2.59	11	4.07	6	2.22	44	16.30
Three week block in June	3	1.11	1	0.37	3	1.11	4	1.48	2	0.74	13	4.81
Three week block in July	4	1.48	4	1.48	2	0.74	5	1.85	3	1.11	18	6.67
Saturday classes only (for eight weeks)	6	2.22	4	1.48	4	1.48	4	1.48	0	0.00	18	6.67
Monday through Friday (all day for one week)	4	1.48	14	5.19	28	10.37	7	2.59	6	2.22	59	21.85
A regular eight week session (June-July)	2	0.74	0	0.00	2	0.74	2	0.74	1	0.37	7	2.59
Other time frames	1	0.37	1	0.37	2	0.74	3	1.11	1	0.37	8	2.96
Total	43	15.93	58	21.48	80	27.63	58	21.48	31	11.48	270	100.00

it is the most convenient course length. Forty-four (16.30 percent) of the teachers indicated that the "Two Week Block in July" course length was the most convenient time for them. As well, 13 (4.81 percent) of the teachers indicated that the "Three Week Block in June" course length was the most convenient for them. Eighteen (6.67 percent) of the teachers indicated the "Three Week Block in July" course length as the most convenient for them. The "Saturday Classes Only" course length was indicated by 18 (6.67 percent) of the teachers and the "Monday through Friday" course length was indicated by 59 (21.85 percent) of the teachers. Seven (2.59 percent) of the teachers indicated that "A Regular Eight Week Session" was the most convenient course length for them. Finally, eight (2.96 percent) of the teachers indicated the "Other Time Frames" option as the most convenient for them.

Figure 4, a combined summary by district, illustrates convenient course schedules for the Summer semester. The responses were compared by districts, within the following categories: (1) two weeks in June; (2) two weeks in July; (3) three weeks in June; (4) three weeks in July; (5) Saturday only; (6) Monday through Friday; (7) Eight weeks (regular); and (8) other.

Table XIV reports the distribution of teachers' perceptions of taking an intersession graduate course between the Fall and Spring semester (Late December-Early January) by district. In the Northwest district 17 (5.92 percent) of the teachers responded "Yes," 20 (6.97 percent) responded "No," and seven (2.44 percent) responded "Maybe." The teachers in the Northeast district responded

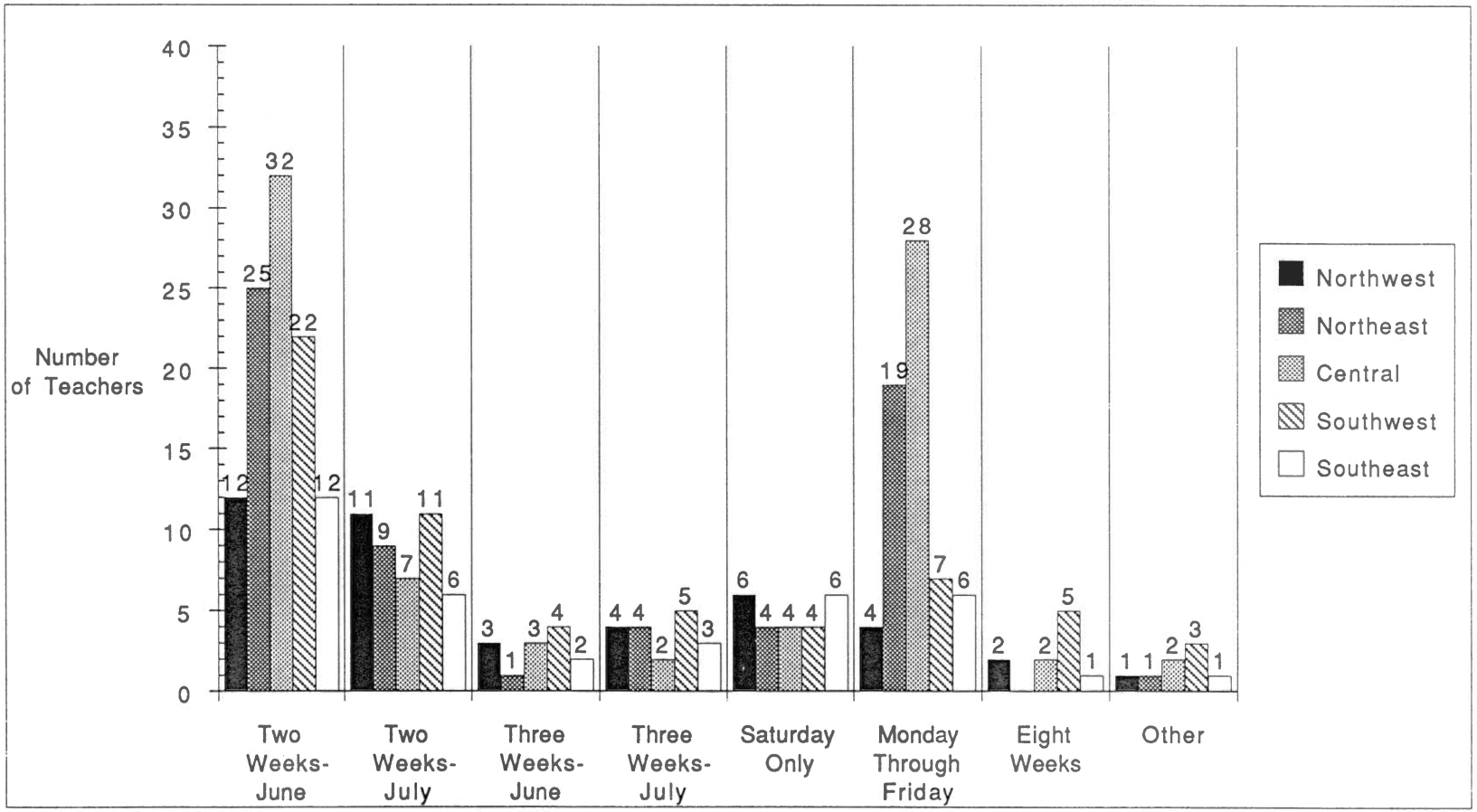

Figure 4. Convenient Course Schedules for the Summer Semester

TABLE XIV

DISTRIBUTION OF TEACHERS' PERCEPTIONS OF TAKING AN INTERSESSION GRADUATE COURSE BETWEEN THE FALL AND SPRING SEMESTERS (LATE DECEMBER-EARLY JANUARY) BY DISTRICT

	Frequency Distribution							
	Yes		No		Maybe		Subtotal	
District	n	%	n	%	n	%	n	%
Northwest	17	5.92	20	6.97	7	2.44	44	15.33
Northeast	12	4.18	39	13.59	12	4.18	63	21.95
Central	21	7.32	45	15.68	17	5.92	83	28.92
Southwest	12	4.18	34	11.85	18	6.27	64	22.30
Southeast	4	1.39	22	7.67	7	2.44	33	11.50
Total (N%)	66	23.00	160	55.75	61	21.25	287	100.00

as follows: 12 (4.18 percent) "Yes," 39 (13.59 percent) "No," and 12 (4.18 percent) "Maybe." In the Central district 21 (7.32 percent) of the teachers responded "Yes," 45 (15.68 percent) teachers responded "No," and 17 (5.92 percent) of the teachers responded "Maybe." The teachers in the Southwest district responded as follows: 12 (4.18 percent) "Yes," 34 (11.85 percent) "No," and 18 (6.27 percent) "Maybe." Finally, four (1.39 percent) of the teachers in the Southeast district responded "Yes," 22 (7.67 percent) responded "No," and seven (2.44 percent) responded "Maybe."

In summary, 66 (23.00 percent) of the teachers indicated that they would like to have a graduate course between Fall and Spring semesters (intersession), another 61 (21.25 percent) of the teachers indicated they might. The remaining 160 (55.75 percent) were not interested.

The distribution of teachers' perceptions of taking an intersession graduate course between the Spring and Summer semester (late May) by district is reported in Table XV. In the Northwest district (5.13 percent) of the teachers indicated "Yes," 21 (7.69 percent) indicated "No," and eight (2.93 percent) indicated "Maybe" Responses for the teachers in the Northeast district were as follows: "Yes," 16 (5.86 percent); "No," 31 (11.36 percent); and "Maybe," 14 (5.13 percent). Responses for the teachers in the Central district were as follows: "Yes," 19 (6.96 percent); "No," 34 (12.45 percent); and, "Maybe," 25 (9.16 percent). The teachers in the Southwest district indicated the following: "Yes," 14 (5.13

TABLE XV

DISTRIBUTION OF TEACHERS' PERCEPTIONS OF TAKING AN INTERSESSION GRADUATE COURSE BETWEEN THE SPRING AND SUMMER SEMESTERS (LATE MAY) BY DISTRICT

	Frequency Distribution							
	Yes		No		Maybe		Subtotal	
District	n	%	n	%	n	%	n	%
Northwest	14	5.13	21	7.69	8	2.93	43	15.75
Northeast	16	5.86	31	11.36	14	5.13	61	22.34
Central	19	6.96	34	12.45	25	9.16	78	28.57
Southwest	14	5.13	25	9.16	21	7.69	60	21.98
Southeast	8	2.93	14	5.13	9	3.30	31	11.36
Total (N%)	71	26.01	125	45.79	77	28.21	273	100.00

percent); "No," 25 (9.16 percent); and, "Maybe," 21 (7.69 percent). Finally, teachers in the Southeast district indicated the following: "Yes," 8 (2.93 percent); "No," 14 (5.13 percent); and, "Maybe," 9 (3.30 percent).

In summary, 71 (26.01 percent) of the teachers indicated that they would like to have a graduate course between the Spring and Summer semesters (intersession), another 77 (28.21 percent) of the teachers indicated they might. The remaining 125 (45.79 percent) were not interested.

Table XVI reports the distribution of teachers by the maximum distance they are willing to drive (one-way) to attend a Fall/Spring semester course on the OSU campus. Due to the similarly of the responses between the districts, only the state totals are presented here. The "Less than 25 miles" range was indicated by 38 (13.29 percent) of the teachers and the "25-49 miles" range was indicated by 79 (27.62 percent) of the teachers. Seventy (24.48 percent) of the teachers indicated the "50-74 miles" range. The "75-99 miles" range was indicated by 30 (10.49 percent) of the teachers and the "100 miles or more" range was indicated by 26 (9.09 percent) of the teachers. Finally, the "Distance Inhibits Attendance" choice was indicated by 43 (15.03 percent) of the teachers.

Figure 5 illustrates the maximum distance the teachers are willing to drive (one-way) to attend Fall/Spring semester courses on the OSU campus. The responses were compared, by districts, within the following categories: (1) less than 25 miles; (2) 25-49 miles; (3) 50-74 miles; (4) 75-99 miles; (5) 100 miles or more; and,

TABLE XVI

DISTRIBUTION OF TEACHERS BY THE MAXIMUM DISTANCE THEY ARE WILLING TO DRIVE (ONE-WAY) TO ATTEND A FALL/SPRING SEMESTER COURSE ON THE OSU CAMPUS

	Frequency Distribution											
	Northwest		Northeast		Central		Southwest		Southeast		State Total	
Distance	n	%	n	%	n	%	n	%	n	%	N	%
Less than 25 miles	6	2.10	8	2.80	11	3.85	10	3.50	3	1.05	38	13.29
25-49 miles	10	3.50	17	5.94	29	10.14	18	6.29	5	1.75	79	27.62
50-74 miles	18	6.29	16	5.59	20	6.99	6	2.10	10	3.50	70	24.48
75-99 miles	4	1.40	10	3.50	6	2.10	4	1.40	6	2.10	30	10.49
100 miles or more	4	1.40	5	1.75	5	1.75	11	3.85	1	0.35	26	9.09
Distance inhibits attendance	3	1.05	7	2.45	13	4.55	13	4.55	7	2.45	43	15.03
Total	45	15.73	63	22.03	84	29.37	62	21.68	32	11.19	286	100.00

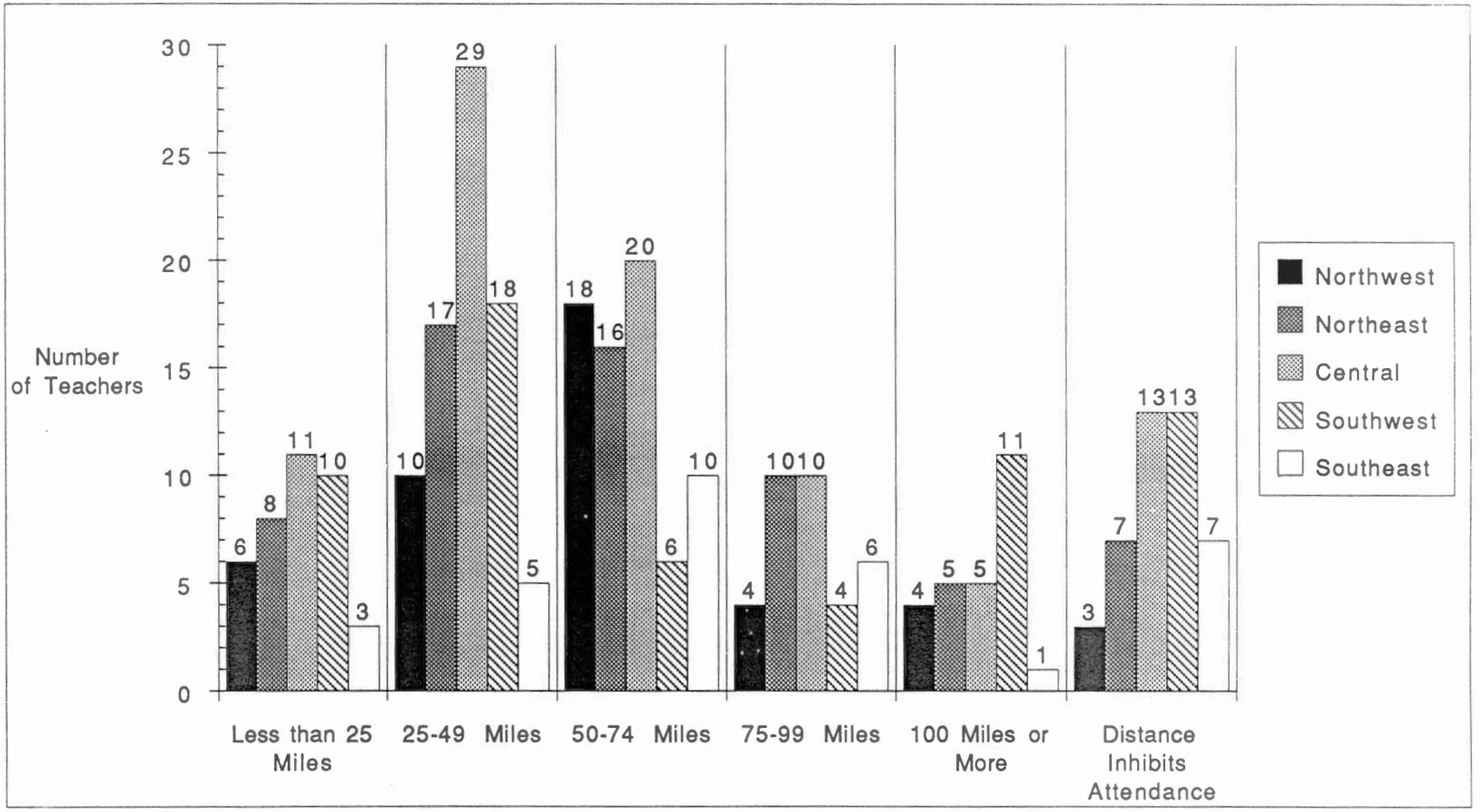

Figure 5. Maximum Distance the Teachers are Willing to Drive (one-way) to Attend A Fall/Spring Course on the OSU Campus

(6) distance inhibits attendance.

