1984

The Teaching Ability, Job Performance, and Attitudes of Vocational Agricultural Teachers Who Received Their Undergraduate Degrees in Selected Land-Grant and Nonland-Grant Universities in the United States (Program Evaluation, Effectiveness).

Chigozie Cyril Asiabaka
Louisiana State University and Agricultural & Mechanical College

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A Dissertation

Submitted to the Graduate Faculty of the Louisiana State University and Agricultural and Mechanical College in partial fulfillment of the requirement for the degree of Doctor of Philosophy in Vocational Agricultural Education

by Chigozie Cyril Asiabaka
B.S.A., The University of Georgia, 1981
M.Ed., The University of Georgia, 1982
December, 1984
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This page is dedicated to:

My wife Ihuoma for her understanding, patience, and love and to my children Chigozie Jr. and Chinekwu for making my doctoral work more challenging.
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ABSTRACT

The study focused on the teaching ability, job performance, and attitudes of vocational agriculture teachers who received their undergraduate degrees from selected land-grant and nonland-grant universities.

Objective of the Study

The purpose of this study was to compare the teaching ability, job performance, and attitudes of vocational agriculture teachers who received their undergraduate degrees from selected land-grant and nonland-grant universities during the 1981-82 school year in the United States.

Methodology

A list of the vocational agriculture teachers who graduated from land-grant and nonland-grant universities in the 1981-82 school year was requested from 37 universities in ten states that have both land-grant and nonland-grant universities which prepare vocational agriculture teachers. A proportionate random sample of 200 teachers was drawn from the population of 300 reported by the universities. Data were collected from school administrators, vocational agriculture teachers and state supervisors of agricultural education.

Findings and Summary

There were no significant differences in the administrators perception of the teaching ability and job performance. The quality
of the vocational agriculture programs and the attitudes of teachers toward vocational agriculture was the same for graduates of both universities. One possible solution to vocational agriculture teacher shortage is to include more nonland-grant universities in the preparation of vocational agriculture teachers.

Knowledge of subject matter was rated higher by the administrators for both groups of teachers than was their teaching skills.

Both groups of teachers had less positive attitudes towards adult education in agriculture. The teachers from land-grant and nonland-grant universities had lower program quality scores in the area of adult education.

Both groups of teachers had higher program quality scores on SOEP component of vocational agriculture. State supervisors of agricultural education indicated that the quality of teacher preparation at land-grant universities was better. However, twenty-nine percent of the variance of the supervisors rating was explained by the type of institution from which they received the bachelors degree.
CHAPTER 1

INTRODUCTION


During the last ten years, there has been an average need per year for more than 179 teachers that are not available. During the last seven years, there has been gradual decline in the percentage of qualified graduates entering vocational agriculture teaching, with 1982 being the lowest. (p. 10).

Agricultural educators have explored several solutions for solving the vocational agriculture teacher shortage. Luft and Bender (1974) maintained that recruiting is the first step in alleviating the vocational agriculture teacher shortage. However, the number of students recruited into agricultural education teacher training programs since 1974 has remained relatively constant (Craig, 1982).

Another procedure for alleviating the teacher shortage has been to recruit people with practical work experience in business and
industry or who have college degrees in a technical area and put them through a "special" program of teacher training. They are granted temporary certificates and are supervised on the job. Bender (1978) pointed out that these provisional teachers "...have difficulty in making their classroom phase of the program effective by relating to other areas of instruction, particularly the basics in education. They usually have some fear and lack of ability in participating as advisors in the FFA program" (p. 51). Research (Moore, 1975; Fagen, 1970; Cross, 1974; New York, 1978; Lee et al., 1978) found that teachers prepared through this program were not as effective as the traditionally college-trained vocational agriculture teacher. Knebel (1977) and Dickerson (1983) after observing the use of these "specially" prepared teachers in Florida and Georgia concluded that the use of this procedure for preparing vocational agriculture teachers was not a desirable practice.

A third solution to the vocational teacher shortage might be achieved through increasing the number of universities which prepare them. In 30 states, one land-grant university has responsibility for preparing vocational agriculture teachers. However, during the past decade, states such as Tennessee, Missouri, Arkansas, and Oklahoma have started new teacher education programs in agriculture in nonland-grant universities. There has been some concern in the profession about the ability of these nonland-grant universities to prepare quality vocational agriculture teachers. This concern gave birth to a debate by Sabol (1979) and Weston (1979) in the Journal of the American Association of Teacher Educators in Agriculture. Sabol
argued that the preparation of vocational agriculture teachers should not be limited to land-grant universities. But Weston argued that all teacher education programs in agriculture should be limited to land-grant universities. Both based their arguments on personal rather than empirical evidence.

A recent study reported in the Chronicle of Higher Education indicated that many teacher education programs have been established during the past decade. Since 1973, 115 institutions have added teacher education programs (Feistritzer, 1984). The report characterizes most programs as:

...diploma mills at which students can show up with high-school diploma and checkbook and get a bachelor's degree in education in four years (p. 19).

Feistritzer concludes:

Up to half of the 1,278 teacher education programs in the United States should be summarily shut down (p. 19).

STATEMENT OF THE PROBLEM

The expansion of agricultural teacher education programs in nonland-grant universities is being questioned by members of the profession. There are also questions about the teaching ability, job performance, and attitudes of vocational agriculture teachers prepared at nonland-grant university. Therefore the purpose of this study was to compare the teaching ability, job performance, and attitudes of vocational agriculture teachers who received their undergraduate degrees from selected land-grant and nonland-grant universities during the 1981-82 school year in the United States.
SIGNIFICANCE OF THE STUDY

The American Vocational Association Agricultural Education Research Committee charged a subcommittee with the task of identifying the professional concerns facing agricultural education as perceived by teachers, supervisors and teacher educators (Stewart, Shinn, & Richardson, 1977). From a list of fourteen concerns, improving the preservice education program of vocational agriculture teachers was ranked third. Teacher shortage (improving agricultural education to attract and retain teachers, recruitment, demand and supply) was ranked fourth. The profession appears to be concerned about the quality of teacher education and the supply of teachers.

Currently, there are no documented comparative studies regarding the teaching ability and job performance of vocational agriculture teachers prepared by land-grant and nonland-grant universities. The philosophies of these two types of institutions vary as most nonland-grant universities evolved from Teachers' Colleges, while the land-grant universities have the mission of educating people in the mechanical arts and agriculture as stipulated by the Morrill Act of 1862.

This study will identify strengths and weaknesses of the teacher education programs of the institutions studied. These findings would be beneficial to teacher educators so they could improve any weakness in preparing teachers to conduct a complete program of vocational agriculture which includes supervised occupational experience programs (SOEP), advising the Future Farmers of
America (FFA) student organization, conducting adult and/or young farmer programs and teaching in the classroom.

The results of this study should be beneficial to state agricultural education officials for use in program planning and decision-making. The findings will be used in verifying or disproving a procedure for increasing the supply of vocational agriculture teachers. As a result of this study, state officials may want to consider expanding the number of teacher education programs or curtail their promulgation.

OBJECTIVES OF THE STUDY

The specific objectives in this study were:

1. To determine if there were differences in the teaching ability and job performance of vocational agriculture teachers according to the type of institution (land-grant or nonland-grant) from which they graduated as perceived by administrators of the schools where the teachers were employed.

2. To determine if there were differences in the quality of Future Farmers of American (FFA), Supervised Occupational Experience Programs (SOEP), and the Young and/or Adult programs conducted by the vocational agriculture teachers according to the type of institution from which they graduated.

3. To determine if there were differences in the attitudes of the vocational agriculture teachers concerning the Future
Farmers of America (FFA), Supervised Occupational Experience Programs (SOEP), and the Adult and/or Young Farmer programs according to type of institution from which the teachers graduated.

4. To determine the opinions of state supervisors of agricultural education concerning the quality of preparation of teachers at nonland-grant and land-grant universities.

HYPOTHESES

Historically, teacher education in agriculture has been traced to land-grant universities. However, nonland-grant universities also participate in preparation of teachers of vocational agriculture. There is a difference in the philosophy and mission of each type of university. Most land-grant universities have been involved in preparing vocational agriculture teachers since 1917. Many of the nonland-grant universities which prepare teachers of vocational agriculture have started doing so recently. Based on these observations, and literature reviewed in the next chapter, it was hypothesized that:

1. Administrators of the schools where the vocational agriculture teachers were employed would perceive the teaching ability and job performance of teachers who were trained at land-grant universities superior to those teachers prepared at nonland-grant universities.

2. The quality of the the Future Farmers of America (FFA), Supervised Occupational Experience Program (SOEP), and
the Adult and/or Young Farmer programs of vocational agriculture teachers who received their training at land-grant universities would be higher than those teachers trained at nonland-grant universities.

3. Vocational agriculture teachers who received their training at land-grant universities would exhibit more positive attitudes toward the Future Farmers of America (FFA), the Supervised Occupational Experience Program (SOEP), and the Adult and/or Young Farmer programs than vocational agriculture teachers trained at nonland-grant universities.

4. The state supervisors of agricultural education would perceive the quality of preparation of vocational agriculture teachers at land-grant universities superior to the quality of preparation of vocational agriculture teachers at nonland-grant universities.

LIMITATIONS OF THE STUDY

This study is limited to vocational agriculture teachers who received their undergraduate degrees from land-grant and nonland-grant universities during the 1981-82 school year who are actually teaching vocational agriculture. This group of teachers was chosen by the researcher because at the time of data collection they should have had a maximum of two years teaching experience with the bachelors degree. Their teaching ability, job performance and attitudes toward the vital components of vocational agriculture should reflect their teacher preparation institution better than when they would have accumulated
more years of practical experience. It is unlikely that many of these teachers would have completed a Masters degree which could have an influence on their teaching ability, job performance, and attitudes toward FFA, SOEP, and adult programs.

The 1890 land-grant universities have been excluded from this study because less than ten percent of the graduates of the 1981-82 school year taught vocational agriculture.

DEFINITION OF THE TERMS

The following terms are operationally defined in this study:

**Future Farmers of America (FFA)**

The national organization of students enrolled in vocational agriculture programs is the Future Farmers of America. The national FFA organization is composed of state FFA associations; state associations are composed of local FFA chapters. The FFA chapters are located in public schools offering instruction in vocational agriculture. The FFA activities are an integral part of the instructional programs under provisions of federal and state legislation and federal and state education policies. The primary purpose of this youth organization is to develop leadership, cooperation, and citizenship.

**Supervised Occupational Experience Program (SOEP)**

A series of related learning experiences which is an integral part of the instructional program of a student enrolled in vocational agriculture designed to develop knowledge and skills in agriculture is called a Supervised Occupational Experience Program. These supervised
learning experiences may be provided by utilizing facilities of the home, farm, school, or an agricultural business. Programs may include any of the following types of experiences: observation and exploration, school farm or school laboratory activities, supervised farming programs, placement for farm experience, or on-the-job agricultural training (Knebel and Richardson, 1982). The Smith-Hughes Act of 1917 clearly stated that vocational agriculture programs "shall provide for directed or supervised practice in agriculture either on a farm provided by the school or other farm, for at least six months per year" (Smith-Hughes Act, Section 10).

Adult and/or Young Farmer Program

All out-of-school instruction related to agriculture or agribusiness conducted by vocational agriculture teachers for youth and/or adults is classified as part of adult and/or young farmer education. These include:

1. Courses for young persons who are getting established in farming or preparing for off-farm occupations requiring knowledge and skills in agriculture.

2. Courses designed for adults who are farmers, or who are employed in off-farm occupations requiring knowledge and skills in agriculture.

3. Other non-vocational courses in agriculture, such as citizenship and consumer education in agriculture.
Land-Grant University

The Morrill Act was sponsored by Congressman Justin Smith Morrill of Vermont, passed by Congress and signed into law by President Lincoln in 1862. The Act granted 30,000 acres of public land to each state for each member of Congress (Senators and Representatives). The income from the sale of these lands was used to establish and maintain agricultural and mechanical arts colleges.

Calhoun and Finch (1982) maintain that:

The primary purpose of the Morrill Act was to create and maintain agricultural and mechanical arts colleges. With this legislative act, the federal government made it possible for many private citizens who could not otherwise do so to prepare themselves for practical careers in agriculture and industry while at the same time acquiring the cultural and intellectual attributes associated with a general education. (p. 30).

(See Appendix Q for list of land-grant universities.)

Nonland-Grant Universities

Colleges and universities that provide teacher education in agriculture but do not trace their origins from the Morrill Act of 1862 are classified as nonland-grant universities in this study. The nation's chief supplier of teachers for the elementary schools in the 1800s had been the normal schools. The normal schools were set up to meet the need for more school teachers as a result of increasing enrollments in public schools during the 19th century. With the establishment of land-grant universities, the colleges of agriculture aided these normal schools to develop courses in agriculture for teachers. From 1935 to 1954, 76 state normal schools changed their type of organization to that of multi-purpose
state college or university. These institutions were located in 22 states (Stiles, Barr, Douglass and Mills, 1960). This change in title of normal schools to state college or university was accompanied by diversification of their programs to include liberal arts and other professional fields, such as agriculture. Ten states have such institutions which offer agricultural education programs. (See Appendix R for the list of nonland-grant universities offering programs in agricultural education.)

Vocational Agriculture

The curriculum or program in agricultural education at the secondary level which is aimed at offering opportunities to students for occupations in agriculture and agribusiness is termed vocational agriculture (Knebel and Richardson, 1982).

Vocational Agriculture Teacher

A vocational agriculture teacher is a high school instructor of vocational agriculture. Vocational agriculture teachers typically spend at least fifty percent of their time teaching one or more of the following areas:

1. Production (General) Agriculture.
2. Specialized Horticulture.
3. Specialized Agribusiness or cooperative program.
5. Other Specialized program in agriculture.
CHAPTER 2

THE REVIEW OF RELATED LITERATURE

The purpose of this chapter is to present a review of related literature which addresses the concerns of this study. Currently there is no documented study which compares the teaching ability, job performance and attitudes of vocational agriculture teachers according to the type of institution from which they graduated.

In order to determine if a teacher is effective, it will be necessary to identify the characteristics of effective teachers. It will also be necessary to identify the types of activities in which vocational agriculture teachers should be involved. In this review of literature a major focus will be on the characteristics of effective teachers and job requirements of vocational agriculture teachers. It will also be helpful to know what has contributed to the vocational agriculture teacher shortage and examine the possible solutions.

In addition, it will be necessary to examine the attitudes of the vocational agriculture teachers towards the total vocational agriculture program as the teachers' attitudes can influence their job performance and teaching ability.
THE SHORTAGE OF TEACHERS OF VOCATIONAL AGRICULTURE


In a study by Luft and Bender (1974) it was found that thirty-six state supervisors of agricultural education indicated that their states have inadequate supply of vocational agriculture teachers. They suggested that teacher recruitment in agricultural education should be the responsibility of state supervisors, teacher educators, and vocational agriculture teachers.

A study by Lee, Brown, Moore, and Hogue (1978) found that 79 percent of the states have an inadequate supply of professionally trained teachers of vocational agriculture. Thirty states, according to this study, use teachers with non-teaching degrees.

Several reasons have been cited for the shortage of vocational agriculture teachers. Craig (1978b) pointed out that:

1. As the number of secondary teaching positions rises at the rate of 5-6 percent per year, the number of post-secondary positions increased by 10 percent per year.
2. There were few college students entering teaching.

3. The turnover rate was 10.3 percent.

A summary of statistics from 1965 to 1973 showed that even though the persons qualified to teach vocational agriculture increased, the percentage of the qualified persons who took teaching positions in vocational agriculture decreased (Craig, 1978). For instance, there were 1,038 persons qualified in 1965 to teach vocational agriculture, only 64.6 percent entered teaching. In 1966, 1,151 persons qualified but only 61.4 percent entered teaching vocational agriculture. In 1967, 1,233 persons qualified but only 60.2 percent entered vocational agriculture teaching. The number of qualified vocational agriculture teachers continued to increase with 1,713 persons qualified in 1973 but only 56.3 percent entered vocational agriculture teaching.

A summary of the statistics from 1978 to 1982, showed that not only is the number of vocational agriculture teachers certified per year declining, the percentage entering teaching is also declining. For instance, in 1978, 1,791 persons qualified to teach vocational agriculture, only 56.7 percent took teaching positions. The figure declined to 1,656 qualified to teach in 1979 with only 54.9 percent entering vocational agriculture teaching. In 1982, 1,368 persons qualified but only 51.3 percent entered vocational agriculture teaching (Craig, 1983).

Craig (1983) reported that in 1982, 15 vocational agriculture departments would not operate because of the teacher shortage. The number of vocational agriculture teachers qualified since 1965 still
has fallen short of the recommendation of the Professional Personnel Recruitment Committee of the American Association of Teacher Educators in Agriculture that 1,800 vocational agriculture teachers be certified each year (Annis and Paul, 1981).

Pals, Knight, Morton, Holmberg and Farrington (1980) gave another reason for the vocational agriculture teacher shortage. They pointed out that more multiple teacher departments are being created, and about 51 percent of all programs in the nation are multiple teacher departments.

Government statistics may have contributed to the vocational agriculture teacher shortage. Most government statistics have portrayed agriculture as a declining industry (Annis and Paul, 1981). Consequently, youths are reluctant to enter a declining profession.

Whatever the reason may be, one fact remains--there is a shortage of vocational agriculture teachers.

Possible Ways of Reducing the Shortage

Zurbrick (1980) asked the question, "Is There Really A Teacher Shortage?" in an article in The Agricultural Education Magazine. The author stated:

The 'shortage' of teachers is not really an actual shortage. The problem is one of providing the kind of economic environment which will attract those qualified teachers to enter the teaching profession (p. 21).

Zurbrick believes that pressure to participate in the many FFA contests and activities is contributing to the unavailability of teachers. The author suggested reducing or limiting contests and
activities might need to be considered as a way of checking unavailability of teachers.

In an editorial in the Agricultural Education Magazine, McMillion (1974) asked, "Is more recruitment the answer? No, it is only part of the answer--making the job of teaching more attractive will both attract and retain teachers and will ease teacher shortage" (p. 172). In order to alleviate the problem of the vocational agriculture teacher shortage, the Professional Personnel Recruitment Committee of the AATEA recommended that approximately 1,800 persons per year nationwide need to be qualified for teaching vocational agriculture. In addition they recommended (Annis and Paul, p. 95):

1. Vocational agriculture teachers should recruit their best students each year to enter agricultural education. Each teacher should have as a goal that at least one of his/her students graduate in agricultural education every three years.