The distribution of teachers by the maximum distance they are willing to drive (one-way) to attend a summer session course on the OSU campus is reported in Table XVII. Due to the similarities of the responses between the districts, only the state totals are presented here. The "Less than 25 Miles" range was selected by 37 (13.12 percent) teachers and the "25-49 Miles" range was indicated by 56 (19.86 percent) of the teachers. The "50-74 Miles" range was indicated by 72 (25.53 percent) of the teachers and the "75-99 Miles" range was indicated by 36 (12.77 percent) of the teachers. Forty-nine (17.38 percent) of the teachers indicated the "100 Miles or More" range. Finally, 32 (11.35 percent) of the teachers indicated that "Distance Inhibits Attendance."

Figure 6 illustrates the maximum distance the teachers are willing to drive (one-way) to attend a summer semester course on the OSU campus. The responses were compared, by districts, within the following categories: (1) less than 25 miles; (2) 25-49 miles; (3) 50-74 miles; (4) 75-99 miles; (5) 100 miles or more; and, (6) distance inhibits attendance.

Table XVIII reports the distribution of teachers by the maximum number of days per week they are willing to drive to campus. The "One Day Per Week" choice was indicated by 124 (43.51 percent) of the teachers and "Two Days Per Week" choice was indicated by 41 (14.39 percent) of the teachers. The "Three Days Per Week" choice was indicated by 15 (5.26 percent) of the teachers and "Four Days Per Week" was indicated by four (1.40 percent) of the teachers.

TABLE XVII

DISTRIBUTION OF TEACHERS BY THE MAXIMUM DISTANCE THEY ARE WILLING TO DRIVE (ONE-WAY) TO ATTEND A SUMMER SESSION COURSE ON THE OSU CAMPUS

	Frequency Distribution											
	Northwest		Northeast		Central		Southwest		Southeast		State Total	
Distance	n	%	n	%	n	%	n	%	n	%	N	%
Less than 25 miles	3	1.06	8	2.84	10	3.55	12	4.26	4	1.42	37	13.12
25-49 miles	7	2.48	11	3.90	27	9.57	8	2.84	3	1.06	56	19.86
50-74 miles	16	5.67	16	5.67	21	7.45	9	3.19	10	3.55	72	25.53
75-99 miles	6	2.13	10	3.55	7	2.48	7	2.48	6	2.13	36	12.77
100 miles or more	11	3.90	10	3.55	11	3.90	14	4.96	3	1.03	49	17.38
Distance inhibits attendance	1	0.35	7	2.48	8	2.84	10	3.55	6	2.13	32	11.35
Total	44	15.60	62	21.99	84	29.79	60	21.28	32	11.35	282	100.00

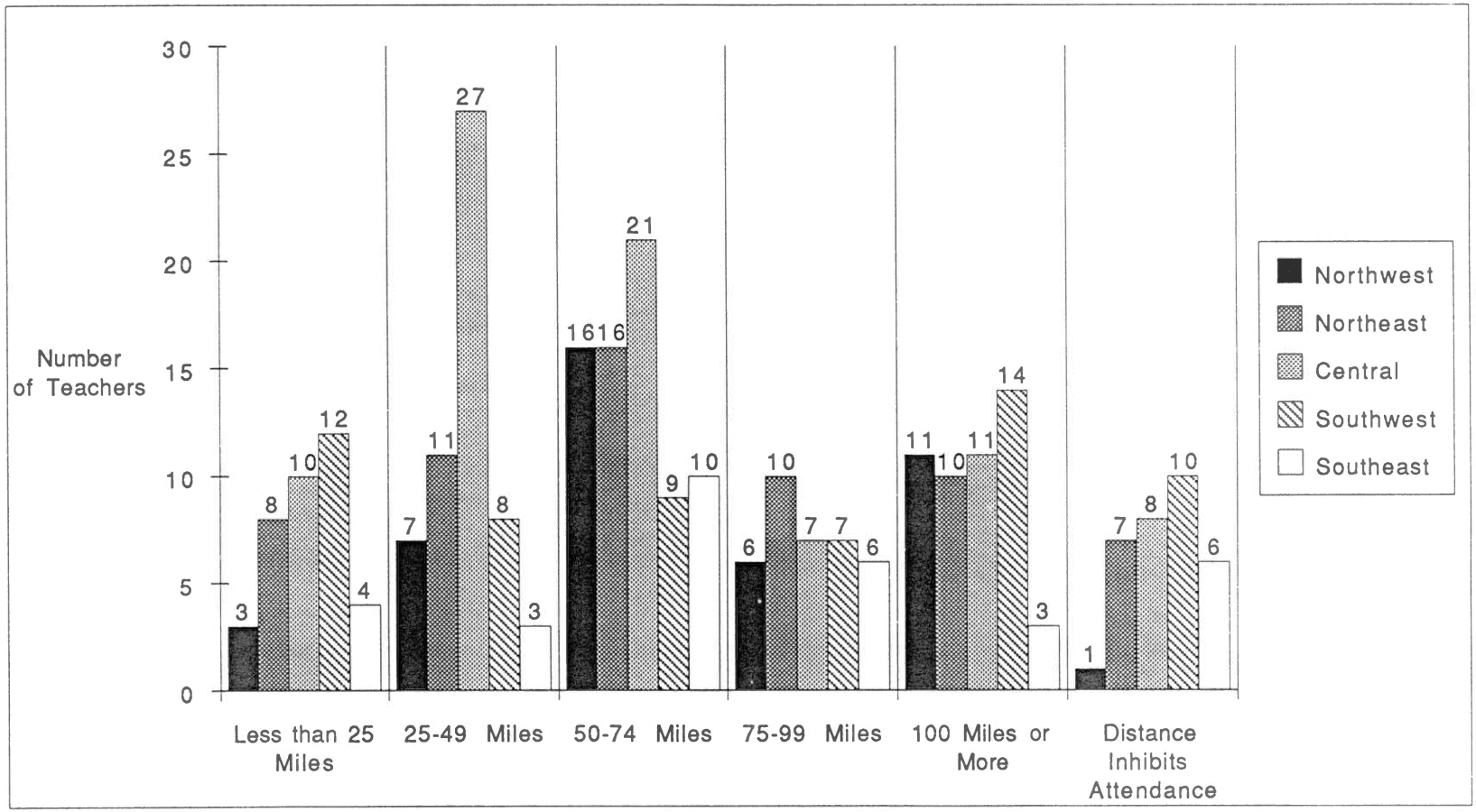

Figure 6. Maximum Distance Teachers are Willing to Drive (one-way) to Attend a Summer Semester Course on the OSU Campus

TABLE XVIII

DISTRIBUTION OF TEACHERS BY THE MAXIMUM NUMBER OF DAYS PER WEEK THEY ARE WILLING TO DRIVE TO CAMPUS

	Frequency Distribution											
	Northwest		Northeast		Central		Southwest		Southeast		State Total	
Days	n	%	n	%	n	%	n	%	n	%	N	%
One day per week	16	5.61	28	9.82	43	15.09	26	9.12	11	3.86	124	43.51
Two days per week	5	1.75	10	3.51	18	6.32	4	1.40	4	1.40	41	14.39
Three days per week	6	2.11	4	1.40	1	0.35	3	1.05	1	0.35	15	5.26
Four days per week	3	1.05	0	0.00	1	0.35	0	0.00	0	0.00	4	1.40
Five days per week	3	1.05	1	0.35	2	0.70	1	0.35	1	0.35	8	2.81
Not interested	9	3.16	19	6.67	21	7.37	29	10.18	15	5.26	93	32.63
Total	42	14.74	62	21.75	86	30.18	63	22.11	32	11.23	285	100.00

Eight (2.81 percent) of the teachers indicated they prefer "Five Days Per Week." Finally, the "Not Interested" option was indicated by 93 (32.63 percent) of the teachers.

The mean responses as to the perceived competency level of the teachers in the new Agricultural Education curriculum areas are reported in Table XIX. Program areas for which a "Moderate" level of competence was perceived by the teachers were: Agricultural Production/Management I and II ($\bar{X}$=3.30); Ag Mechanics I and II ($\bar{X}$=3.14); Natural Resources ($\bar{X}$=2.98); Employment in Agribusiness ($\bar{X}$=2.72); Agricultural Sales and Service ($\bar{X}$=2.68); and, Agricultural Processing and Marketing ($\bar{X}$=2.61). Program areas in which teachers perceived themselves as having a "Slight" level of competence were: Equine ($\bar{X}$=2.48); Principles of Agriculture Technology ($\bar{X}$=2.43); Horticulture I and II ($\bar{X}$=2.38); Aquaculture ($\bar{X}$=2.14); Biotechnology ($\bar{X}$=2.09); and, Forestry ($\bar{X}$=2.05).

Table XX reports the distribution of teachers' perceptions to OSU offering courses pertaining to the new Agricultural Education curriculum areas by district. Due to the similarity of the responses between the districts, only the state totals are presented here. The combined responses for the districts were as follows: (1) Ag Processing/Management I and II, 108 (51.92 percent) "Yes" and 100 (48.08 percent) "No;" (2) Ag Mechanics I and II, 107 (52.97 percent) "Yes" and 95 (47.03 percent) "No;" (3) Horticulture I and II, 141 (71.21 percent) "Yes" and 57 (28.79 percent) "No;" (4) Ag Processing and Marketing, 141 (71.94 percent) "Yes" and 55 (28.06 percent) "No;" (5) Ag Sales and Service, 133 (66.50 percent) "Yes" and 67

TABLE XIX

MEAN RESPONSES OF PERCEIVED COMPETENCY LEVEL OF THE TEACHERS BY THE NEW AGRICULTURAL EDUCATION CURRICULUM AREAS

Program/ Area	State Total N*	x	SD	Interpretation (N=355)
Agricultural Production/ Management I & II	262	3.30	0.65	Moderate
Agricultural Mechanics I & II	268	3.14	0.71	Moderate
Horticulture I & II	262	2.38	0.91	Slight
Agricultural Processing & Marketing	260	2.61	0.84	Moderate
Agricultural Sales & Service	264	2.68	0.78	Moderate
Equine	263	2.48	0.92	Slight
Employment in Agribusiness	260	2.72	0.78	Moderate
Natural Resources	270	2.98	0.73	Moderate
Principles of Agricultural Technology	263	2.43	0.92	Slight
Forestry	259	2.05	0.91	Slight
Aquaculture	257	2.14	0.91	Slight
Biotechnology	252	2.09	0.94	Slight

* N Varies because some teachers chose not to indicate a program area

TABLE XX

DISTRIBUTION OF TEACHERS' PERCEPTIONS TO OSU OFFERING GRADUATE LEVEL COURSES PERTAINING TO THE NEW AGRICULTURAL EDUCATION CURRICULUM AREAS BY DISTRICT

	Frequency Distribution					
	Yes		No		Subtotal	
New Curriculum Areas	n	%	n	%	n	%
Northwest District						
Agricultural Production/ Management I & II	15	55.56	12	44.44	27	100.00
Agricultural Mechanics I & II	14	56.00	11	44.00	25	100.00
Horticulture I & II	15	60.00	10	40.00	25	100.00
Agricultural Processing & Marketing	17	65.38	9	34.62	26	100.00
Agricultural Sales & Services	18	69.23	8	30.77	26	100.00
Equine	15	62.50	9	37.50	24	100.00
Employment in Agribusiness	17	68.00	8	32.00	25	100.00
Natural Resources	23	85.19	4	14.81	27	100.00
Principles of Agricultural Technology	21	75.00	7	25.00	28	100.00
Forestry	14	60.87	9	39.13	23	100.00
Aquaculture	18	75.00	6	25.00	24	100.00
Biotechnology	18	69.23	8	30.77	26	100.00
Northeast District						
Agriculture Production/ Management I & II	25	56.82	19	43.18	44	100.00
Agricultural Mechanics I & II	29	63.04	17	36.96	46	100.00
Horticulture I & II	32	78.05	9	21.95	41	100.00
Agricultural Processing & Marketing	32	74.42	11	25.58	43	100.00
Agricultural Sales & Services	27	61.36	17	38.64	44	100.00
Equine	37	84.09	7	15.91	44	100.00

TABLE XX (Continued)