2. Local administrators, state supervisors of agricultural education, and professional organizations should encourage all effective teachers of quality programs to remain in the profession, thus reducing the teacher turnover rate.

3. State supervisors and teacher educators in states with a surplus of agriculture teachers should urge graduates to go to areas where teacher shortage exist.

4. All vocational education groups must continually strive to make teacher salaries competitive with job opportunities in other agricultural fields.
5. State vocational agriculture teacher associations should lead in developing and/or maintaining active recruitment campaigns. They should emphasize the variety of job opportunities—especially specialized subject areas—the locations of the jobs, and the advantages of teaching as a profession—for example, the importance of agriculture and working with the youth.

6. Agricultural education leaders at the state level should make strong efforts to reduce the number of uncertified teachers in the profession. They should stress the importance of broadening certification standards to include areas such as ornamental horticulture, agribusiness, agricultural mechanics, and small animal care. They should make sure that the names and addresses of available and certified teachers are placed in the hands of superintendents and boards of education.

7. Agricultural educators should institute a study which will synthesize current research and seek answers to questions about vocational teacher supply and demand. For example, they need to know why qualified graduates do not obtain available positions and why vocational agriculture teachers leave the profession.

8. The Professional Personnel Recruitment Committee should continue its sponsorship of the longitudinal study of the supply and demand for teachers of vocational agriculture.
The fact that demand for vocational agriculture teachers exceed the supply has been widely publicized in the profession. Studies have shown that agricultural teacher education programs do not produce enough vocational agriculture teachers to meet the demand of the profession. Thus several states embarked on programs aimed at meeting their vocational agriculture teacher demand from sources other than the traditional four-year colleges.

Lee et al. (1978a) cited the following as other sources of agricultural teachers:

1. Agricultural majors other than agricultural education.
2. Graduates in some areas of agriculture other than agricultural education seeking employment.
3. Employees in agricultural business and industry who have baccalureate degrees.

Is Recruiting Teachers From Industry the Answer to the Teacher Shortage?

In an article in The Agricultural Education Magazine, Kindschy (1974) stated:

Perhaps we should listen to our colleagues in Trade and Industrial Education who use many non-degree teachers to conduct high school, post-secondary and adult classes... Considering the shortage of agribusiness instructors, very often a former tradesman in motor mechanics, farm machinery, welding, nursery management or the farm supply business can play an important role in providing additional instruction and relieving the burdened vocational teacher so he can concentrate on the responsibility of meeting the needs of his regular students (p. 173).

Supporting this argument, Knight (1980) writes:

Recruiting teachers from industry can serve as a valuable supplement to the current method of teacher preparation... If
defensible selection criteria and a preparation program in the pedagogical skills are developed (p. 3).

In several studies (Popham, 1968; Fagen, 1970; Pfahl, 1971; Cross, 1974; Moore, 1975, 1980; Lee et al. 1978b, New York, 1978) the teaching abilities of college prepared and non-degree teachers have been compared.

Popham (1968) compared twenty-eight college prepared teachers and 28 non-degree teachers in automobile mechanics using 1,200 pupils. The difference on a posttest based on pre-specified objectives which both groups were instructed to accomplish was not significant. When another group of 32 teachers (16 from industry and 16 college prepared) were compared on ability to teach electronics with 700 pupils, a small but significant difference occurred. But on further analysis with Analysis of Covariance, the difference disappeared.

Pfahl (1971) found that there were significant differences based on student's assessment between the teaching performance of degree and non-degree teachers in Oregon. The non-degree teachers were rated higher. The study also found that students who were taught by non-degree teachers did not feel inferior to those taught by degree teachers.

Moore (1976) found that entry-level industry teachers were not as effective in their teaching as the entry-level college prepared vocational agriculture teachers in Ohio. The researcher concluded that recruiting vocational agriculture teachers from industry needs careful consideration as these industry teachers need adequate professional training to be able to teach vocational agriculture. Two
other studies (Fagen, 1970; Cross, 1974) reported the same findings as Moore's study and concluded that non-degree teachers were not as effective as degree teachers.

In the New York study it is noted that supervisors perceived non-traditionally prepared teachers as positive on most variables but still lacked in classroom management and human relation skills. This observation was supported by Lee et al. (1978b) who found that:

The major weakness of teachers with nonteaching professional degrees were found to be in the areas of methods and techniques of teaching, developing lesson plans, classroom management, knowledge of FFA, organizing advisory committees, laboratory management and knowledge of adult programs (p. 70).

Moore (1980) stated:

...continued use of non-degree teachers will hurt vocational agriculture on a long term basis. Programs will decrease in quality, professionalism will decline, fewer students will be in FFA, and the image of vocational agriculture will suffer (p. 3).

The question is, "Will agricultural educators sacrifice quality for quantity to meet the demand of vocational agriculture teachers?". This was tackled by the National Advisory Council on Agriculture Education for the Agriculture Education Division at the AVA convention in 1975. The message from agricultural educators (Cross 1976) was:

The quality of agricultural education at all levels must be kept high, even if this means fewer such programs because of vocational agriculture teacher shortage (p. 35).

In the distinguished lecture at the annual awards breakfast of the American Association of Teacher Educators in Agriculture in Anaheim, California in 1983, Dickerson (1984) pointed out that a few excellent teachers have entered the profession through provisional certificates
but many become frustrated before completing requirements for professional certification and leave to seek other employment.

Craig (1983) reported that 254 vocational agriculture teachers have provisional or emergency certificates during the 1981-82 school year. In 1983 this number had dropped to 149. These figures and the studies cited indicate recruiting teachers from non-traditional areas does not appear to be the most desirable procedure for alleviating teacher shortage.

**Increasing the Number of Universities That Offer Agricultural Education Programs**

Several states have followed another option to increase the supply of vocational agriculture teachers, namely, increasing the number of institutions that offer teacher education in agriculture other than land-grant universities. Ten states, Arkansas, California, Illinois, Kentucky, Louisiana, Missouri, Oklahoma, Tennessee, Texas, and Wisconsin have established agricultural education programs in nonland-grant universities.

**Differences Between Nonland-Grant and Land-Grant Universities**

A brief history of the land-grant and nonland-grant universities will be necessary to distinguish between the two types of institutions. The mission and philosophy of each institution is a product of its historical past.

The history of nonland-grant universities started from the normal schools of the 1800s. The movement to establish the normal
schools was pioneered by James Carter and Horace Mann (Harper, 1939). The normal schools were not in the modern sense institutions of higher education. The prime purpose of the normal schools were to train teachers for the elementary schools. The course they offered were short, ranging from six weeks to one academic year. The student who enrolled in the normals were elementary school graduates.

Most of the existing universities were not interested in establishing teacher education departments. This lack of interest in the preparation of teachers was responsible for the establishment of 100 normal schools between 1860 and 1899 and an additional 71 since 1900 (Wahlquist and Thornton, 1964). With increased high school graduates, the requirement for admission to normal schools became a high school diploma, and training was lengthened to two years. The curriculum included more of child study and some form of liberal education. As the enrollment increased, the normal schools started to change their names to teachers' colleges and offered four-year bachelor's degree programs.

Irwin (1960) summarizes the development of a typical normal school to teachers' college and state college or university:

...Peru Normal College; first instruction 1867; name changed to Peru State Teacher's College and first baccalaureate degree awarded 1921; name changed to Peru State College 1949. Granting of liberal arts degree authorized 1949; Master's degree in education authorized 1956. Accredited by North Central Association. (p. 628)

As a result of the change from normal schools to state universities (nonland-grant universities), these institutions diversified
their programs to include other areas of specialization other than teacher training.

The land-grant university on the other hand has its own historical past. The Morrill Act, signed into law by President Lincoln on July 2, 1862 marked the beginning of the land-grant colleges and universities.

The act authorized the sale of 30,000 acres of land for each member of Congress from each state. The act stipulates that funds that accrued from this sale be used for the:

...endowment, support, and maintenance of at least one college where the leading object shall be, without excluding other scientific and classical studies, and including military tactics, to teach such branches of learning as are related to agriculture and mechanic arts ... in order to promote the liberal and practical education of the industrial classes in the several pursuits and professions of life (Brunner, 1962).

The primary purpose of the land grant university is teaching, research and extension (Ellis, 1963).

Wahlquist and Thornton point out five basic principles that are demonstrated in the mission of the land-grant system:

1. The need for access to higher education by persons of all works of life—democratization of education.
2. The need for a diversified curriculum.
3. The relationship of the university to the life of its state and of segments of the population—business, industry, agriculture, and government.
4. The possibility of integrating teaching and research, and to the marked advantage of both activities.
5. The concept of life long education as expressed in extension activities and continuation study centers.