New Curriculum Areas	Frequency Distribution: Yes n	Yes %	No n	No %	Subtotal n	Subtotal %
Employment in Agribusiness	31	72.09	12	27.91	43	100.00
Natural Resources	43	89.58	5	10.42	48	100.00
Principles of Agricultural Technology	34	77.27	10	22.73	44	100.00
Forestry	30	68.18	14	31.82	44	100.00
Aquaculture	32	72.73	12	27.27	44	100.00
Biotechnology	31	72.09	12	27.91	43	100.00
Central District						
Agriculture Production/ Management I & II	29	45.31	35	54.69	64	100.00
Agricultural Mechanics I & II	28	43.75	36	56.25	64	100.00
Horticulture I & II	49	74.24	17	25.76	66	100.00
Agricultural Processing & Marketing	46	71.88	18	28.13	64	100.00
Agricultural Sales & Services	47	73.44	17	26.56	64	100.00
Equine	46	71.88	18	28.13	64	100.00
Employment in Agribusiness	45	68.18	21	31.82	66	100.00
Natural Resources	54	80.60	13	19.40	67	100.00
Principles of Agricultural Technology	51	78.46	14	21.54	65	100.00
Forestry	37	59.68	25	40.32	62	100.00
Aquaculture	42	67.74	20	32.26	62	100.00
Biotechnology	43	69.35	19	30.65	62	100.00
Southwest District						
Agriculture Production/ Management I & II	29	58.00	21	42.00	50	100.00
Agricultural Mechanics I & II	27	58.70	19	41.30	46	100.00
Horticulture I & II	32	68.09	15	31.91	47	100.00

TABLE XX (Continued)

New Curriculum Areas	Frequency Distribution					
	Yes		No		Subtotal	
	n	%	n	%	n	%
Agricultural Processing & Marketing	32	71.11	13	28.89	45	100.00
Agricultural Sales & Services	28	59.57	19	40.43	47	100.00
Equine	27	58.70	19	41.30	46	100.00
Employment in Agribusiness	26	56.52	20	43.48	46	100.00
Natural Resources	33	70.21	14	29.79	47	100.00
Principles of Agricultural Technology	32	69.57	14	30.43	46	100.00
Forestry	18	40.00	27	60.00	45	100.00
Aquaculture	22	48.89	23	51.11	45	100.00
Biotechnology	28	62.22	17	37.78	45	100.00
Southeast District						
Agriculture Production/ Management I & II	10	43.48	13	56.52	23	100.00
Agricultural Mechanics I & II	9	42.48	12	57.14	21	100.00
Horticulture I & II	13	68.42	6	31.58	19	100.00
Agricultural Processing & Marketing	14	77.78	4	22.22	18	100.00
Agricultural Sales & Services	13	68.42	6	31.58	19	100.00
Equine	8	42.11	11	57.89	19	100.00
Employment in Agribusiness	8	44.44	10	55.56	18	100.00
Natural Resources	14	58.33	10	41.67	24	100.00
Principles of Agricultural Technology	16	76.19	5	23.81	21	100.00
Forestry	10	50.00	10	50.00	20	100.00
Aquaculture	10	52.63	9	47.37	19	100.00
Biotechnology	12	63.16	7	36.84	19	100.00

TABLE XX (Continued)

New Curriculum Areas	Frequency Distribution (N=355) Yes N	Yes %	No N	No %	State Total N*	State Total %
Combined District						
Agriculture Production/ Management I & II	108	51.92	100	48.08	208	100.00
Agricultural Mechanics I & II	107	52.97	95	47.03	202	100.00
Horticulture I & II	141	71.21	57	28.79	198	100.00
Agricultural Processing & Marketing	141	71.94	55	28.06	196	100.00
Agricultural Sales & Services	133	66.50	67	33.50	200	100.00
Equine	133	67.51	64	32.49	197	100.00
Employment in Agribusiness	127	64.14	71	35.86	198	100.00
Natural Resources	167	78.40	46	21.60	213	100.00
Principles of Agricultural Technology	154	75.49	50	24.51	204	100.00
Forestry	109	56.19	85	43.81	194	100.00
Aquaculture	124	63.92	70	36.08	194	100.00
Biotechnology	132	67.69	63	32.31	195	100.00

* N varies because some respondents chose not to respond to this question

(33.50 percent) "No;" (6) Equine, 133 (67.51 percent) "Yes" and 64 (32.49 percent) "No;" (7) Employment in Agribusiness, 127 (64.14 percent) "Yes" and 71 (35.86 percent) "No;" (8) Natural Resources, 167 (78.40 percent) "Yes" and 46 (21.60 percent) "No;" (9) Principles of Ag Technology, 154 (75.49 percent) "Yes" and 50 (24.51 percent) "No;" (10) Forestry, 109 (56.19 percent) "Yes" and 85 (43.81 percent) "No;" (11) Aquaculture, 124 (63.92 percent) "Yes" and 70 (36.08 percent) "No;" and (12) Biotechnology, 132 (67.69 percent) "Yes" and 63 (32.31 percent) "No."

Figure 7 illustrates the combined teachers' perceptions to OSU offering graduate level courses pertaining to the new Agricultural Education curriculum areas. The "Yes" and "No" responses were reported by subject as follows: (1) Agricultural Production; (2) Agricultural Mechanics; (3) Horticulture; (4) Agricultural Processing and Marketing; (5) Agricultural Sales and Service; (6) Equine; (7) Employment in Agribusiness; (8) Natural Resources; (9) Principles of Agricultural Technology; (10) Forestry; (11) Aquaculture; and, (12) Biotechnology.

The distribution of teachers by their teachers by their highest educational level and number of hours of course work completed beyond their last degree are reported in Table XXI. A total of 233 (76.64 percent) of the teachers indicted that their highest educational level consisted of a Bachelor's degree. Also, 70 (23.03 percent) of the teachers indicated that their highest educational level consisted of a Master's degree. Only one (0.33 percent) teacher indicated he/she had acquired the Doctorate degree.

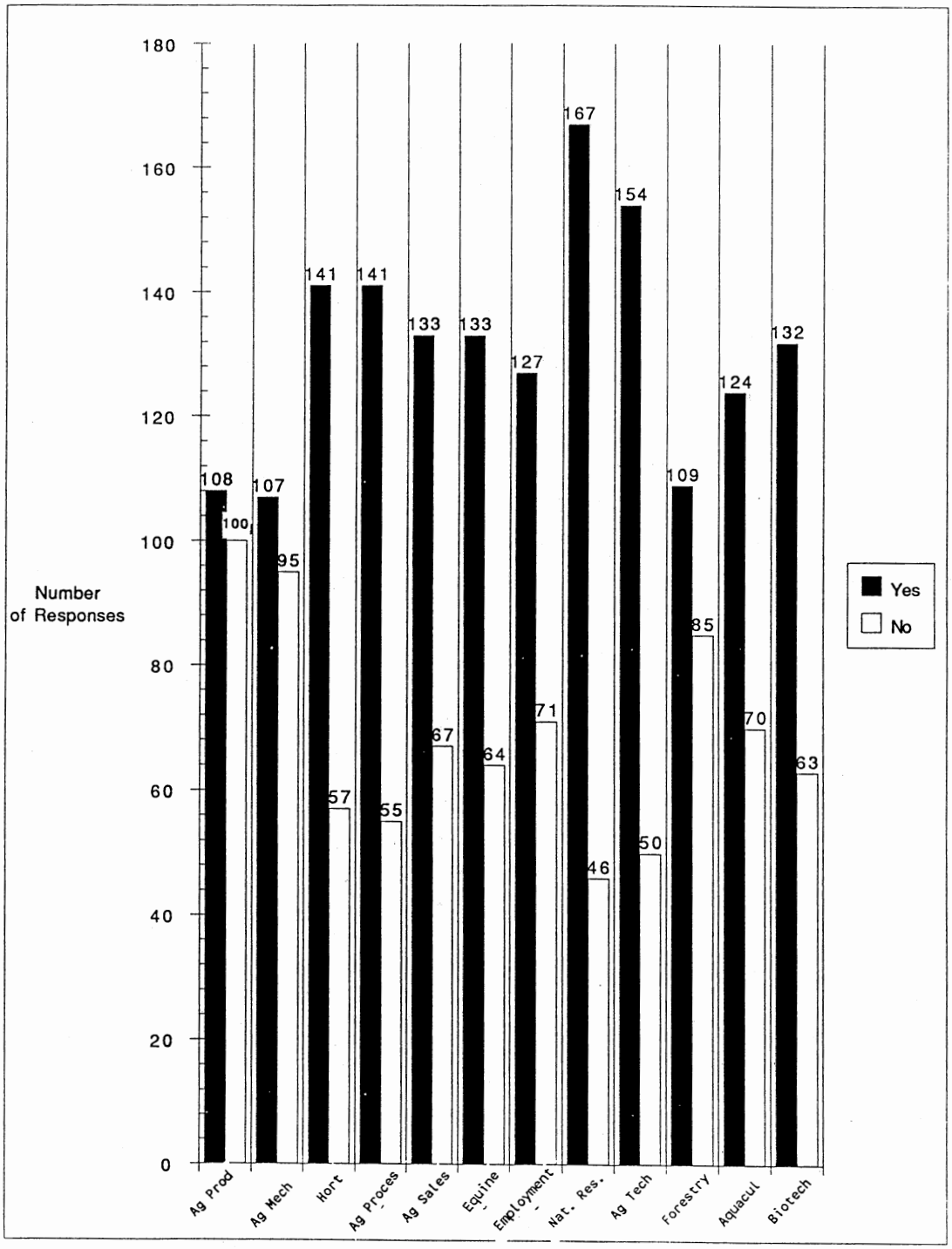

Figure 7. Teachers Perceptions to OSU Offering Graduate Level Courses Pertaining to New Agricultural Education Program Areas

TABLE XXI

DISTRIBUTION OF TEACHERS BY THEIR HIGHEST EDUCATIONAL LEVEL AND NUMBER OF HOURS OF COURSE WORK COMPLETED BEYOND THEIR LAST DEGREE

	Frequency Distribution		
	State Total		
Educational Level/Hours	N*	%	N=355
Educational Level			
Bachelors Degree	233	76.64	
Master's Degree	70	23.03	
Doctorate	1	0.33	
Total	304	100.00	
Hours Beyond Last Degree			
5 Hours or Less	103	34.92	
6-10 Hours	71	24.07	
11-15 Hours	39	13.22	
16-20 Hours	37	12.54	
21-25 Hours	17	5.76	
26 Hours or More	28	9.49	
Total	295	100.00	

*N Varies because some of the teachers chose not to respond

A total of 103 (34.92 percent) of the teachers indicated they had "five hours or less" course work beyond their last degree. Also, 71 (24.07 percent) of the teachers indicted they had "6 to 10 hours" of course work beyond their last degree. Thirty-nine (13.22 percent) of the teachers indicated they had "16 to 20 hours" of course work and 17 (5.67 percent) of the teachers reported having "21 to 25 hours" of course work beyond their last degree. Finally, 28 (9.49 percent) of the teachers indicated that they have "26 hours or more" course work beyond their last degree.

To determine which topics the teachers believe should be emphasized more, relative to teaching and technical skills, an open-ended question was asked. In fairness to the respondents and to ensure that their opinions would be reported, it was deemed necessary to include every response to the open-end question. The question was segregated into four areas. The areas were: (1) Topics in graduate level courses which would contribute to the further development of teaching skills; (2) Topics for inservice and/or workshops which would contribute to the further development of teaching skills; (3) Topics in graduate level courses which would enhance their technical competence; and, (4) Topics for inservice and/or workshops which would enhance their technical competence.

A total of 98 teachers chose to list at least one topic area in graduate level courses that would contribute to their further development of teaching skills. The responses were as follows: (1) Twenty-six teachers listed curriculum development; (2) Twenty-one teachers listed time management; (3) Nineteen teachers noted

student recruitment; (4) Audio-Visual instruction was listed by 14 teachers; (5) Classroom management was indicated by eight teachers; (6) Five teachers listed adult/child learning; (7) Classroom instruction, computers, and horticulture were each listed by three teachers; (8) Graduate instruction, adult education, and school finances were each listed by two teachers; and, (9) Current issues in agriculture, administration, record-keeping, school finance, assertive discipline, equine, natural resources, animal science, teaching skills, dealing with emotionally mentally handicapped students, counseling, stress management, adult student recruitment, 9-12 agricultural education, livestock skills, basic skills, math/science communication, student involvement, marketing commodities, and FFA speech writing were each listed once.

A total of 161 teachers indicated at least one specific inservice/workshop topic which would contribute to further development of their teaching skills. The teachers responses were as follows: (1) Twenty-eight teachers listed curriculum development; (2) Student recruitment was listed by 26 teachers; (3) Eighteen teachers listed time management; (4) Audio-visual was listed by 13 teachers; (5) Ten teachers listed natural resources; (6) Seven teachers reported classroom management; (7) Computers/ Software was listed by six teachers; (8) Five teachers listed adult/child learning; (9) Four teachers listed classroom teaching ideas and methods and four teachers listed horticulture; (10) Proficiency awards were listed by three teachers; (11) School finance, record books, and ag sales and service were each listed by

two teachers; and, (12) Current issues in agriculture, at risk students, minority students, artificial insemination, technical information, equine, student responsibility, new technology, small gas engines, poultry industry, public relations, eighth grade students, discipline, pasture and range science, water safety, greenhouse management, non-traditional agriculture, family relations, student involvement, state competency tests, adult education, teacher files, interscholastic areas, agriculture careers, organizational skills, livestock skills, marketing, agriculture placement, public speaking, teenage problems, and agriscience were each listed once.

A total of 91 teachers indicated at least one specific topic relative to graduate level courses that would enhance their technical competence. The responses were as follows: (1) Fifty teachers listed computers; (2) Marketing strategies was listed by 30 teachers; (3) Livestock production was listed by 15 teachers; (4) Eight teachers listed tissue culture; (5) Six teachers listed horticulture; (6) Natural resources was listed by five teachers; (7) Biological sciences and livestock selection/evaluation were each listed by three teachers; (8) Agricultural economics was listed by two teachers; and, (9) Forestry, mig/tig welding, animal science, current issues, math/science communications, genetics, meat science, ag mechanics, new curriculum, business/industry relationships to agriculture, agricultural experiments, farm business management, adult education, equine, and student recruitment were each listed once.