Preparing Vocational Agriculture Teachers at Nonland-Grant Universities

In a special feature debate in The Journal of American Association of Teacher Educators in Agriculture, Weston of Missouri argued that teacher education in agriculture be located in land-grant universities. Weston (1979) argues that three acts: (1) the Morrill Act (1862) established the land-grant university philosophy; (2) the Hatch Act (1887) provided for the establishment of the agricultural experiment stations; and (3) the Smith-Lever Act (1914) established the Cooperative Extension Service. Weston points that these acts are closely related to land-grant institutions. Weston continues and states that professionalism and standardization are achieved by having one land-grant university in each state. The author stresses that:

The teacher training staff in most land-grant institutions is only involved with teacher education. This can be contrasted to other universities where the teacher educator may also be soils professor, animal husbandry professor, or agricultural economics professor... Most states that have gone to multi teacher training institutions are still plagued with a teacher shortage... (p. 8-9).

Some of the reasons for limiting teacher education in agriculture, according to Weston are: (1) coordination of inservice education can best be handled by land-grant institutions; (2) student body in land-grant universities are exposed to more agricultural staff than nonland-grant universities; (3) teachers trained at nonland-grant
universities have difficulty adjusting to state programs upon graduation; and (4) duplication of facilities and increased costs are checked by having one land-grant university in each state.

Weston summarized his argument by stating:

...the land-grant colleges or universities have the largest staffs and the best resources for training of instructors of vocational agriculture (p. 3).

Sabol of California disagrees with Weston and points out that teacher education in agriculture should not be limited to land-grant universities: "Because students who elect to attend nonland-grant university develop into strong, dedicated, competent teachers of vocational agriculture" (p. 9). Sabol (1979) points out that the shortage of vocational agriculture teachers and teacher turnover makes it imperative to include nonland-grant institutions in vocational agriculture teacher preparation. Sabol indicates that teacher educator at the nonland-grant institutions may do a better job of teaching because teacher educators in agriculture in nonland-grant institutions are primarily concerned with teaching. Their time is not spent on research, extension or 4-H and as such, do a better job of teaching. Sabol further points out that the emphasis in nonland-grant universities is on undergraduate degrees, unlike the land-grant universities that combine undergraduate and graduate programs.

In a recent study Feistritzer (1984) collected data from all 50 state departments of education and 803 teacher education programs. The study found that there has been a proliferation of institutions training teachers. The study concluded that:
Up to half of 1,287 teacher-education programs in the United States should be 'summarily shut down'. (p. 19)

TEACHER EFFECTIVENESS/PERFORMANCE

The importance of teacher effectiveness was highlighted by Medley's article in the Encyclopedia of Educational Research. Medley (1982) states:

One of the most difficult problems in educational research is that of recognizing teacher effectiveness--of discriminating between more and less effective teachers. The role of the classroom teacher in education is central. The teacher is, after all, the point of contact between the educational system and the pupil; the impact of any educational program or innovation on the pupil operates through the pupil's teacher. It is therefore quite accurate to say that a school's effectiveness depends directly on the effectiveness of its teachers. Maximizing teacher effectiveness is a major goal of education. (p. 1894)

In writing about teacher effectiveness, Drawbaugh and Hull (1971) point out that:

... Time is measured by clocks, temperature is measured by thermometers. Teacher effectiveness, however, is measured by instruments which are not so readily identified as the clock and the thermometer, nor so easily interpreted. (p. 227)

The Committee of Teacher Effectiveness of the American Educational Research Association (1953) commented:

The simple fact of the matter is that after 40 years of research on teacher effectiveness during which a vast number of studies have been carried out, one can point to a few outcomes that a superintendent of schools can safely employ in hiring a teacher or granting him tenure, that an agency can employ in certifying teachers or that a teacher education faculty can employ in planning or improving teacher education programs. (p. 657)
The principal role of the teacher is to produce desirable change in the behavior of pupils. An effective teacher is one who produces these desired changes in pupils with some degree of efficiency (Smith & Gremillion, 1971). One of the earliest reported research studies on teacher effectiveness was Kratz (1896). The method used was to bring a large group of elementary school pupils together and let them remember the teachers they have encountered. They then listed all the characteristics that distinguished one teacher from another. Their listings were analyzed and compared to get some characteristic of effective teachers. Educators used this method and Charters and Waples (1929) came out with a list of twenty-five characteristics of effective teachers. The list included adaptability, considerateness, enthusiasm, good judgement, honesty, and magnetism. In another study, Hart (1936) listed the following as the six most frequently mentioned characteristics of effective teachers. They are: (a) has teaching skills; (b) is cheerful, good-natured, patient, not irritable; (c) is friendly, companionable, not aloof; (d) is interested in pupils, understands them; (e) is impartial -- does not have "teacher's pets"; and, (f) is fair in grading and marking. One thing seems clear from these early studies. Most of the characteristics are not what a teacher can acquire by teacher education. They are more personal characteristics.

Boyle (1915) made an innovation to the early method of assessing teacher effectiveness by developing the rating scale. Rating scales have been widely used since then in promotions, certification, tenureship and accreditation. Mitzel (1960) wrote an article in the
Encyclopedia of Educational Research and outlined four criteria for teacher effectiveness—context, presage, process and product variables. The context variables refer to those environmental conditions that the teacher has no control that affect the pupils. The presage variables refer to preexisting teacher characters, the process variables refer to student-teacher interaction, and the product variables refer to the end product of teaching—student change in behavior. The use of these criteria made it possible for researchers to pinpoint which variable they are interested.

Rosenshine and Furst (1971) reviewed some 50 process-product studies of teacher effectiveness. Their conclusions were that students learn best when the following teaching behaviors are present:

1. Clarity.
2. Variability.
3. Enthusiasm.
5. Student opportunity to learn criterion material.

They further listed use of student's ideas, criticism, use of structuring comments, questioning skills, probing, and attention to the level of difficulty of instruction as variables that appear to correlate with effective teaching, though not as strongly as the first five.

Cruickshank (1976) noted that most research on teacher effectiveness have been correlational in nature. He concluded that research can also be classified as that which explores relationships between variables—presage, context or process. Presage variables
deal with the teacher characteristics such as educational level, socioeconomic status, race, and sex. Context variables include the characteristics of the students, classroom and school environment while process variables are classroom activities: teacher talk, pupil talk, and time on task.

Olson (1979) investigated the criteria that the administrators and teachers in Montana used in measuring teacher effectiveness. This study revealed that the highest rated criterion by teachers and administrators for measuring teacher effectiveness were:

1. Classroom control.
2. Knowledge of the subject matter.
3. Rapport with the students.

The teachers in Montana according to the study believed that the "amount learned" by students was less significant in judging effective teaching. In using Mitzel's criteria, the study found that the product criteria (measure of learner behavior) and process criteria (measure of teacher behavior) were rated significantly higher than presage criteria (measure of teacher's personal or intellectual attributes).

Moore (1975) conducted a study to determine if there were differences in teaching effectiveness of entry-level four-year provisionally certified and one-year vocationally certified teachers of vocational agriculture in Ohio. The study found that there were statistically significant differences between the two groups on teaching performance test, teacher educator ratings, and teaching behaviors. The entry level four year provisionally certified teachers
performed better on a teaching performance test and were rated higher by the teacher educators. The teaching behaviors of the entry-level one-year vocationally certified teachers were more directive (teacher centered) than the entry-level four-year provisionally certified teachers.

The method of communication can also influence teacher effectiveness. Churchill and Becker (1973) studied the relationship between communication and teaching among industrial education teachers in Florida's secondary schools, vocational and technical centers, and community colleges. The study found that the "best" teachers were dynamic, spent a great amount of time in direct contact with their students, and created a pleasant social-emotional environment through the use of reinforcement and banter. Additionally, it was found that the students were more concerned with the attitudes of the teachers toward them and the socio-emotional environment created in the classroom or shop.

In a position paper presented at the Teacher Education Conference Board, New York, Kiepper (1981) stated:

Effective teachers not only remain abreast of new developments in their fields, but strive towards increased mastery of teaching skills by continually extending and refining the specialized knowledge acquired prior to entering the profession... The effective teacher participates in periodic review of educational goals with sensitivity to changing societal circumstances and requirements. Effective teachers plan carefully both what is to happen in their classrooms and what is to result from it... They exhibit flexibility... They are ambassadors of education in the communities in which they teach or reside, helping their fellow citizens to understand what the schools are trying to do and accomplish, learning
what is expected of the schools, and working with the community to improve the schools. (p. 1)

Teacher effectiveness has also been looked at from the management style of the principals. Greenblatt (1982) investigated the relationship between principal's management system and the teaching effectiveness of teachers under them. The management systems identified were:

1. Authoritarian--where principals rarely consult staff before making decisions.
2. Consultative--Centralized: whereby the principal or administrator consult staff selectively based on expertise, but still makes the decision.
3. Consultative--Decentralized: whereby the principal seeks input from teachers individually and in groups but still makes the decision.
4. Participative--whereby the staff share the prerogatives of office with the principal.

The study found that the teachers in the group of consultative-centralized schools were less effective and the authoritarian schools have the least effective teachers. The consultative-decentralized mode of management seemed more appropriate for teacher effectiveness.

One method of identifying an effective teacher is to contrast the teacher with some identified traits of teacher effectiveness (Suffredini, 1982; Fitzgerald, 1982). Fitzgerald (1982) studied elementary principals' perceptions of teacher effectiveness based upon
The study contrasted effective and noneffective teachers on the basis of personality traits of creativity, dynamism, organized demeanor, and warmth and acceptance. It found that in suburban and urban atmospheres, warmth and acceptance seem to be prevailing over dynamism. Urban principals in this study tend to place more emphasis on dynamism and organized demeanor as strategies for classroom management. In Suffredini (1982), it was found that all principals indicated that there were no marked differences among their perception of teacher effectiveness as measured in the four personality traits.

Moore (1976) pointed out the following key things as regards teacher effectiveness:

1. Effective teachers ask questions when they are teaching. In a study by the author in Ohio involving vocational agriculture teachers, it was found that students learned more from teachers who ask questions while teaching.

2. Effective teachers let their students know what they are supposed to learn. This means that effective teachers have clear cut objectives and work towards them.

3. Effective teachers provide their students with feedback. Moore further points out that for students to perform better, they should know how well they are doing in their work so that they can improve.

4. Effective teachers get their students motivated to learn. Miller (1983) in an editorial in Agricultural Education Magazine emphasized that quality can be achieved by the teacher who goes
the length to prepare a good lesson. The effective teacher, according to Miller, uses other ingredients such as enthusiasm, clarity, and care in teaching.

In addition, Stewart (1983) points out that teacher effectiveness can be achieved through:

1. Planning.
2. Assessing students needs.
3. Selecting content.
4. Creating a positive atmosphere.
5. Utilizing appropriate technology.
6. Maintaining student control.
7. Utilizing resources.

Although there are no rigid criteria for measuring an effective teacher, Stewart believes that an effective teacher should be interested in the students, use methods appropriate to the subject matter and student's background, and also be knowledgeable in terms of the relationship between learning theories and applicability.

Peterson (1983) in an article on teacher effectiveness based on review of past research, points out that effective teachers tend to be more orderly, uses more positive motivation and maintain classroom warmth. The effective teacher also uses students time judiciously, uses questions in their classrooms, and spent more time on the supervision of their students.

Hedges (1983) likened a good and effective teacher as a "teacher" and an ineffective teacher as a "teller." In this contrast,
a teacher uses problem-solving methods to teach vocational agriculture while the teller teaches a subject to the students. Effective teaching therefore should aim at bringing change in the student. These changes on the part of the student can be cognitive, psychomotor, or in the effective domains of learning.

Summary of Literature on Teacher Effectiveness/Job Performance

This researcher agrees with Gage (1984), who after re-examining research on teacher effectiveness points out that: "Research has shown repeatedly that it is possible to change teaching practices—not for all teachers or for all practices, but for enough practices to make an educationally important difference" p. 88. The literature on teacher effectiveness indicates that effective teachers:

a. motivate students to learn,
b. involve students in the lesson,
c. are organized,
d. use variety of teaching methods,
e. are enthusiastic,
f. plan their lessons,
g. hold students attention,
h. have control of their classroom, and
i. participate in professional activities.

Research on teaching effectiveness, concluded there is a body of knowledge which educators can use in studying and evaluating teaching effectiveness.
ATTITUDES OF VOCATIONAL AGRICULTURE TEACHERS

The attitude of the vocational agriculture teacher towards his/her profession can influence job performance. Research both in industry and education have indicated that worker morale can contribute to job success and longevity. During this period of teacher shortage, attitude and morale of the teacher can influence vocational agriculture programs.

Miller (1975) after studying the morale of first year teachers in Virginia pointed out that research should be conducted to ascertain whether the characteristics exhibited by the first year teachers were akin to those of experienced teachers, and what factors inherent in the job might influence teacher morale or attitude.

Studying the changing status of supervised occupational experience programs in North Carolina, Miller (1980) reported that teacher attitude toward supervised occupational experience programs was illustrated by the willingness to provide class time for SOEP. Ninety-one percent of the teachers provided time for SOEP. The researcher reported that over half of the teachers responded that SOEP activities would be increased in the future.

Kittrell (1978) conducted a study on the relationship between selected teacher job setting and morale of vocational agriculture teachers in Mississippi. The study found that vocational agriculture teachers who plan to stay in the job as teachers have higher morale than those who plan to leave. The researcher concluded that: (a) vocational agriculture teachers in Mississippi who place considerable
and moderate emphasis on FFA have higher morale or positive attitude than those who make little use of FFA; and (b) the job settings in which teachers conduct programs of vocational agriculture have a relationship to attitude/morale.

In their study of attitudes of prospective and present teachers toward selected vocational agriculture activities Combs and Todd (1974) found that experienced teachers have a positive attitude towards FFA. The researchers also reported that the experienced teachers had a positive attitude towards using class time for FFA.

Combs and Todd also found that teachers of vocational agriculture had negative attitudes toward adult programs. The teachers had negative reaction to the statement that vocational agriculture teachers should teach adult classes.

Kiesling (1971) studied the relationship between vocational agriculture teachers' attitudes toward coordinating and advising young farmer organizations and the teachers attitudes toward other duties. The study found that attitudes toward the young farmer organizations were favorable. The teachers considered the duty moderately good and active.

In a study conducted in Oklahoma, Brown (1965) found that teachers were more positive in their belief as to the continued need for adult and young farmer programs and that teachers would continue to assume an effective role as educational leaders in young and adult farmer education. Brown also found that both teachers and administrators had the belief that FFA was instrumental in motivation of students to become leaders in agriculture.
Cole and Herren (1984) examined the attitudes of Oregon vocational agriculture teachers toward SOEP component of vocational agricultural curriculum. Herren found that vocational agriculture teachers had strong positive attitudes towards the following statements:

1. Each student should have a SOEP.
2. SOEP helps make agricultural programs vocational.
3. SOEPs are instrumental in preparing students for jobs in agriculture.
4. SOEP should continue and vocational agriculture teachers should supervise, even if SOEP period is lost.
5. Employees can affectively assist SOEP supervision.
6. Students should receive credit for SOEP.
7. Vocational agriculture teachers should have at least one period for SOEP supervision.
8. Each student should maintain up-to-date records related to their SOEP.

The attitude of the teacher toward certain aspects of the vocational agriculture program appear to have an influence on the amount of emphasis placed on the various program components and the overall quality of the programs.
COMPONENTS OF QUALITY VOCATIONAL AGRICULTURE PROGRAM

The vocational agriculture teacher does more than teach in the classroom. Brown (1977) noted that an effective agricultural education program has four components:

1. In-school instruction,
2. Supervised Occupational Experience Programs (SOEP),
3. Future Farmers of America (FFA), and
4. Adult instruction.

Amberson (1981) listed four identified facets to the role of a vocational agriculture teacher. These major aspects include: (1) providing classroom/laboratory instruction, including instruction in agricultural science, leadership, and mechanics; (2) coordinating supervised occupational experience programs (SOEP); (3) advising the FFA; and (4) instructing out-of-school youth and adults in production agriculture/agribusiness.

Writing in The Journal of the American Association of Teacher Educators in Agriculture, McCracken (1983) suggested that:

There is a body of knowledge and a set of attitudes characteristic of our profession. We have believed in a community-based program with the teacher as a agricultural leader. We have believed in supervised occupational experience programs, the intracurricular FFA organization, year-round programs, problem solving as an approach to teaching and learning, the college-prepared teacher and continuing education for adults. (p. 4)

Another article by Dickerson (1984) stated the importance of SOEP, FFA and adult programs in vocational agriculture:
It seems to me that the basics most responsible for the success of the vocational agriculture program have been (a) the supervised occupational experience program to make instructions functional and realistic, (b) curriculum design and approach emphasizing problem solving and rational thinking, (c) the Future Farmers of America organization to provide incentive and motivation, and (d) well prepared teachers with requisite skills to utilize these basic tools. (p. 4).

Supervised Occupational Experience Programs (SOEP)

Phipps (1980) defined supervised occupational experience programs (SOEP) as: "All the practical agriculture activities of educational value conducted by students outside class or on school-released time for which systematic instruction and supervision are provided by their teachers, parents, employers, or others" (p. 199). Phipps points out that supervised occupational experience programs of students make the instruction in an agriculture course practical and meaningful to the students.

Binkley and Hammonds (1970) state that the program of vocational agriculture should include supervised experience programs.

Legally, supervised occupational experience programs have been mandated by vocational education legislation. The Smith-Hughes Act (1917) stipulated:

...such schools shall provide for directed or supervised practice in agriculture, either on a farm provided for by the school or other farm, for at least six months per year... (section 10).

The 1963 vocational act (Burdine 1978) specified:

...the program of instruction will combine and coordinate related instruction with field, shop, laboratory, cooperative work, or other occupational experience which is appropriate to the vocational objective of the student, and is of sufficient duration to develop competence necessary to fit him/her for employment in the occupation or occupational field for which
he is being trained, and is supervised, directed, or coordinated by a person qualified under state plan. (p. 271)

Love (1978) writing on the philosophy of agricultural education states:

Production projects conducted by the vo-ag student and supervised by the vo-ag teacher outside the school not only involve the student but also permit the teacher to associate in-school learning activities with the student's life experiences. (p. 7)

Phipps (1980, p. 201) listed seventeen reasons why students enrolled in vocational agriculture should have supervised occupational experience programs. Moore (1979) in an article in the Agricultural Education Magazine states that "all students in vocational agriculture should be required to have a project. There is a sound philosophical foundation for the projects, and research has shown that students benefit from projects. The project is one basic in vocational agriculture that we need to return to" (p. 220).