A total of 109 teachers indicated at least one specific inservice/workshop topic which would enhance their technical skills. The responses were as follows: (1) Sixty-five teachers listed computers; (2) Twenty-seven teachers listed marketing strategies; (3) Fifteen teachers listed livestock production; (4) Twelve teachers listed tissue culture; (5) Natural Resources was listed by eight teachers; (6) Six teachers listed forestry; (7) Horticulture was listed by five teachers; (8) Agricultural mechanics was listed by four teachers; (9) Equine, new technology and agricultural sales and service, leadership, and environment/energy issues were listed two times; and, (11) Adult education, rural economic development, sales contest, agricultural economics, wildlife management, agriculture government agencies, artificial insemination, embryo transfer, technical information, agriculture marketing, speaker training, competency test, meat science, agriculture science, courses for the new curriculum, agriculture placement, farm and ranch management, agriculture careers, animal science, and state applications were each listed once.

The teachers were asked to identify a city or town, within their Agricultural Education Supervisory district, they would commute to for instruction. A total of 207 teachers responded to this question. In fairness to all respondents it was deemed necessary to include all responses.

Twenty-two teachers in the Northwest district listed the following: Alva (9); Woodward and Enid (5 each); Weatherford, Guymon, and Watonga (1 each).

A total of 53 teachers in the Northeast district identified the following cities: Tulsa (22); Muskogee (13); Miami and Bartlesville (3 each); Sapulpa, Salina, and Okmulgee (2 each); and, Claremore, Stillwater, Vinita, Drumright, Okemah, and Shawnee (1 each).

Sixty-six teachers in the Central district identified the following cities as alternative sites: Shawnee and Oklahoma City (10); Stillwater and Duncan (8 each); Ardmore (7); Norman (5); Pauls Valley, Lawton and Guthrie (3 each); and, Edmond, Davis, Ada, Chickasha, Sulphur, Stroud, Garvin County, Tulsa, and Elk City (1 each).

In the Southwest district a total of 47 teachers responded. The responses were as follows: Lawton (17); Altus (11); Weatherford (9); Sayre, Burns Flat, and Elk City (2 each); and El Reno, Tuttle, Chickasha, Hobart (1 each).

In the Southeast district 21 teachers identified the following cities: Durant and Wilburton (5 each); McAlester (4); Seminole and Poteau (2 each); and, Ardmore, Tishomingo, and Konawa (1 each).

Figure 8 illustrates cities and towns within the teachers Agricultural Education Supervisory district that they would be willing to commute to for instruction. The cities and towns included in the illustration were identified by at least five teachers. Three cities/towns (Alva, Woodward, Enid) were identified by at least five Northwest district teachers. Six cities/towns (Shawnee, Oklahoma City, Ardmore, Norman, Stillwater, Duncan) were identified by at least five Central district teachers. Three cities/towns (Lawton, Altus, Weatherford) were identified by at

Figure 8. Cities and Towns the Teachers are Willing to Commute to for Instruction

least five Southwest district teachers. Two cities/towns (Durant and Wilburton) were identified by at least five Southeast district teachers.

CHAPTER V

SUMMARY, FINDINGS, AND RECOMMENDATIONS

Summary

Due to the rapidly changing times, agricultural education teachers (hereafter referred to as teachers) are constantly faced with the task of updating their skills and competencies. Two traditional methods to satisfy these needs have been through the use of non-formal (in-service) and formal (graduate college) education.

It was the intent of the author to determine the perceived educational needs/plans of the teachers. The purpose of this chapter is to present the purpose and objectives of the study, as well as, to summarize the rationale, design, methodology, and findings of the study. Finally, the conclusions and recommendations of the study
will be presented.

Rationale for the Study

The Oklahoma State University (OSU) and the Oklahoma Department of Vocational and Technical Education needed to know more about the educational needs and/or plans of the teachers in order to do a "better job" of meeting the educational needs of the teachers. It was determined that based upon the input of the teachers, recommendations could be shared with educators and/or administrators

at Oklahoma State University and the Oklahoma Department of Vocational and Technical Education. Upon determining the teachers needs, sufficient program modifications perhaps could result in an increased enrollment in the Graduate College and the concomital obtaining of advanced degrees by the teachers would result. Also, specific topics for in-service education and graduate courses could be determined relative to the new Agricultural Education curriculum areas.

Purpose of the Study

The purpose of this study was to determine the perceived educational needs/plans of Oklahoma Agricultural Education teachers.

Objectives of the Study

The following specific objectives were developed in order to accomplish the purpose of this study:

1. To determine the current status and intention concerning graduate study, as well as to determine the degree program the teachers are likely to pursue or are currently pursuing, and more specifically to determine when they may pursue graduate studies.

2. To determine which specific public school administrator certification programs that teachers may be pursuing, as well as specific topics relative to enhancing the technical competence and teaching skills of the teachers that would be most beneficial to them as part of their graduate studies and/or in-service education.

3. To determine the level of benefit of Agricultural Education course topics as perceived by the teachers, both personally and/or professionally.

4. To determine the level of agreement or disagreement as perceived by the teachers relative to predetermined statements which indicate their reasons for pursuing graduate study.

5. To determine the teachers' perceptions pertaining to specific inhibitors which may cause them to not pursue a graduate degree.

6. To determine the teachers' perceptions pertaining to:

   a. the instructional delivery methods for graduate courses that are of most interest to them;

   b. the time schedules that would be most convenient to them pertaining to formal course work;

   c. the course length that would be most appealing to them pertaining to graduate studies;

   d. whether or not they are interested in intersession courses;

   e. the maximum distance that they would be willing to drive (one-way) to attend formal courses;

   f. the number of days per week they would be willing to drive to Stillwater to attend formal courses; and

   g. the level of competence for each new Agricultural Education curriculum area and more specifically if a graduate course should be offered to enhance technical competence.

7. To determine a city or town within each Agricultural Education Supervisory District that the teachers would be willing to commute to in order to receive off-campus instruction.

8. To determine how OSU can be of better service to the teachers.

9. To elicit selected demographic information which will enable the researcher to characterize the typical respondent.

Design of the Study

In order to obtain data that were deemed to be of high quality and accuracy, an investigator designed questionnaire was developed for the study (See Appendix A). Numerous individuals were contacted concerning the design and content of the instrument. University faculty members from the colleges of Agriculture and Education aided in the design of the study. As well, individuals from the Oklahoma Department of Vocational and Technical Education provided valuable input.

In order to achieve validity, the question content and format of the instrument were reviewed by a panel of experts. Reliability of the instrument was achieved by conducting two pilot tests of the instrument. After reliability and validity of the instrument were established, the questionnaire was developed into a booklet format.

Permission was granted by the State Supervisor of Agricultural Education - Eddie Smith, to allow the six district supervisors, from the Division of Agricultural Education at the Oklahoma Department of Vocational and Technical Education, to distribute the

booklets during the first-round of professional improvement meetings during the Fall of 1990. The district supervisors provided the researcher with information concerning the number of teachers in each district.

As for the conduct of the study, the researcher collected the booklets from the district supervisors each week. The first professional improvement meeting (of the first-round) was held August 13, 1990 and the last meeting (of the first round) was held September 13, 1990. The booklets contained of 19 questions. The questions were developed to elicit both quantitative and qualitative data. A majority of the questions in the instrument addressed the formal educational (graduate college) needs/plans of the teachers. The remainder of the questions addressed the non-formal (in-service) educational needs of the teachers and demographic information.

The Statistical Analysis System (SAS) was utilized to manipulate the quantitative data. The following types of data were analyzed: number of frequencies, percentages, means, and standard deviations. It was deemed necessary, due to the nature of the study, to segregate the analysis by each of the five Agricultural Education Supervisory districts. The qualitative data were grouped and summarized by the investigator.

Major Findings of the Study

Table XXII reports the educational needs/plans of the teachers. The findings indicated that the majority of the teachers (264 or 81.49 percent) were not currently pursuing graduate studies.

TABLE XXII

SUMMARY TABLE OF EDUCATIONAL NEEDS/PLANS OF TEACHERS

	Frequency Distribution	
	N	%
Current Status		
Currently Pursuing	60	18.51
Not Currently Pursuing	264	81.49
Total	324	100.00
Intent		
Plan to Pursue	98	35.50
Do Not Plan to Pursue	178	64.50
Total	276	100.00
When Respondents Plan to Pursue		
Spring 1991 or Summer 1991	48	71.64
Fall 1991 or Spring 1992 or Summer 1992 or Fall 1992	19	28.36
Total	67	100.00
Degree Programs Teachers Plan to Pursue		
Agricultural Education	49	44.54
Educational Administration	39	35.46
Other	22	20.00
Total	110	100.00
Degree Programs Teachers Are Currently Pursuing		
Agricultural Education	20	44.44
Educational Administration	22	48.89
Others	3	6.67
Total	45	100.00
Public School Administration Certification Programs Teachers Might/Are Pursuing		
Public School Administration	171	56.25
Other	45	14.80
Not Interested	88	28.95
Total	218	100.00

TABLE XXII (Continued)

	Frequency N	Distribution %
Most Convenient Starting Times for Fall/Spring Semester Courses		
4:30 p.m.	49	18.56
6:30 p.m.	74	28.03
7:00 p.m.	73	27.65
Saturday Classes	68	25.76
Total	264	100.00
Perceptions of Offering Two Classes Back-to-Back		
Yes	181	67.29
No	79	29.37
Other	9	3.34
Total	269	100.00
Most Convenient Course Length for Summer Semester		
Two Week Block in June	103	38.15
Two Week Block in July	44	16.30
Monday-Friday for One Week	59	21.85
Other	64	23.70
Total	270	100.00
Perceptions of Intersession Graduate Courses Between Fall/Spring Semesters		
Yes	66	23.00
No	160	55.75
Maybe	61	21.25
Total	287	100.00
Perceptions of Intersession Graduate Courses Between Spring/Summer Semesters		
Yes	71	26.01
No	125	45.79
Maybe	77	28.20
Total	273	100.00

TABLE XXII (Continued)

	Frequency Distribution N	%
Maximum Distance Teachers Are Willing To Drive (one-way) to attend a Spring/Fall Semester Course On Campus		
74 miles or less	187	65.39
75 miles or more	56	19.58
Distance Inhibits Attendance	43	15.03
Total	286	100.00
Maximum Distance Teachers Are Willing to Drive (one-way) to attend a Summer Semester Course on the OSU Campus		
74 miles or less	165	58.51
75 miles or more	85	30.14
Distance Inhibits Attendance	32	11.35
Total	282	100.00
Maximum Number of Days Per Week Teachers Are Willing to Drive (one-way) to Campus		
One day	124	43.51
Two to Five Days	68	23.86
Not Interested	93	32.63
Total	285	100.00
Teacher's Highest Educational Level		
Bachelor's degree	233	76.64
Master's degree	70	23.03
Doctorate	1	0.33
Total	304	100.00
Number of Hours of Course Work Completed Beyond their Last Degree		
0 - 10 Hours	174	58.99
11 - 20 Hours	76	25.76
21 or more Hours	45	15.25
Total	295	100.00

However, 60 (18.51 percent) of the teachers indicated that they were currently pursuing graduate studies.

A majority of the teachers (who were not currently pursuing graduate studies) do not plan to pursue graduate studies (178 or 64.50 percent). However, 98 (35.50 percent) of the teachers plan to pursue graduate studies in the future.

Forty-eight (71.64 percent) of the teachers (who plan to pursue graduate studies) will do so in the Spring or Summer of 1991. Only 19 (28.36 percent) of the teachers plan to do so in the Fall of 1991 or in the 1992 academic year.

Of the teachers planning to pursue a degree program, 49 (44.54 percent) indicated the Agricultural Education discipline to be their choice, whereas 39 (35.46 percent) indicated the Educational Administration discipline as their choice. Only 22 (20.00 percent) of the teachers were interested in pursuing degree programs in other areas.

Of the 45 teachers who indicated they were currently pursuing a degree program, 20 (44.44 percent) indicated that they were currently pursuing a degree program in the Agricultural Education discipline. As well, 22 (48.89 percent) of the teachers indicated pursuit in the Educational Administration discipline. Only three (6.67 percent) of the teachers indicated that they were currently pursuing degree programs in other disciplines.

Of the 304 teachers who indicated they were pursuing additional certification, the majority indicated they might/are currently pursuing a public school administrator certification program (171 or

56.25 percent). Forty-five (14.80 percent) of the teachers indicated interest in other (school counselor, school psychologist, etc.) certification areas. However, 88 (28.95 percent indicated that they were not interested.

In regard to the most convenient times for Fall/Spring semester courses, 49 (18.56 percent) of the teachers indicated that classes which begin at 4:30 p.m. was their preference. As well, 74 (28.03 percent) of the teachers preferred the 6:30 p.m. starting time and 73 (27.65 percent) preferred the 7:00 p.m. starting time. Finally, 68 (25.76 percent) of the teachers preferred attending class only on Saturdays.

The majority of the teachers (181 or 67.29 percent) indicated that "Yes" they prefer two courses offered back-to-back on the same day. However, 79 (29.37 percent) of the teachers indicated "No" and only nine (3.34 percent) preferred "other" time frames.

A two week block in June was the course length indicated to be most convenient by 103 (38.15 percent) of the teachers, whereas 44 (16.30 percent) of the teachers preferred a two week block course in the month of July. Monday through Friday, all day long for one week, was chosen by 59 (21.85 percent) of the teachers as their preference and 64 (23.70 percent) of the teachers indicated other time frames to be their preference.

Teachers were asked of their willingness to attend graduate courses offered between the Fall and Spring semesters., Sixty-six (23.00 percent) of the teachers indicated "Yes," 160 (55.75 percent) indicted "No," and 61 (21.25 percent) of the teachers indicated

"Maybe."

Seventy-one (26.01 percent) of the teachers indicated a willingness (Yes) to attend graduate courses between the Spring and Summer semesters, whereas 125 (45.79 percent) of the teachers responded "No." Finally, 77 (28.20 percent) of the teachers responded "Maybe."

As for the maximum distance teachers were willing to drive (one-way) to attend a Fall/Spring semester course on the OSU campus, 187 (65.39 percent) indicated they were willing to drive less than 74 miles. Fifty-six (19.58 percent) of the teachers were willing to drive 75 miles or more. Forty-three (15.03 percent) teachers reported that distance inhibits them attending a Fall/Spring semester course on the OSU campus.

One hundred sixty-five (58.51 percent) of the teachers reported that the maximum distance that they were willing to drive (one-way) to attend a Summer semester course on the OSU campus was 74 miles or less. Eighty-five (30.14 percent) of the teachers were willing to drive 75 miles or more. Thirty-two (11.35 percent) of the teachers indicated that distance inhibits them from attending a Summer semester course on the OSU campus.

The teachers were asked to indicate the maximum number of days they were willing to drive (one-way) to the OSU campus for graduate courses. One day per week was chosen by 124 (43.51 percent) of the teachers. As well, two to five days per week was reported by 68 (23.86 percent) of the teachers. Ninety-three (32.63 percent) of the teachers indicated that they were not interested.

The teachers were asked to indicate their highest educational level. A bachelor's degree was indicated by 233 (76.64 percent) of the teachers. Seventy (23.03 percent) of the teachers held a Master's degree. One (0.33 percent) teacher indicated that his/her highest degree was a Doctorate.

One hundred seventy-four (58.99 percent) of the teachers indicated they have completed less than ten hours of course work beyond their last degree. As well, 76 (25.76 percent) of the teachers indicated 11-20 hours and 45 (15.25 percent) of the teachers indicated they have completed 21 or more hours of course work beyond their last degree.

The summary of responses as to Agricultural Education graduate course topics are presented in descending order by their mean in Table XXIII. The teachers indicated that "moderately important" course topics were as follows: Guidance and Leadership Development of Agriculture Youth ($\overline{X}$=3.16); Leadership Style ($\overline{X}$=3.13); Advanced Methods of Teaching Agriculture ($\overline{X}$=3.08); Organizing Curriculum and Programs in Agricultural Education ($\overline{X}$=3.00); Curriculum Design for Alternative Approaches in Agriculture ($\overline{X}$=2.93); Direction Programs of Supervised Training in Agriculture ($\overline{X}$=2.90); Organization and Methods of Adult Education ($\overline{X}$=2.82); Young Farmer Organizations ($\overline{X}$=2.82); Agricultural Education Workshop ($\overline{X}$=2.82); Teaching Agriculture in Higher Education ($\overline{X}$=2.64); Educational Aspects of Occupational Behavior ($\overline{X}$=2.54); Research Design in Occupational Education ($\overline{X}$=2.54); and Assessment and Evaluation of Educational Programs in Agriculture ($\overline{X}$=2.51). The teachers indicated that

TABLE XXIII

SUMMARY OF RESPONSES PERTAINING TO THE LEVEL OF BENEFIT OF AGRICULTURAL EDUCATION GRADUATE COURSES

Course Topics Presented in Descending Order by $\bar{X}$	Level of Benefit	Mean ($\bar{X}$)
Guidance and Leadership Development of Agriculture Youth	Moderate	3.16
Leadership Styles	Moderate	3.13
Advanced Methods of Teaching Agriculture	Moderate	3.08
Organizing Curriculum and Programs in Agricultural Education	Moderate	3.0
Curriculum Design for Alternative Approaches in Agriculture	Moderate	2.93
Directing Program of Supervised Training in Agriculture	Moderate	2.90
Organization and Methods of Adult Education	Moderate	2.82
Young Farmer Organization	Moderate	2.82
Agricultural Education Workshop	Moderate	2.82
Teaching Agriculture in Higher Education	Moderate	2.64
Educational Aspects of Occupational Behavior	Moderate	2.54
Research Design in Occupational Education	Moderate	2.54
Assessment and Evaluation of Educational Programs in Agriculture	Moderate	2.51
Independent Studies in Agricultural and Extension Education	Slightly	2.44
Extension Teaching Methods	Slightly	2.44
County Extension Program Development	Slightly	2.13
History, Functions Land Objectives of the Extension Service	Slightly	2.03

"slightly important" topics were as follows: Independent Studies in Agricultural and Extension Education ($\bar{X}$=2.48); Extension Teaching Methods ($\bar{X}$=2.44); County Extension Program Development ($\bar{X}$=2.13); and, History, Functions and Objectives of the Extension Service ($\bar{X}$=2.03).

Table XXIV summarizes selected statements, in descending order by their respective mean, pertaining to reasons why teachers pursue graduate studies. The teachers "Strongly Agreed" with the statement "it could increase my salary" ($\bar{X}$=3.51). Statements with which the teachers "Moderately Agreed" were as follows: "Could lead to a new job" ($\bar{X}$=3.27); "Enables me to obtain an additional degree" ($\bar{X}$=3.17); "Could lead to a promotion in my present job" ($\bar{X}$=3.05); "Enables me to obtain an additional certification" ($\bar{X}$=3.05); "Makes me better informed" ($\bar{X}$=2.93); "Satisfies my curiosity for knowledge" ($\bar{X}$=2.70); and, "Enables me to meet the educational standards set by my employer" ($\bar{X}$=2.66). The teachers "Slightly Agreed" with the statements "Provided me with an opportunity to meet new people" ($\bar{X}$=2.21); and "Allows me to feel a sense of belonging" ($\bar{X}$=2.08).

Table XXV summarizes responses pertaining to inhibitors, in descending order by mean, to the pursuit of a graduate degree. The teachers indicated "Lack of time due to job related activities: as the greatest inhibitor to their pursuit of a graduate degree ($\bar{X}$=3.55); followed by: "Cost of tuition/fees/texts/etc." ($\bar{X}$=3.45); "Personal priority to spend additional time with my family" ($\bar{X}$=3.27); "Inconvenient course schedules" ($\bar{X}$=3.11); "Campus location" ($\bar{X}$=3.09); "Time limit for program completion" ($\bar{X}$=2.92);

TABLE XXIV

SUMMARY OF RESPONSES PERTAINING TO REASONS WHY TEACHERS PURSUE GRADUATE STUDIES

Reasons Presented in Descending Order by $\bar{X}$	Interpretation	Mean ($\bar{X}$)
Could increase my salary	Strongly Agree	3.51
Could lead to a new job	Moderately Agree	3.27
Enables me to obtain an additional degree	Moderately Agree	3.17
Could lead to a promotion in my present job	Moderately Agree	3.05
Enables me to obtain an additional certificate	Moderately Agree	3.05
Makes me better informed	Moderately Agree	2.93
Satisfying my curiosity for knowledge	Moderately Agree	2.70
Enables me to meet the educational standards set by my employer	Moderately Agree	2.66
Provides me with an opportunity to meet new people	Slightly Agree	2.21
Allows me to feel a sense of belonging	Slightly Agree	2.08

TABLE XXV

SUMMARY OF RESPONSES PERTAINING TO INHIBITORS TO THE PURSUIT OF A GRADUATE DEGREE

Inhibitors Presented in Descending Order by $\bar{X}$	Interpretation	Mean ($\bar{X}$)
Lack of time due to job related activities	High	3.55
Cost of tuition/fees/texts, etc.	Moderate	3.45
Personal priority to spend additional time with my family	Moderate	3.27
Inconvenient course schedules	Moderate	3.11
Campus location	Moderate	3.09
Time limit for program completion	Moderate	2.92
Thesis/dissertation requirement	Moderate	2.77
Enrollment procedures	Moderate	2.66
Inadequate information concerning course schedules	Slight	2.35
Wrong time in my life	Slight	2.35
Graduate school entrance requirements	Slight	2.22
Lack of encouragement from administration	Slight	2.21
Lack of course relevance to job	Slight	2.16
Minimum grade point requirement	Slight	1.96
Personal problems	Slight	1.92
Lack of self confidence	Slight	1.66

"Thesis/dissertation requirement" ($\bar{X}$=2.77); and, "Enrollment procedures: ($\bar{X}$=2.66). Inhibitors which were interpreted as "Slight" were: "Inadequate information concerning course schedules" ($\bar{X}$=2.35); "Wrong time in my life" ($\bar{X}$=2.35); "Graduate school entrance requirements" ($\bar{X}$=2.22); "Lack of encouragement from my administration" ($\bar{X}$=2.21); "Lack of course relevance to my job" ($\bar{X}$=2.16); "Minimum grade point requirement" ($\bar{X}$=1.96); "Personal problems" ($\bar{X}$=1.92); and, "Lack of self confidence" ($\bar{X}$=1.66).

Table XXVI summarizes how the teachers ranked current and potential delivery methods for graduate courses. The methods were ranked as follows: Number one--"Courses Offered at an Alternative Location" ($\bar{X}$=3.25); Number two--"Courses Offered by Satellite" ($\bar{X}$=3.82); Number three--"Courses Offered through Oklahoma's Higher Education Televised Instruction System" ($\bar{X}$=4.18); Number four--"Courses offered by Interactive Video" ($\bar{X}$=4.43); Number five--"Courses Offered by Oklahoma Educational Television Authority" ($\bar{X}$=4.53); Number six--"Courses Offered in an Open Entry and Open Exit Format" ($\bar{X}$=4.58); Number seven--"Courses Offered on the OSU Campus in Stillwater" ($\bar{X}$=4.61); and, Number eight--"Courses Offered by Electronic Mail" ($\bar{X}$=6.35).

Table XXVII summarizes responses pertaining to the perceived competency level of the teachers, in descending order by the mean, in the new Agricultural Education curriculum areas. Program areas that the teachers perceived themselves to be "Moderately" competent in were as follows: Agricultural Production/Management I and II ($\bar{X}$=3.30); Ag Mechanics I and II ($\bar{X}$=3.14); Natural Resources

TABLE XVI

SUMMARY OF RESPONSES AS TO AVERAGE RANK OF CURRENT AND POTENTIAL DELIVERY METHODS FOR GRADUATE COURSES

Methods Presented in Rank Order	Average Rank	Mean ($\bar{X}$)
Courses offered at an Alternative Location	1	3.25
Courses offered by Satellite	2	3.82
Courses offered through Oklahoma Higher Education Televised Instruction System	3	4.18
Courses offered by Interactive Video	4	4.43
Courses offered by Oklahoma Educational Education Television Authority	5	4.53
Courses offered in an Open-Entry/Open-Exit format	6	4.58
Courses offered on the OSU campus in Stillwater	7	4.61
Courses offered by Electronic Mail	8	6.35

TABLE XXVII

SUMMARY OF RESPONSES PERTAINING TO THE PERCEIVED COMPETENCY LEVEL OF THE TEACHERS IN THE NEW AGRICULTURAL EDUCATION CURRICULUM AREAS

Program Area Presented in Descending Order by $\bar{X}$	Interpretation	Mean ($\bar{X}$)
Agricultural Production/Management I and II	Moderate	3.30
Ag Mechanics I and II	Moderate	3.14
Natural Resources	Moderate	2.98
Employment in Agribusiness	Moderate	2.72
Agricultural Sales and Service	Moderate	2.68
Agricultural Procession and Marketing	Moderate	2.61
Equine	Slight	2.48
Principles of Agriculture Technology	Slight	2.43
Horticulture I and II	Slight	2.38
Aquaculture	Slight	2.14
Biotechnology	Slight	2.09
Forestry	Slight	2.05

($\bar{X}$=2.98); Employment in Agribusiness ($\bar{X}$=2.72); Agricultural Sales and Service ($\bar{X}$=2.68); and, Agricultural Processing and Marketing ($\bar{X}$=2.61). Program areas that the teachers perceived themselves to be "Slightly" competent in were as follows: Equine ($\bar{X}$=2.48); Principles of Agriculture Technology ($\bar{X}$=2.43); Horticulture I and II ($\bar{X}$=2.38); Aquaculture ($\bar{X}$=2.14); Biotechnology ($\bar{X}$=2.09); and, Forestry ($\bar{X}$=2.05).

Table XVIII summarizes the responses pertaining to OSU offering graduate level courses to enhance the teachers' competence in the new Agricultural Education curriculum areas. The "Yes" responses that fell in the 70-79 percent range were: Natural Resources - 167 (78.40 percent) of the teachers indicated "Yes" and 46 (21.60 percent) indicated "No;" Principles of Ag Technology - 154 (75.49 percent) of the teachers indicated "Yes" and 50 (24.51 percent) indicated "No; "Ag Processing and Marketing - 141 (71.94 percent) of the teachers indicated "Yes" and 55 (28.06 percent) indicated "No;" Horticulture I and II - 141 (71.21 percent) of the teachers indicated "Yes" and, 57 (28.79 percent) indicated "No."

The "Yes" responses that fell in the 60-69 percent range were: Biotechnology - 132 (67.69 percent) of the teachers indicated "Yes" and 63 (32.31 percent) indicated "No;" Equine - 133 (67.51 percent) of the teachers indicated "Yes" and 64 (32.49 percent) indicated "No;" Ag Sales and Service - 133 (66.50 percent) of the teachers indicated "Yes" and 67 (33.50 percent) indicated "No;" Employment in Agribusiness - 127 (64.14 percent) of the teachers indicated "Yes" and 71 (35.86 percent) indicated "No;" and,

TABLE XXVIII

SUMMARY OF RESPONSES PERTAINING TO OSU OFFERING GRADUATE LEVEL COURSES RELATIVE TO THE NEW AGRICULTURAL EDUCATION CURRICULUM AREAS

Program Offerings	Frequency Distribution					
	Yes		No		Total	
	N	%	N	%	N	%
70-79% Range of Responses Indicated "Yes"						
Natural Resources	167	78.40	46	21.60	213	100.00
Principles of Ag Tech	154	75.49	50	24.51	204	100.00
Ag Processing & Marketing	141	71.94	55	28.06	196	100.00
Horticulture I and II	141	71.21	57	28.79	198	100.00
60-69% Range of Responses Indicated "Yes"						
Biotechnology	132	67.69	63	32.31	195	100.00
Equine	133	67.51	64	32.49	197	100.00
Ag Sales & Service	133	66.50	67	33.50	200	100.00
Employment In Agribusiness	127	64.14	71	35.86	198	100.00
Aquaculture	124	63.92	70	36.08	194	100.00
50-59% Range of Responses Indicated "Yes"						
Forestry	109	56.19	85	43.81	194	100.00
Ag Mechanics I and II	107	52.97	95	47.03	202	100.00
Ag Production/Management I and II	108	51.92	100	48.08	208	100.00

Aquaculture - 124 (63.92 percent) of the teachers indicated "Yes" and 70 (36.08 percent) indicated "No."