To answer the question, "Are SOE Programs really that important?," Peterson and McCreight (1973) pointed out that the SOE program:

1. Is an extension of the classroom instruction for farm, ranch, or off-farm agricultural occupations.
2. Encourages use of approved practices.
3. Promotes closer cooperation and relationships between agribusiness and teacher.
4. Informs teachers about situation of students.
5. Makes effective teaching in a real life situation.
6. Helps students see a need for the relevance of instruction.

Williams (1978) found that students thought that their SOE programs were important in developing occupational abilities and that their SOE programs were also important in developing an appreciation for the importance of honest work, acceptable work habits, and working relationships. The occupational plans of students influenced their perceived importance of SOE programs in developing skills such as producing, financing, and marketing farm products. Students who plan to enter off-farm agricultural occupations perceived SOE programs important in developing agricultural orientation abilities, communication abilities, and agricultural resource use abilities. Williams further found that students who do not plan to enter agricultural occupations indicated that SOE programs were important in developing occupational abilities, more especially those related to work ethics and business communications.

The five most important benefits of SOE programs have been identified by Williams (1979): It encouraged the keeping of records, promoted the acceptance of responsibility, developed pride of ownership, helps students attain advanced FFA degrees, and encouraged the production of crops and animals.

A similar study by McGrew (1981) in Mississippi reported that eighty-seven percent of responding students indicated that their SOE programs will help them achieve their career goals, and sixty percent plan to enter agricultural occupations in the future.
Other benefits of SOE programs have been highlighted by Stuever (1983) who pointed out that they can help students in learning how to keep records such as inventory, income and expenses in their projects. They can also help students in winning their FFA contests.

Williams and Rawls (1977) cited five types of SOEPs and their benefits:

1. Farming programs--This provides opportunity for ownership, self-employment and management experiences associated with productive farm enterprises.

2. Cooperative farm placement--This is designed to develop competencies in production agriculture through employment in the farm.

3. Supervised laboratory experience which is achieved through experiences in the use of school's laboratories, shops, greenhouse, and farms.

4. Cooperative agribusiness placement which provides experiences in agribusiness.

5. Supervised exploratory experiences which allows students to interview and observe employers and employees in agricultural firms.

The authors conducted a study of the SOE programs in Iowa and found that from a sample of 300 students, 93 percent had some form of SOE programs during their enrollment in vocational agriculture. The remaining 7 percent said that they had no SOE programs while enrolled in vocational agriculture.
Binkley (1977) in addition to listing the types of SOEPs, pointed out that the Smith-Hughes Act specified that: "...there must be a directed or supervised practice in agriculture..." Binkley further argues that if agricultural educators turn their backs on SOE programs, they are turning their backs to what makes agricultural education "vocational" (p. 219).

Woodard (1977) argues that vocational education at all levels aspires to prepare students to perform and succeed at a specific job. But it is not easy for a school to equip the classroom or the laboratory to resemble all the different situations in a job setting. Therefore, the author points out that the only possible way to teach many of these skills would be through supervised work experience programs.

Morton and McCracken (1979) conducted a study to determine the relationship between quality SOE programs and the level of academic achievement in a test measuring technical knowledge in production agriculture in Central Ohio. The findings of this study revealed that higher quality SOE programs are likely to result in greater learning achievement.

In order to confirm the need for SOE programs in vocational agriculture programs, Long and Dunham (1982) conducted a study of Utah vocational agriculture programs in order to determine the status of SOE programs in the state. It was found that about 80.3 percent of the responding students had SOE programs. Sixty-six percent of the respondents had production type experience programs, 41.7 percent of
the student had work experience programs, while 11.3 percent had some agricultural related businesses themselves.

One of the goals of SOE programs is building students' confidence about themselves and what they achieve. Williams and Morris (1982) conducted a study to determine the effects of programmatic SOE program instruction (SOE packet) on the self-image of students who participated in its use and those who did not. The study found that students who were in schools where SOE packet were used had a higher self-image than those who did not receive the experience. The study recommended the use of SOE instruction packets by beginning teachers of vocational agriculture.

Crawford (1983) suggested that state laws for vocational education must include SOE programs, a state plan of continuous evaluation and follow-up in order to identify deficient SOE programs.

Brown and McGrew (1983) in a study to determine the status of SOE programs in Mississippi found that 82 percent of the students enrolled in vocational agriculture in 36 public high schools, were FFA members while 75 percent were involved in SOE programs. The study further asked students why they were engaged in SOE programs. Fifty percent replied that they participated because it is part of total vocational agriculture program. Some said that they participated to get credits, while others said that they participated for career exploration.

Williams (1978) conducted a study at Iowa State University to determine the factors that contributed to students development of SOE programs. The findings were that students perceived that their
parents and their vocational agriculture classes were the two most important factors in developing their SOE programs. The study further found that there were commalities in factors among students that lead to their developing their SOE programs.

Berkey and Sutphin (1983) point out that quality SOE programs is a component of the agricultural education curriculum and there is the need for support from the administrator. They also point out that there is the need for a realistic teacher role to make this important component a reality.

Summary of Literature Related to the Need of Supervised Occupational Experience in Vocational Agriculture

After reviewing the available literature on the supervised occupational experience component of vocational agriculture, the following conclusions are based on the literature:

1. Supervised Occupational Experience Program is an integral part of vocational agriculture.
2. Supervised experience programs have been required by legislation.
3. Supervised occupational experience programs are vital to make agricultural education "vocational."
4. Students derive benefits by engaging in supervised occupational experience programs of vocational agriculture.
Future Farmers of America (FFA)

The Future Farmers of America (FFA) was founded in 1928 and since then it has been an important part of the public school program in vocational agriculture. The FFA student organization operates under a federal charter—Public Law 740 which was passed by the 81st Congress of the United States.

Phipps (1980) states that FFA is an integral part of the program of vocational education in agriculture. The FFA official manual, according to Phipps further states: "The foundation upon which FFA organization is built includes leadership and character development, sportsmanship, cooperation, service, thrift, scholarship, improved agriculture, organized recreation, citizenship, and patriotism" (p. 251).

FFA has been described as the "leadership laboratory which the students organize and operate" (Amberson, 1981). Commenting on the philosophy of agricultural education, Love (1978) points that FFA explains more than any other thing the philosophy of agricultural education.

Phipps listed twelve purposes and seventeen benefits of the FFA to students (pp. 252-3). Thousands of students enrolled in vocational agriculture are members of FFA chapters. Agricultural educators contend that FFA provides training in leadership development, cooperative attitudes and other community service activities. It appears from the zeal and emphasis by vocational agriculture
teachers, students and agricultural educators, FFA is accomplishing its mission. Vocational agriculture is sometimes called FFA by people who are not within agricultural education.

In order to ascertain the importance of FFA, this researcher examined the literature related to the importance of FFA in vocational agriculture.

Love (1978) notes that some public leaders speak respectfully of the contributions of FFA to their personal development. The list includes: Former President Jimmy Carter; Secretary of Agriculture Doyle Conner of Florida; Governor George Busbee from Georgia; Governor George Wallace of Alabama; and Governor James B. Hunt of North Carolina.

In a study in Iowa, Townsend (1981) examined the FFA participation and personal development of Iowa vocational agriculture seniors. The study used the Personal Development Inventory (PDI) which consisted of personality scales which includes leadership, self-confidence, cooperation, thrift, scholarship, self-conscience and occupation choice. The researcher found that participants of FFA activities had higher PDI scale scores than non-participants. The study concluded that FFA activities assisted in the leadership and personal development of the members.

Carter and Neason (1984) replicated Townsend's study and found that positive relationships existed between FFA participation and personal development scores across all scales. Leadership scale has the highest correlation coefficient indicating some relationship with FFA participation. The study concluded that FFA contributes to its
Leske (1977) of the University of Minnesota conducted a study on the impact of FFA on student motivation in Minnesota. The Minnesota FFA Land Judging score card instructions booklet was used as the soils unit content outline. The accompanying FFA Land Judging score card was used to measure student learning. The researcher concluded from the findings that FFA skills contests motivate students to study beyond the regular classroom; and FFA skills contests stimulate an increase in learning.

Drake and Morgan (1973) conducted a study to determine the perceptions of Alabama superintendents and principals relative to vocational youth organizations in their school or school system. Eighty-nine percent of the respondents have favorable opinions relative to the effectiveness of the FFA.

In a study designed to assess the competencies of tenth grade vocational agriculture students who had completed two years of instruction in vocational agriculture (Neavill, 1972) found that as students participation on FFA committees and FFA contests and awards activities increased, their degree of mastery on leadership items increased.

Rathbun (1974) examined the relationship between participation in vocational student organization and student success. The study found that students who were more active in vocational youth organizations were perceived by their instructors, employer or college advisor, and parents as having high levels of ability in leadership,
citizenship, character, responsibility, confidence and cooperation than student who were less active. The study also found that students who were more active in the vocational education student organization (such as FFA) or who were enrolled in the training program for a greater number of years enjoyed greater employment success than students who were less active or enrolled for fewer number of years.