The "Yes" responses that fell in the 50-59 percent range were: Forestry - 109 (56.19 percent) of the teachers indicated "Yes" and 85 (43.81 percent) indicated "No;" Ag Mechanics I and II - 107 (52.97 percent) of the teachers indicated "Yes" and 95 (47.03 percent) indicated "No;" and, Ag Processing/Management I and II - 108 (51.92 percent) of the teachers indicated "Yes" and 100 (48.08 percent) indicated "No."

Qualitative Summary of the Findings

The teachers were asked several open-ended questions relative to their educational needs. Responses that were indicated by five or more teachers are summarized in this section.

Viable topics for graduate courses, relative to their enhancement of teaching skills, were identified by the teachers. The responses, in descending order, were as follows: curriculum development (26), time management (21), student recruitment (19), audio-visual instruction (14), classroom management (8), and adult/child learning (5).

The teachers were asked to identify topics for in-service/ workshop sessions that would contribute to their development of teaching skills. The responses, in descending order, were as follows: curriculum development (28), student recruitment (26), time management (18), audio-visual instruction (13), classroom management (7), natural resources (6), computers/software (6), and

adult/child learning (5).

The teachers indicated that their technical competence could be increased in graduate college by focusing on the following six topics: computers (50), marketing strategies (30), livestock production (15), tissue culture (8), horticulture (6), and natural resources (5).

Seven topics for in-service/workshops, relative to the enhancement of technical competence, were identified by the teachers. The topics were as follows: computers (65), marketing strategies (27), livestock production (15), tissue culture (12), natural resources (8), forestry (6), and horticulture (5).

The teachers were asked to identify cities/towns within their Agricultural Education Supervisory Districts that they would be willing to commute to for instruction. Each of the cities/towns that follow were identified by five or more teachers in their respective districts. In the Northwest district, Alva (9), Woodward and Enid (5 each) were identified by the teachers. Teachers in the Northeast district identified Tulsa (22) and Muskogee (13). The Central district teachers identified Shawnee and Oklahoma City (10 each), Ardmore (7), Stillwater and Duncan (8 each), and Norman (5) as their choices. In the Southwest district, Lawton (17) and Altus (11) were identified. Finally, the teachers in the Southeast district identified Durant and Wilburton (5 each) as their choices.

The question "How can OSU be of better service to you?" was asked to the teachers. Twenty-five teachers indicated that more courses should be offered closer to their home and away from

Stillwater. Ten teachers indicated that tuition should be lowered. Nine teachers indicated that information (relative to course schedules) should be made more readily available. Five teachers indicated that more extension courses should be offered.

Conclusions

Based on the objectives, questions asked, and major findings of the study, the following conclusions were drawn.

1. A notably larger percentage of teachers exist who are not currently pursuing graduate studies than teachers who are currently pursuing graduate studies. Thus, there is undoubtedly a large target group of teachers to recruit into graduate studies.

2. There exists a large group of teachers who plan to pursue graduate studies, a majority of whom plan to do so within the next two years (by Fall, 1992). However, many of the teachers are not willing to disclose future plans relative to graduate studies.

3. Degree programs in the disciplines of Agricultural Education and Education Administration, in that order, are currently the most popular choices and are the most likely to attract teachers interested in pursuing graduate studies. Some plan to pursue degree programs in other disciplines in the College of Agriculture or Education.

4. A large number of teachers might pursue or are currently pursuing public school administrator certification (such as elementary or high school principalships and/or public school superintendency) and some are more interested in pursuing

certification programs rather than degree programs in the Educational Administration discipline.

5. Teacher education related graduate courses in Agricultural Education were perceived to be more beneficial to the teachers than graduate courses that focused on the Cooperative Extension Service. And as well, the teachers pursue graduate study for goal oriented reasons rather than for socially oriented reasons.

6. Factors which inhibit the teacher's attendance in graduate studies are primarily lack of time due to job related activities and the cost of tuition, fees, texts, etc. These factors were more inhibiting than personal reasons.

7. Teachers prefer innovative graduate course delivery methods to the traditional delivery method (courses offered on the OSU campus). The delivery methods which potentially have most appeal to the teachers were: courses offered at an alternative location; courses offered by satellite; talkback T.V.; and/or interactive video.

8. Fall/Spring semester courses offered on Saturday (as well as those that start late in the evening, 6:30 p.m. or after) are more likely to attract enrollments rather than courses that begin early in the afternoon (4:30 p.m.). Also, two courses offered back-to-back on the same day and summer courses that can be completed in two weeks or less appears to be a viable option to make available to the teachers.

9. Some teachers appeared to be interested in intersession courses offered between the Spring and Summer semesters and some

appeared to be interested in intersession courses offered between the Fall and Spring semesters.

10. The teachers prefer to drive less than 74 miles (one-way), one day per week, to attend graduate courses in the Fall/Spring and Summer semesters on the OSU campus.

11. The teachers did not perceive themselves to be highly competent in any of the Agricultural Education curriculum areas; however, the considered themselves most competent in Ag Production/ Management I and II, as well as Ag Mechanics I and II.

12. The Oklahoma State University should offer graduate level courses pertaining to each of the newer Agricultural Education curriculum areas, more especially in the curriculum areas of Natural Resources, Principles of Ag Technology, Ag Processing and Marketing, and Horticulture. Other areas of interest include Biotechnology, Equine Science, and Aquaculture. Also, the teachers preferred graduate level courses in each of the new curriculum areas regardless of their perceived competency level in the program area.

13. The typical teacher has a Bachelor's degree and less than ten hours of graduate credit.

14. The teachers did have a particular preference relative to topics which could or should be emphasized which would contribute to further development of their teaching skills and technical skills. They were specific concerning their preference for topics. The teaching skills topics should be curriculum development, student recruitment, time management, audio-visual instruction, natural resources, classroom management, computers/software, and adult/child

learning. The technical skills topics should be computers, marketing strategies, livestock production, tissue culture, horticulture, natural resources, and forestry. (The teachers did not appear to have distinct preferences as to specific topics for formal (graduate college) or informal (in-service) education.

15. The Oklahoma State University can make it more convenient for teachers by offering off-campus courses within the more densely populated cities/towns in each of the supervisory districts. The cities/towns identified were, Alva, Woodward, Enid, Tulsa, Muskogee, Shawnee, Oklahoma City, Ardmore, Stillwater, Duncan, Norman, Lawton, Altus, Durant, and Wilburton.

Recommendations

Based on the conclusions, the following recommendations are presented.

1. The teachers appear to be a viable target population for the Graduate College at Oklahoma State University and therefore should be actively recruited.

2. The Graduate College at Oklahoma State University should prepare to serve more teachers than they are currently serving to make available the courses felt to be needed by the teachers (Natural Resources, Aquaculture, etc.).

3. The College of Agriculture should recruit more teachers into agricultural disciplines.

4. For the teachers pursuing undergraduate degree programs in Agricultural Education, an attempt should be made to emphasize

studies in technical agriculture disciplines (Animal Science, Agricultural Economics, etc.) in order to increase technical competencies.

5. The department of Educational Administration should be informed of the high degree of interest of the teachers pursuing public school administrator certification and actively recruit them into their program.

6. The Agricultural Education department should continue to offer teacher education related graduate courses, more especially those which have such major themes as, Leadership, Advanced Teaching Methods, etc. Also, the teachers should be encouraged to include these courses in their degree plans.

7. The Agricultural Education department should continue to advise and encourage the teachers to achieve their goal related objectives.

8. The teachers should be cognizant of the inhibitors of job related activities and cost of tuition, fees, texts, etc., and, therefore implement better time management practices and seek out financial assistance to further their education.

9. The Oklahoma State University should offer more courses off-campus and continue to update and modernize their delivery methods.

10. The Agricultural Education department should consider delaying starting times of courses to 6:30 p.m. because many teachers prefer courses that begin at a later starting time. Also, the Agricultural Education department and Educational Administration

department should offer more courses back-to-back on the same day because many teachers indicated an interest in taking back-to-back courses. Finally, more graduate courses should be offered in a two week or less time frame in the Summer semester because many teachers indicated a preference for these.

11. The Oklahoma State University should offer intersession courses between the Fall/Spring semesters and/or Spring/Summer semesters. Some teachers indicated that they were interested in intersession courses.

12. The Oklahoma State University should continue offering courses in the evening, one day per week. Most teachers indicated that they were only interested in driving to campus one day per week.

13. The Agricultural Education department and Oklahoma Department of Vocational and Technical Education should focus some graduate and in-service instruction to the new curriculum areas. Specific topics that should be addressed are as follows: curriculum development, student recruitment, time management, audio-visual instruction, natural resources, classroom management, computers/software, and adult/child learning, marketing strategies, livestock production, tissue culture, horticulture, natural resources, and forestry.

14. The Oklahoma Department of Vocational and Technical Education district supervisors should disclose to the teachers, the benefits of a Master's degree (salary, personal satisfaction, etc.).

15. The Oklahoma Department of Vocational and Technical Education and Oklahoma State University, in cooperation with other universities, should target the cities/towns of Alva, Woodward, Enid, Tulsa, Muskogee, Shawnee, Oklahoma City, Ardmore, Stillwater, Duncan, Norman, Lawton, Altus, Durant, and Wilburton; these were identified by the teachers as future sites for in-service and formal education.

16. The Oklahoma State University should offer incentives to the teachers to enroll in graduate courses by offering tuition discounts or graduate level scholarships to full-time teachers.

Recommendations for Additional Research

1. A replication of this research study should be attempted in a few years to determine if the perceptions of the teachers changed relative to their wants and/or needs pertaining to non-traditional delivery methods and to determine if the teachers wants and/or needs have changed relative to graduate courses that concentrate on the new Agricultural Education curriculum areas.

2. Similar research should be conducted in order to ascertain the educational needs of persons employed by the Cooperative Extension Service.

3. A more indepth study should be conducted to determine the specific content within graduate courses (or in-service sessions) which should be addressed as perceived by the teachers. For example: What do they specifically need in the area of Natural Resources, Aquaculture, etc.?

4. Specific research should be conducted among the faculty of the College of Agriculture and among the faculty of the College of Education to derive compatible times of course offerings in order that the teachers will have the availability of two courses being offered back-to-back on the same day.

5. Research should be conducted among students, school administrators, Oklahoma Department of Vocational and Technical Education staff, Young Farmer Organizations, and other constituencies in order to determine their perceptions relative to the professional development of teachers.

A SELECTED BIBLIOGRAPHY

Abolaji, Grace and Reneau, Fred W. (1988). Inservice Needs and Problems of Agricultural Science Teachers in Kwara State of Nigeria. The Journal of the American Association of Teacher Educators in Agriculture, 29(3), pp. 43-49.

Aldrich, D. Jr. (1985). The Leading Object. Justin Smith Morrill Memorial Lecture. National Association of State Universities and Land-Grant Collects Annual Meeting, Arlington, Virginia.

Anderson, Craig, K. and Knight, Clyde B. (nd). Position Paper. Televised Instruction Delivery Systems: Talkback TV in Oklahoma Vocational Education. Oklahoma State University.

Barrick, Kirby R., Ladewig, Howard W. and Hedges, Lowell, E. (1983). Development of a Systematic Approach to Identifying Technical Inservice Needs of Teachers. The Journal of the American Association of Teacher Educators in Agriculture, 24 (1), pp. 13-19.

Birkenholz, Robert J. and Harbstreit, Steven R. (1985, December). Needs of Beginning Teachers of Vocational Agriculture in Missouri. Paper presented at the twelfth annual national agricultural education research meeting, Atlanta, Georgia.

Bjoraker, Walter T. (1987). Concepts and Philosophical Issues in Food and Agriculture Undergraduate Education with Basic Guidelines for Curricular Planners. In Ellen Porath (Ed.). Curricular Innovation for 2005-Planning for the Future of Our Food and Agricultural Sciences (pp. 5-32). Madison, Wisconsin: The University of Wisconsin-Madison.

Blanton, Lloyd H. (1972). Professional Competency Through Continuing Education. The Journal of the American Association of Teacher Educators in Agriculture, 31(3), pp. 39-42.

Borich, Gary D. (1980). A Needs Assessment Model for Conducting Follow-up Studies. Journal of Teacher Education, 31(1), pp. 28-31.

Bowen, Blanie, E. and Shinn, Glen C. (1983). Achieving Quality Programs? RX: Inservice Education. The Agricultural Education Magazine, 56(1), pp. 13-15.

Burnett, M. F. and bin Yahya (1987, December). Assessment of Pre-Service Preparation by Recent Graduates of Agricultural Education Programs in Louisiana. Paper presented at the national agricultural education research meeting, Las Vegas, Nevada.

Castetter, William B. (1981). The Personnel Function in Educational Administration. New York, NY: MacMillan.

Centergram Bulletin. (1980). Computer Conferencing for Distance Learning, 25(5). The Ohio State University, Columbus, Ohio.

Chesnut, E. D. (1985). Perceptions of Preservice Student Teaching Experiences in Agricultural Education. From the Summaries of Research and Development Activities in Agricultural Education. Louisiana State University, Baton Rouge, Louisiana.

Claycomb, Ronald M. and Petty, Gregory C. (1983). A Three Year Longitudinal Sutdy of the Perceived Needs for Assistance as Ranked by Vocational Agriculture Instructors. The Journal of the American Association of Teacher Educators in Agriculture, 24(4), pp. 29-33.

Cross, Patricia K. (1979). Adult Learners: Characteristics, Needs and Interests. In Richard E. Peterson (Ed.), Lifelong Learning in America. San Francisco, CA: Jossey-Bass.