Ricketts and Newcomb (1983) investigated leadership and personal development abilities possessed by high school seniors who are FFA members and those who never enrolled in vocational agriculture. The study found that vocational agriculture students who were FFA members possessed more leadership and personal development abilities than non-vocational agriculture students. Those vocational agriculture students who were FFA members from superior chapters possessed more leadership and personal development abilities than non-vocational agriculture students. The study concluded that students who were more active in FFA activities tend to develop higher levels of leadership and personal development ability.

FFA is a component of the total vocational agriculture program. To substantiate this statement, Byers (1977) reported that professionals in agricultural education believe FFA should be:

1. An integral and inseparable part of vocational agriculture.

2. Intra-curricula, that is, gets its roots from the vocational agriculture curriculum.
3. Serves to enrich, stimulate, and motivate the instructional program in agriculture.

The author further points out that the FFA has an aim of developing agricultural leadership, citizenship and cooperation, but can also expand to include developing technical skills in agriculture.

Sheradin (1977) portrayed FFA as a program that aimed at uniting the classroom activities into real life experience. The author illustrated with the FFA motto:

Learning to Do
Doing to Learn
Earning to live
Living to serve

and says that the motto has bearing to the total instructional program in vocational agriculture. In the classroom, the student is taught a certain task and the FFA helps the students to do this task in form of a project. The student is doing to learn. The student earns money from the project, and also serves the community and the society with the knowledge gained.

**Summary of Literature Related to the Importance of FFA Student Organization in Vocational Agriculture**

After reviewing the related literature, the following are conclusions based on this review:

1. FFA is an integral part of the total vocational agriculture program.

2. The FFA student organization is beneficial to students enrolled in vocational agriculture. Some of the benefits are:
a. leadership development;
b. cooperative attitudes in students;
c. thrift;
d. scholarship; and
e. personal development.

Adult Programs in Vocational Agriculture

Adult programs in vocational agriculture has generally been assumed to stem from the Smith-Hughes Act of 1917. But prior to this act, states such as Indiana, Illinois, Massachusetts and New York had started some form of adult programs in agriculture.

The Smith-Hughes Act (Phipps, 1980) stipulated that instruction in vocational agriculture should be "designed to meet the needs of persons over fourteen years of age who have entered upon or who are preparing to enter upon the work of the farm or the farm home" (p. 594).

In its report to Congress in 1920, the Federal Board for Vocational Education stated:

Three kinds of vocational agricultural education schools and classes developed in the states are growing out of the needs of the following groups of boys and men: (1) boys who are in school, (2) boys who have left school and are employed on farms... (3) older men who have left school ... but can be reached by evening classes... (p. 79).

Ekstrom and McClelland (1952) list eleven reasons why agricultural education should be concerned with instruction of young and adult farmers (p. 17).
We are in a world of technological change and adults need to learn these new technologies if they want to cope with change. Phipps (1980) points out that teachers of agriculture need to contribute to the life long education of adult farmers.

Forell (1972) listed the benefits of adult education to the vocational agriculture program:

1. Higher support from the superintendent and school board.
2. Increased support for the FFA chapter of the program.
3. Increased participation in the off-farm agricultural occupation as agribusiness leaders are aware of the activities of vocational agriculture program.
4. Visits or contact with parents of high school students thereby increasing chances of increased enrollment in the program.

Miller (1979) noted that a vocational agriculture program implies that we are serving the needs of the community and school district in agriculture. Any vocational agriculture department that bases its programs only on the secondary level is not meeting the needs of the entire community.

Grady (1979) argues that the returns of adult program to vocational agriculture is three-fold: To the student (young/adult farmer), to the vocational agriculture teacher, and to the school. To the farmer, there is exchange of ideas in the adult classes. There is public relations to the school and the vocational agriculture teacher.

Persons (1980) suggested that more funds be allocated to adult programs because these programs are not restricted to persons
established in farming but can be expanded to the agricultural industry. The importance of adult programs has been noted by Miller (1983). The author points out that increasing turnover and lack of positive image of the vocational agriculture programs can be checked by an effective adult program in agriculture in the community. The effective adult program ensures the participation of tax payers in the total vocational agriculture program.

Thompson (1983) in an article in Agricultural Education Magazine highlighted the importance of agriculture to the United States and the world. As a world leader in agriculture farmers are supposed to be up-to-date with changes in technology. The article further points out that vocational agriculture through its adult programs can help to maintain the high esteem of American agriculture. Thompson continues that if vocational agriculture does not provide quality instruction in management, the adult and young farmers will look for other sources of gaining knowledge. The author summarized by urging that the total agricultural system be organized to provide the technical assistance needed by adult and young farmers across the country.

Richardson (1983) argued that successful teaching of vocational agriculture mandates that the needs of the communities be assessed and met. A complete vocational agriculture involves offering adult classes. Benefits of adult programs Richardson points out are:

1. Participants ability in planning their future instead of being victims of circumstances.

2. Keeping and using accurate records.
3. Establishing goals and objectives.
4. Improving attitudes toward risk taking.
5. Improving their earnings.

The importance of adult programs the author continued can be explained by the following objectives that it is meant to achieve:
1. Develop competent, aggressive agricultural leadership.
2. Strengthen confidence of young people in themselves and their work.
3. Encourage intelligent choices of agricultural enterprises.
4. Establish strong individual family and farm business goals.
5. Improve home and living condition.
6. Participate in cooperative activities.
7. Provide a basis for solid decision making in business management.
8. Provide organized agricultural recreational activities.
9. Encourage establishment in agriculture.

Cavey (1983) points out that adult programs tend to keep the instructor in touch with real needs of the community. Through on-going young/adult farmer programs, the instructor locates resource people that can be used in the program. Cavey further points out that the use of school facilities are maximized by the adults, and that library facilities are also used fully.

Lawrence and Mallilo (1981) used a modified Delphi approach on a population of state supervisors of vocational agriculture, head teacher educators of major land grant institutions in each state, and
presidents of state vocational agriculture teacher associations within continental U.S. to determine which areas of vocational agriculture need improving. The respondents were asked to list five areas or aspects of vocational agriculture teaching, in their opinions, that needs greatest improvement. Their findings revealed that half of the items in the top twenty concerns pertained to SOE programs and adult/young farmer education. Adult farmer programs ranked third overall in need for improvement.

**Summary of Literature on Adult Programs in Vocational Agriculture**

After reviewing the literature on the importance of adult programs in vocational agriculture, the following conclusions are based on the review. They are:

1. Adult programs are an important part of vocational agriculture.
2. Adult instruction is one of the roles of the vocational agriculture teacher.
3. Conducting adult education is beneficial to the vocational agricultural program. The benefits include:
   a. higher support from the administration; and
   b. favorable public relations for the school, the program and the teacher.
SUMMARY OF REVIEW OF RELATED LITERATURE

After reviewing the literature in the area of teacher shortage, differences between land-grant and nonland-grant universities, attitudes of vocational agriculture teachers and the role of the vocational agriculture teacher, several conclusions were based on this literature. They are:

1. There is a shortage of vocational agriculture teachers.
2. One possible solution to this problem is involving nonland-grant universities in vocational agriculture teacher preparation.
3. There is a difference in the history and philosophy of land-grant and nonland-grant universities.
4. While the art of measuring teaching effectiveness is imperfect, there exist a body of knowledge which gives direction to its measurement. It appears effective teachers exhibit the following characteristics: (a) motivate students; (b) relate to students; (c) use questions while teaching; (d) use a variety of teaching methods; (d) are enthusiastic; (e) manage the classroom; (f) plan lessons; and (g) hold the attention of the class.
5. The job of the vocational agriculture teacher includes: (a) classroom instruction; (b) advising the Future Farmers of America (FFA) student organization; (c) conducting supervised occupational experience programs (SOEP); and (d) conducting adult and young farmer programs.
6. The attitude and morale of vocational agriculture teachers can influence their job performance.
CHAPTER 3

METHODOLOGY

OVERVIEW OF METHODS

From Craig's (1983) study of the demand and supply of vocational agriculture teachers in the United States, this researcher identified 10 states with land-grant and nonland-grant universities which offer agricultural education programs. There were 37 universities in these states that offer the programs. This researcher wrote each of the universities in the ten states and requested a list of the 1981-82 graduates who were teaching vocational agriculture. All 37 universities responded. From the lists obtained, a population of 300 was identified as still teaching. A proportionate random sample was drawn from the population. There were 134 teachers from nonland-grant universities, and 66 teachers from land-grant universities in the drawn sample. These teachers were asked to respond to an instrument which contained items pertaining to the quality of their vocational agriculture program and their attitudes toward the various components of the program.

Data were also collected from the administrators of each school where the teacher in this study taught. The administrators were asked to complete an instrument which focused on the teaching ability and job performance of the vocational agriculture teachers.
Data were also collected from the state supervisors of agricultural education in the ten states that were included in this study. The supervisors were asked to compare the quality of the teachers produced at land-grant and nonland-grant universities.

POPULATION AND SAMPLE

Population of Teachers

The population for this study were two groups of vocational agriculture teachers who received their undergraduate degrees from selected land-grant and nonland-grant universities in the United States during the 1981-82 school year. The subjects of this study were selected by the researcher such that at the time of data collection these vocational agriculture teachers would have had a maximum teaching experience of two years with the bachelors degree. It is not likely that these teachers would have earned the masters degree which would have influenced the results. Again, these second year teachers have not had many years of practical experience which might have influenced their teaching ability, job performance, and attitudes towards supervised occupational experience programs (SOEP), Future Farmers of America (FFA) student organization, and adult and/or young farmer programs of the total vocational agriculture.