Darkenwald, Gordon G and Merriam, Sharon B. (1982). Adult Education: Foundations of Practice. New York, NY: Harper and Row.

Deeds, Jacquelyn P. and Barrick, Kirby. (1985, December). Early Field Based Experience Programs and Attitudes of Pre-Service Teachers. Paper presented at the twelfth annual national agricultural education research meeting, Atlanta, Georgia.

Deeds, Jacquelyn P. (1986, March). Attitudes of Pre-Service Agricultural Education Majors and Their Relationship to Variables Related to Early Field-Based Experiences. Paper presented at the Thirty-fifth annual southern region agricultural education research conference, North Little Rock, Arkansas.

Donaldson, Les and Scannel, Edward E. (1986). Human Resource Development: The New Trainer's Guide. (Second Edition). Reading, MA: Addison-Wesley Publishing Company, Inc.

Eric Clearing House on Rural Education and Small Schools Department of Agricultural Education. The Ohio State University (nd).

ERIC Digest (1989, April). Using Technology to Improve the Curriculum of Small Rural Schools. Appalachia Educational Laboratory. Charleston, West Virginia.

Erpelding, Lawrence H. and Mugler, David J. (1987). Characteristics Needed of Agricultural College Graduates in 2005. In Ellen Porath (Ed.), Curricular Innovation for 2005--Planning for the Future of our Food and Agricultural Sciences (pp. 38-42). Madison, WI: The University of Wisconsin-Madison.

Final Report--W. K. Kellogg Foundation and Oklahoma State University. (1989). A First: Satellite Videoconferencing. Stillwater, OK: Cooperative Extension Service, Oklahoma State University.

Hackmeister, Marvin H. (1981). Meeting Needs of First and Second Year Teachers. Paper presented at the central states seminar in agricultural education, Chicago, Illinois.

Hayes, Kevin. (1990). Welcome to the Beginning of Our Next Century. The 1990's and Beyond. Stillwater, OK: Division of Agricultural Education.

Heinich, Robert, Molenda, Michael, and Russell, James D. (1982). Instructional Media and the New Technologies of Instruction. New York, NY: John Wiley and Sons.

Hillison, John (1988, December). How Practicing Agricultural Education Teachers View Pre-Service Courses with Implications for Teacher Education Reform. Paper presented at the national agricultural education research meeting. St. Louis, Missouri.

Houle, Cyrilo. (1961). The Inquiring Mind. Madison, WI: University of Wisconsin Press.

Kahler, Alan A. (1974). Position Paper. Organization and Instructional problems of Beginning Teachers of Vocational Agriculture. Ames, IA: Department of Agricultural Education Iowa State University.

Knowles, Malcom. (1980). The Modern Practice of Adult Education. (Rev. Ed.). Chicago, IL: Association Press/Fallett Publishing.

Merritt, Richard and Wilson, Kathlen (1990). University Program Review: Key Questions Using Systems Techniques. The National Association of College Teachers of Agriculture, 34(1), pp. 14-19.

Miller, Melvin D. (1986). Principles and A Philosophy for Vocational Education. The National Center for Vocational Education, The Ohio Stte University, Columbus, OH (no. 48).

Moss, Jeffery W. and Borne, Curtis J. (1988, December). Preparedness of Teaching Vocational Agriculture: Perceptions of First Year Teachers. Paper presented at the national agricultural education research meeting, St. Louis, Missouri.

Nadler, Leonard. (1970) Devleoping Human Resources. Houston, TX: Gulf.

Oklahoma Higher Education Televised Instruction System Bulletin. (1990, Summer). Oklahoma City, OK: Oklahoma State Regents for Higher Education.

Oklahoma State University Faculty Minutes, October 9, 1990, pp. 1-2.

Oklahoma State University, Independent and Correspondence Study Department. (nd). Bulletin. Stillwater, OK.

Orlich, Donald. (1981, July). Guide to Sensible Surveys. Olympia, WA: Research Coordinating Unit Washington State University Commission for Vocational Education.

Pals, Douglas A. and Burton, DeVere. (1989, April). Attitudes of Northwest Secondary Vocational Agriculture Instructors Toward Improving of Teaching Inservice. Paper presented at the eighth annual western region agricultural education research meeting, Sparks, Nevada.

Pals, Douglas A. and Crawford, Harold R. (1980). Roles and Responsibilities of Selected Agencies and Groups in Providing In-service Education for Vocational Agriculture Instructors in Iowa. The Journal of the American Association of Teacher Educators in Agriculture, 21(1), pp. 26-33.

Rawls, Willie J. and Fatunsin, Lucus O. (1985). Importance and Utilization of Professioanl Education Competency Areas Needed by Vocational Educators. Journal of Vocational Education Research, 10(1), pp. 59-72.

Sell, G. Roger. (1989). Notes on Teaching: An Introduction and Invitation. Notes on Teaching from the Center for Teaching Excellence at the Ohio State University. Columbus, Ohio, 1(1), pp. 1-3.

Shelhamer, C. Van. (1983). Teacher Inservice Speeds Change. The Agricultural Education Magazine, 56(1), pp. 15-16.

Sherrold, Deury. (1982). Social Psychology. New York, NY: Random House.

Sledge, George W. (1987). Curricular Innovation--A Necessity in Ellen Porath (Ed.), Curricular Innovation for 2005-Planning for the Future of Our Food and Agricultural Sciences (pp. 1-4). Madison, WI: The University of Wisconsin-Madison.

Sledge, George W. and Wharton, Keith (1987). Alternative Educational Delivery Systems for the Future-The Rationale Processes. In Ellen Porath (Ed.), Curriculum Innovation for 2005-Planning For the Future of our Food and Agricultural Scienes (pp. 115-130). Madison, WI: The University of Wisconsin-Madison.

Sledge, George W., Dorrow, Edward, Ellington, Earl F., Erplelding, Lawrence, H., Hartung, T. E., and Reisch, Kenneth W. (1987). Futuristic Curricular Models/Designs for the Food and Agricultural Sciences. In Ellen Porath (Ed.). Curricular Innovations for 2005-Planning for the Future of Our Food and Agricultural Sciences (pp. 115-130). Madison, WI: The University of Wisconsin-Madison.

Sleight, Weldon and Long, Gilbert A. (1985, December). Agricultural Education Inservice Via Telecommunications. Paper presented at the american vocational agriculture conference, Atlanta, Georgia.

Southern Research Conference in Agricultural Education Project (1976). Problems of Beginning Vocational Agriculture Teachers in the Southern Region. Unviersity of Florida, Department of Agricultural and Extension Education Institute for Food and Agricultural Sciences.

Tenney, Richard W. and Frank, Robert M. (1981). Inservice Education for Agriculture Teachers. A Final Report. Research Publication 81-06. Ithaca, NY: Cornell University Instructional Materials Center.

The Greater Oklahoma News Bulletin. (1975, April). Talk-Back TV Courses in Trade, Industrial Education Successful, No. 40.

The Oklahoma State University Access Bulletin. (1990). Correspondence and Independent Study Department, Oklahoma State University.

The Oklahoma Stater. (May, 1990). Stillwater, Oklahoma.

VanAusdale, Steven L. (1983). Planning Postsecondary Programs: Better Future During Tough Times. The Agricultural Education Magazine, 55(10), pp. 9-11.

Websters New Collegiate Dictionary, (1975). Springfield, MS: Merriam Company.

Whitbourne, Susan Kraues and Weinstock, Comilda S. (1979). Adult Development: The Differentiation of Experience. New York, NY: Random House.

APPENDIX A

QUESTIONNAIRE

QUESTIONNAIRE

INTRODUCTION

The Oklahoma State University (OSU) Department of Agricultural Education, on behalf of the College of Agriculture, is conducting this "Educational Needs/Plans Assessment" research effort in order to determine, specifically, the interest Oklahoma Agricultural Education teachers may have relative to OSU Graduate courses and/or special inservice topics. More simply stated: "We need to know more about your educational needs and/or plans!" Why? Because one of the goals of OSU is to do a "Better Job" of meeting the educational needs for teachers like yourself. Therefore, we are sincerely requesting your input, and most assuredly, we do appreciate you taking time to respond to the following questions. Based on your input, recommendations will be made in order to BETTER MEET YOUR EDUCATIONAL NEEDS. (Thanks for your help!)

INSTRUCTIONS

Please read each question and/or statement carefully. Place a check mark(s) in the space that you believe "best" represents your opinion and/or fact. Also, please respond to each of the open-ended questions. Once again, your input is of great value and is also essential.

1. **What is your current status concerning graduate studies?**

(Check only one)

☐ I am currently pursuing graduate studies. (If you check this response, please proceed to question number 3)

☐ I am not currently pursuing graduate studies. (If you check this response, please proceed to question number 2).

2. **What is your intention concerning graduate studies?**

(Please Check)

☐ Yes, I do plan to pursue graduate studies.

(Please indicate when you plan to pursue graduate studies - Check only one)

Spring	Summer	Fall
☐ 1991	☐ 1991	☐ 1991
☐ 1992	☐ 1992	☐ 1992
☐ 1993	☐ 1993	☐ 1993
☐ 1994	☐ 1994	☐ 1994
☐ 1995	☐ 1995	☐ 1995

☐ No, I do not plan to pursue graduate studies. Please indicate why you do not plan to pursue graduate studies. (Response) _____

_____

_____

(Now, please proceed to question number 4)

3. **Please indicate the degree program that you ...**

(Check one) ☐ ...plan to pursue.
☐ ...are currently pursuing.

(Check one)	Master of Agriculture	Master of Science/ Education	Educational Specialist	Doctorate
Agricultural Education	☐	☐	☐	☐
Agricultural Economics	☐	☐	N/A	☐
Agricultural Engineering	N/A	☐	N/A	☐
Agronomy	☐	☐	N/A	☐
Animal Science	☐	☐	N/A	☐
Biochemistry	N/A	☐	N/A	☐
Entomology	☐	☐	N/A	☐
Horticulture	☐	☐	N/A	☐
Forestry	☐	☐	N/A	N/A
Plant Pathology	☐	☐	N/A	☐
Applied Behavioral Sciences	N/A	☐	☐	☐
Curriculum and Instruction	N/A	☐	☐	☐
Educational Administration and Higher Education	N/A	☐	☐	☐
Occupational and Adult Education	N/A	☐	☐	☐

Other, please list_____

4. **Below is a list of public school administrator certification programs that many teachers opt to pursue. Please indicate the certification program you...**

(Check one) ☐ ...might consider pursuing.
☐ ...are currently pursuing.

(Check one)
☐ Public School Administration (Elementary or High School, or Superintendent)
☐ School Psychologist
☐ School Counselor
☐ I Am Not Interested In Certification Programs
☐ Other, please list_____

5. **We also need to know which topics you believe should be emphasized more in order to meet <u>your</u> continuing educational needs pertaining to further development of your teaching skills as well as enhancing your technical competence.**

   A. Please list topics you would like to see emphasized which would contribute to further development of your **<u>teaching skills</u>**. (*Examples: classroom/time management, audio/visual operation, curriculum development, adult/child learning, student recruitment, etc.*)

<u>Graduate Level Courses</u> Topics, please list...	<u>Inservice and/or Workshops</u> Topics, please list...
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____

   B. Please list topics you would like to see emphasized which would enhance your **<u>technical competence</u>** (*Examples: using computers, beef production, forestry, marketing strategies, tissue culture, etc.*)

<u>Graduate Level Courses</u> Topics, please list...	<u>Inservice and/or Workshops</u> Topics, please list...
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____

6. **Please rate each of the following Agricultural Education Graduate course topics with regard to how beneficial it would be to you, personally and/or professionally.**

	Level of Benefit			
	High	Moderate	Slight	None
	4	3	2	1
Organizing Curriculum and Programs in Agricultural Education	☐	☐	☐	☐
Organization and Methods of Adult Education	☐	☐	☐	☐
Extension Teaching Methods	☐	☐	☐	☐
Young Farmer Organizations	☐	☐	☐	☐
Directing Programs of Supervised Training in Agriculture	☐	☐	☐	☐
Guidance and Leadership Development of Ag Youth	☐	☐	☐	☐
History, Function and Objectives of the Extension Service	☐	☐	☐	☐
Advanced Methods of Teaching Agriculture	☐	☐	☐	☐
Leadership Styles	☐	☐	☐	☐
Educational Aspects of Occupational Behavior	☐	☐	☐	☐
Agricultural Education Workshop	☐	☐	☐	☐
Curriculum Design for Alternative Approaches in Agriculture	☐	☐	☐	☐
Research Design in Occupational Education	☐	☐	☐	☐
Independent studies in Agricultural and Extension Education	☐	☐	☐	☐
Developments in Agricultural and Extension Education	☐	☐	☐	☐
Teaching Agriculture in Higher Education	☐	☐	☐	☐
County Extension Program Development	☐	☐	☐	☐
Assessment and Evaluation of Educational Programs in Agriculture	☐	☐	☐	☐

7. **Below is a list of statements that have been recognized as playing an important role in the decision for teachers like yourself to pursue graduate study. Please rate each of the following statements as they pertain to you.**

I pursue graduate study because it...	Strongly Agree 4	Moderately Agree 3	Slightly Agree 2	Disagree 1
...provides me with an opportunity to meet new people.	☐	☐	☐	☐
...allows me to feel a sense of belonging.	☐	☐	☐	☐
...enables me to meet educational standards set by my employer.	☐	☐	☐	☐
...makes me better informed.	☐	☐	☐	☐
...satisfies my curiosity for knowledge.	☐	☐	☐	☐
...could lead to a new job.	☐	☐	☐	☐
...could lead to a promotion in my present job.	☐	☐	☐	☐
...enables me to obtain an additional certification.	☐	☐	☐	☐
...enables me to obtain an additional degree.	☐	☐	☐	☐
...could increase my salary.	☐	☐	☐	☐
...other, please list_____				

8. **Below is a list of reasons that might inhibit you from pursuing a graduate degree at OSU. Please indicate the extent to which each reason may apply to you, personally.**

	Level of Inhibitors			
	High	Moderate	Slight	None
	4	3	2	1
Cost of Tuition/Fees/Texts, etc.	☐	☐	☐	☐
Enrollment Procedures	☐	☐	☐	☐
Campus Location	☐	☐	☐	☐
Inconvenient Course Schedules	☐	☐	☐	☐
Graduate School Entrance Requirements	☐	☐	☐	☐
Minimum Grade Point Requirements	☐	☐	☐	☐
Thesis/Dissertation Requirement	☐	☐	☐	☐
Time Limit for Program Completion	☐	☐	☐	☐
Lack of Time Due to Job Related Activities	☐	☐	☐	☐
Personal Priority to Spend Additional Time With my Family	☐	☐	☐	☐
Lack of Encouragement from my Administration	☐	☐	☐	☐
Personal Problems	☐	☐	☐	☐
Inadequate Information Concerning Course Schedules	☐	☐	☐	☐
Wrong Time in my Life	☐	☐	☐	☐
Lack of Course Relevance to my Job	☐	☐	☐	☐
Lack of Self Confidence	☐	☐	☐	☐

Other, please list

_____

9. **Below is a list of current and potential instructional delivery methods for graduate courses. Please rank the instructional delivery methods ranging from your most preferred to your least preferred. Place a 1 on the line you prefer most and rank each numerically all the way through the number 8 which is least preferred.**

(Please Rank 1 Through 8)

____**Courses offered on the OSU Campus in Stillwater.**

____**Courses offered at an Alternative Location.** (Where?_____)

____**Courses offered through Oklahoma's Higher Education Televised Instruction System.** (Often referred to as Talk Back TV)

____**Courses offered by Satellite.** (Lectures via a satellite dish; one way communication)

____**Courses offered by Oklahoma Educational Television Authority.** (OETA television channel 13.)

____**Courses offered by Interactive Video.** (Pre-programmed lessons on VCR tapes and microcomputer software)

____**Courses offered in an Open Entry and Open Exit Format.** (Similar to independent study, however you can enroll and complete at any point during a year)

____**Courses offered by Electronic Mail.** (The teacher and student communicate by computers)

10. **Please indicate the time which is most convenient for you to attend classes at OSU during the Fall and/or Spring semesters.**

A. FALL/SPRING

(CHECK ONLY ONE RESPONSE)

☐ Late Afternoon Classes Beginning at 4:30
☐ Evening Classes Beginning at 6:30
☐ Evening Classes Beginning at 7:00
☐ Saturday Classes only

B. Do you prefer two courses offered back-to-back on the same day? (*Example: One course beginning at 4:30 and the second one beginning at 6:30*).
(Check One)

☐ Yes
☐ No
☐ Other Time Frame? specify_____

11. **Please indicate the course length which is most convenient for you to attend classes at OSU during the Summer Session.**

(CHECK ONLY ONE RESPONSE)
- ☐ Two Week Block in June
- ☐ Two Week Block in July
- ☐ Three Week Block in June
- ☐ Three Week Block in July
- ☐ Saturday Classes, Only (for eight weeks)
- ☐ Monday through Friday, (all day for one week)
- ☐ A Regular Eight Week Session (June-July)
- ☐ Other Time Frames, specify_____

12. **An intersession is the time between semesters at Oklahoma State University.** (Typically a three to four week period)

A. Would you be interested in taking an intersession graduate course between the Fall and Spring Semesters? **(Late December-Early January)**
- ☐ Yes
- ☐ No
- ☐ Maybe

B. Would you be interested in taking an intersession graduate course between the Spring and Summer Semesters? **(Late May)**
- ☐ Yes
- ☐ No
- ☐ Maybe

13. **What is the maximum distance you are willing to drive (one-way) to attend a Fall/Spring Semester course and/or a Summer Session course "on the OSU campus" in Stillwater?**

(Please check only one response)

FALL/SPRING SEMESTER
- ☐ Less than 25 miles
- ☐ 25-49 miles
- ☐ 50-74 miles
- ☐ 75-99 miles
- ☐ 100 or more miles
- ☐ Distance Inhibits Attendance

SUMMER SESSION
- ☐ Less than 25 miles
- ☐ 25-49 miles
- ☐ 50-74 miles
- ☐ 75-99 miles
- ☐ 100 or more miles
- ☐ Distance Inhibits Attendance

14. **How many days per week, maximum, are you willing to drive to Stillwater to attend graduate courses at Oklahoma State University.** (Please check only one response)

- ☐ One day per week
- ☐ Two days per week
- ☐ Three days per week
- ☐ Four days per week
- ☐ Five days per week
- ☐ Not interested

15. **Please identify a city or town, within your Ag. Ed. Supervisory District, to which you would be willing to commute, in order to receive off-campus instruction.** _____

16. **How can OSU be of better service to you?**

_____

_____

_____

17. **Pertaining to the revised Agricultural Education curriculum in the public school systems, please indicate <u>your perceived level of competence</u> for each new program area and please indicate whether or not you believe a graduate course should be offered to enhance your technical competence.**

Level of Competence					Should a graduate course be offered to enhance your technical competence?	
High 4	Moderate 3	Slight 2	None 1		Yes	No
☐	☐	☐	☐	Ag Production/Management I & II	☐	☐
☐	☐	☐	☐	Ag Mechanics I & II	☐	☐
☐	☐	☐	☐	Horticulture I & II	☐	☐
☐	☐	☐	☐	Ag Processing and Marketing	☐	☐
☐	☐	☐	☐	Ag Sales and Service	☐	☐
☐	☐	☐	☐	Equine	☐	☐
☐	☐	☐	☐	Employment in Agribusiness	☐	☐
☐	☐	☐	☐	Natural Resources	☐	☐
☐	☐	☐	☐	Principles of Ag Technology	☐	☐
☐	☐	☐	☐	Forestry	☐	☐
☐	☐	☐	☐	Aquaculture (Curriculum Unit)	☐	☐
☐	☐	☐	☐	Biotechnology (Curriculum Unit)	☐	☐

18. **The highest educational level that you have completed is a...**

- ☐ ...Bachelor's Degree
- ☐ ...Master's Degree
- ☐ ...Doctorate

19. **Please indicate the approximate number of hours of graduate course work you have completed beyond your last degree.**

☐ 5 Hours or less	☐ 16-20 Hours
☐ 6-10 Hours	☐ 21-25 Hours
☐ 11-15 Hours	☐ 26 Hours or More

Thank you very much for your input. We hope that as a result of your input, the OSU College of Agriculture will be of better service to you!

APPENDIX B

FORM LETTER TO AGRICULTURAL EDUCATION DISTRICT SUPERVISORS

OSU

Oklahoma State University

DEPARTMENT OF AGRICULTURAL EDUCATION
DIVISION OF AGRICULTURE

STILLWATER, OKLAHOMA 74078-0484
448 AGRICULTURAL HALL
405-744-5129

August 10, 1990

_____, _____ District Supervisor
Agricultural Education Division
Oklahoma Department of
Vocational and Technical Education
1500 West Seventh Avenue
Stillwater, Oklahoma 74074

Dear Mr._____:

The Oklahoma State University (OSU) Department of Agricultural Education, on behalf of the College of Agriculture, is conducting this "Educational Needs/Plans Assessment" research effort in order to determine, specifically, the interest Oklahoma Agricultural Education teachers may have relative to OSU Graduate courses and/or special inservice topics.

Each questionnaire contains nineteen questions that address the educational needs/plans of the teachers. The questions address both the formal (graduate school) and the informal (inservice) educational needs of the teachers. Typically, it takes 8 to 10 minutes to complete each questionnaire. You may want to instruct the teachers to use as much space as necessary when they respond to the write-in questions.

I would like to pick-up the questionnaires as soon as you return from each professional improvement meeting. Thanks for your help!

Sincerely,

Johnny Baker

Johnny Baker
Graduate Teaching Assistant
OSU Department of AGED

Eddy Finley
Associate Professor
OSU Department of AGED

cc: Eddie Smith
H. Robert Terry

CENTENNIAL
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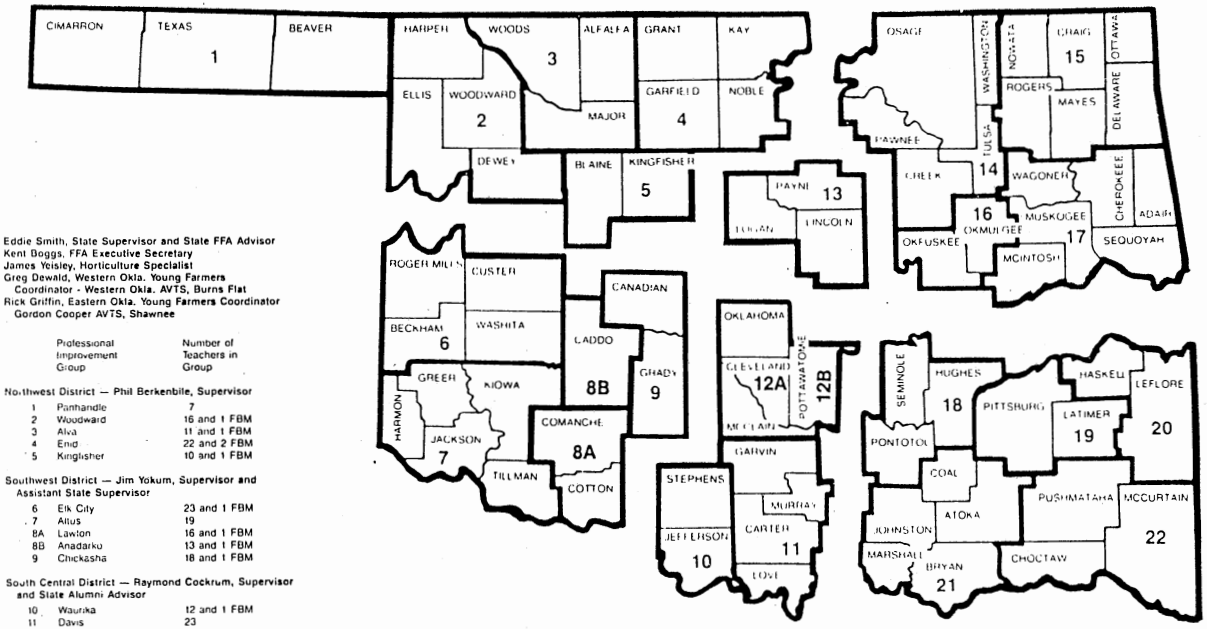
Celebrating the Past . . . Preparing for the Future

APPENDIX C

OKLAHOMA AGRICULTURAL EDUCATION TEACHERS

DISTRICTS AND PROFESSIONAL

IMPROVEMENT GROUPS



Eddie Smith, State Supervisor and State FFA Advisor
Kent Boggs, FFA Executive Secretary
James Yoisley, Horticulture Specialist
Greg Dewald, Western Okla. Young Farmers Coordinator - Western Okla. AVTS, Burns Flat
Rick Griffin, Eastern Okla. Young Farmers Coordinator
Gordon Cooper AVTS, Shawnee

Professional Improvement Group		Number of Teachers in Group
Northwest District — Phil Berkenbile, Supervisor		
1	Panhandle	7
2	Woodward	16 and 1 FBM
3	Alva	11 and 1 FBM
4	Enid	22 and 2 FBM
5	Kingfisher	10 and 1 FBM
Southwest District — Jim Yokum, Supervisor and Assistant State Supervisor		
6	Elk City	23 and 1 FBM
7	Altus	19
8A	Lawton	16 and 1 FBM
8B	Anadarko	13 and 1 FBM
9	Chickasha	18 and 1 FBM
South Central District — Raymond Cockrum, Supervisor and State Alumni Advisor		
10	Waurika	12 and 1 FBM
11	Davis	23
12A	Norman	13 and 1 FBM
12B	Shawnee	19 and 1 FBM
North Central District — Verlin Hart, Supervisor and Ag. Mech. and Facilities Specialist		
13	Stillwater	23
Northeast District — G. T. Moody, Supervisor		
14	Tulsa	32 and 1 FBM
15	Vinita	26 and 1 FBM
16	Morris	11
17	Muskogee	30
Southeast District — Jim Meek, Supervisor		
18	Holdenville	20 and 1 FBM
19	Wilburton	15
20	Poteau	18
21	Atoka	23
22	Idabel	22

Each PI group has elected officers and meets each month with a

	No. Depts.	Single-Teacher Dept.	Two-Teacher Dept.	Three-Teacher Dept.	Four-Teacher Dept.	Five-Teacher Dept.	Total Teachers	*FBM Al	**SP
Northwest District	60	54	6				66	5	0
Southwest District	75	65	8	1		1	89	4	2
Central District	70	51	18	1			90	3	2
Northeast District	81	67	12		2		99	2	0
Southeast District	80	63	16	1			98	2	1
Total	366	300	60	3	2	1	442	16	5

*Farm Business Management Adult Instructors

**Special Programs

Figure 9. 1990-1991 Oklahoma Agricultural Education Teachers Districts and Professional Improvement Groups

VITA

Walter John Baker

Candidate for the Degree of

Doctor of Education

Thesis: PERCEIVED EDUCATIONAL NEEDS/PLANS OF OKLAHOMA AGRICULTURAL EDUCATION TEACHERS

Major Field: Agricultural Education

Biographical:

Personal Data: Born in Vernon, Texas, March 12, 1962, the son of Mathew Thomas and Pearl Elizabeth Baker.

Education: Graduated from Vernon High School, Vernon, Texas, May, 1980; received the Bachelor of Science degree from Texas Tech University, Lubbock, Texas, December, 1984; received the Master of Education degree from Texas Tech University, August, 1988; with a major in Agricultural Education; completed the requirements for the Doctor of Education degree at Oklahoma State University in May, 1991.

Professional Experience: Vocational Agricultural Instructor, Smyer, Texas, July, 1985 to July, 1989; Graduate Teaching Assistant, Oklahoma State University, September, 1989 to present.

Professional Organizations: American Vocational Association, Texas Vocational Agriculture Teachers Association, National Vocational Agriculture Teachers Association, Alpha Tau Alpha, Phi Delta Kappa, Phi Kappa Phi, Graduate Student Council, Gamma Sigma Delta.