It is assumed that the teachers' ability to conduct the supervised occupational experience programs (SOEP), operate the Future Farmers of America (FFA) student organization, conduct the adult and/or young farmer program and teach in the classroom within the
first two years of teaching should reflect more of their teacher preparation than after several years of practical experience.

According to Craig (1983), there were 1,368 vocational agriculture teachers certified during the 1981-82 school year. Since this study was primarily concerned with comparing the graduates from land-grant and nonland-grant universities, graduates were identified from the ten states that use both systems for preparing vocational agriculture teachers. These states are: Arkansas, California, Illinois, Kentucky, Louisiana, Missouri, Oklahoma, Tennessee, Texas, and Wisconsin.

In the ten states used in this study, Craig (1983) reported that 333 out of a total of 638 (52.4 percent) of the graduates entered teaching. The 1890 land-grant universities are not included in this study because less than ten percent of their students who graduated in the 1981-82 school year entered teaching. The researcher wrote each of the 37 universities in the ten states and asked for a list of the 1981-82 graduates who were teaching. The lists received by the researcher revealed that 300 graduates were still teaching vocational agriculture. From this list of 300, 201 were from nonland-grant universities while 99 were from land-grant universities.

Teacher Sampling

From a population of 300, a sample size of 168 is considered appropriate (Orlich, Clark, Fagan, and Rust, 1975; Krejcie and Morgan, 1978). The researcher after consultation with Dr. Koonce of the
Department of Experimental Statistics and his major professor decided to select a proportionate random sample of the population.

This procedure is necessary because the two groups of institutions have unequal representation in the population—a ratio of two nonland-grant teachers to one land-grant university teacher. A proportionate random sample of two-thirds of each group was drawn. As a result, 66 land-grant and 134 nonland-grant teachers were included in the proportionate random sample. Therefore a total of 200 vocational agriculture teachers were drawn.

School Administrators

The principal of each school where the vocational agriculture teacher taught was included in the study. Accordingly, there were 200 school administrators in the study.

State Level Supervisors

The researcher identified all the supervisors of agricultural education in the ten states in this study. The names and addresses of these supervisors were obtained from the Agriculture Teachers Directory, 1983 edition. Fifty-seven supervisors were identified.

INSTRUMENTATION

All data for this study were collected through the use of a mail questionnaire. Three instruments were used in collecting data. The design of each instrument will be discussed separately.
Instrument Development

Principals' Instrument

The principals/administrators instrument was developed by Moore (1980) at Purdue University specifically for the purpose of evaluating the teaching performance of vocational agriculture teachers. This twenty-one item instrument assesses:

(a) teacher's teaching ability/job performance (Eight items);
(b) knowledge of the subject matter (Six items);
(c) involvement in the total vocational program (Five items);
(d) overall knowledge of the subject matter and
(e) overall teaching ability and job performance.

The items in the instrument are based on teaching behaviors which have been found to correlate highly with effective teaching.

The administrators/principals are asked to rate each item on a scale of 1 to 99, with 1 being very low and 99 being very high. The score of 50 is average. (The instrument is located in Table 0).

In a nationwide study of vocational agriculture teachers this instrument had an established reliability coefficient of .96 (Moore, 1980). In a study conducted by Grady (1984) the instrument yielded a reliability of .97. In this study the instrument had a standardized Cronbach's alpha reliability coefficient of .96.

This instrument was used to measure the dependent variable in objective I.
Teachers' Instrument

This instrument was used to measure the dependent variable in objectives 2 and 3. It was developed by the researcher to:

(a) Gather demographic information of the respondents.

(b) Gather information on the quality of supervised occupational experience programs (SOEP), Future Farmers of America (FFA) student organization, and adult and/or young farmer components of the classes that the teacher conducted. This was used with objective 2.

(c) Measure the attitudes of the vocational agriculture teachers toward supervised occupational experience programs (SOEP), the Future Farmers of America (FFA) student organization, and adult and/or young farmer components of the vocational agriculture classes that the teachers conducted. This was used with objective 3.

The instrument was developed after a review of related literature and field-tested with a group of vocational agriculture teachers in Indiana. It was modified and mailed to the sample of vocational agriculture teachers. The respondents were asked to fill in information concerning their FFA, SOEP, and adult programs. Examples of questions asked were:

1. What percentage of your students are members of the FFA Chapter?

2. How many proficiency awards were awarded at the local level in the last two years?
3. In a year, how many total visits will you make to students observing their SOEP?
4. Are students required to keep record books on their SOEP?
5. Do you have young and/or adult farmer classes in your vocational agriculture programs?
6. On the average, how many student/farmers attend each adult class meeting?

The reader is referred to Appendix N to see the complete instrument.

Additionally, the respondents (vo-ag teachers) were asked to rate their attitudes towards SOEP, FFA and adult program components of vocational agriculture. There were 10 items in each component for a total of 30 attitude items. A Likert-type scale was used with 1 being strongly disagree, 6 being undecided and 11 being strongly agree. Several negative items were included in each subscale. Scoring of the negative items was reversed for data analysis.

The attitude section of the instrument was considered reliable with a Cronbach's alpha reliability coefficient of .85.

**Supervisors' Instrument**

This instrument was developed by the researcher for the purpose of determining the perception of state supervisors of agricultural education regarding the quality of the preparation received by vocational agriculture teachers from land-grant and nonland-grant universities. This instrument addressed the fourth objective of this study.
This instrument consisted of two sections. Section A asked for demographic information from the supervisors (Five items). Section B consisted of twenty-two items which measured teacher education programs in land-grant and nonland-grant universities in relation to FFA, SOEP, facilities, faculty, and students. For each of the twenty-two items the supervisors were requested to respond to each item using the following scale:

Nonland-grant universities much more than land-grant universities

Nonland-grant universities somewhat better than land-grant universities

No difference between universities

Land-grant universities somewhat better than nonland-grant universities

Land-grant universities much more than nonland-grant universities

No score or scaling was on the instrument. The researcher, for data coding and statistical purposes, assigned a value of 1 to the statement nonland-grant universities much more than land-grant universities, 2 to nonland-grant universities somewhat better than land-grant universities, 3 to no difference between universities, 4 to land-grant universities somewhat better than nonland-grant universities and 5 to land-grant universities much more than nonland-grant universities. In interpreting the data a score of less than 3 indicated the nonland-grant university was rated higher while a score above 3 indicated the land-grant university was rated higher.

See Appendix P for the complete instrument.
This instrument was field-tested with a group of supervisors from Florida, Indiana, Iowa, Kansas, Minnesota, New Mexico, North Carolina, Oregon, and West Virginia.

Even though these states do not have both systems of teacher education, their proximity to the ten states used in this study, increased the chances that they would have worked with teachers prepared by land-grant and nonland-grant universities.

The instrument was then modified and mailed to the state supervisors of agricultural education in the ten states used in this study.

This instrument was considered reliable with a Cronbach's alpha reliability coefficient of .93.

DATA COLLECTION

Principals' Data

Data were collected from the principals or administrators through the use of a mailed questionnaire. The initial mailing was dispatched on April 6, 1984. The first mailing yielded 118 returns which is a 59 percent return rate. Two follow-up letters and new instruments were sent to non-respondents.

The first follow-up mailing was dispatched on April 28, 1984. Twenty-seven principals responded. The second and final follow-up mailing was on May 20, 1984. Twenty principals responded. This increased the return rate to 87.5 percent. Ten returned instruments were deemed unusable by the researcher either because the principals
refused to respond or they were not property completed. Therefore the usable response rate was 82.5%. This return rate was considered adequate (Babie, 1973).

Teachers' Data

Data were collected from teachers by mailed questionnaire. The initial mailing of questionnaire and cover letters were sent on March 29, 1984. Fifty-seven teachers responded. This yielded a 28.5 percent return rate. Two follow-up letters and new instruments were sent to non-respondents.

The first follow-up letter and instrument were mailed April 23, 1984. Forty-nine teachers responded.

The second and final follow-up letter and questionnaire were dispatched on May 20, 1984. Forty-five vocational agriculture teachers responded. Thus a total of 151 teachers responded for a 75.5 percent return rate. A random sample of ten teachers were drawn from non-respondents and called over the telephone to determine if there was a difference between non-respondents and respondents. By comparing their responses with the respondents on selected items on the instrument it was decided there were no differences. Further follow-up was deemed not necessary by the researcher.

A total of six questionnaires were deemed unusable by the researcher because the respondents did not fully complete them. This yielded a usable response rate of 72.5 percent.
Supervisors' Data

Data were collected by mailed questionnaire. The initial mailing of cover letters and instruments were dispatched on March 29, 1984. Forty-five supervisors responded. This represented a 75 percent return rate.

The first follow-up letters with new instruments were dispatched on April 23, 1984. Five supervisors responded.

The final and last follow-up letters and new instruments were mailed on May 20, 1984. Three supervisors responded. The overall return rate was 92.98 percent. A total of 4 returned instruments were deemed not usable by the researcher because they were improperly completed or not completed at all. The total usable response rate was 86 percent.

STATISTICAL ANALYSIS

Frequency counts, means and standard deviation were used in analyzing demographic data.

Hypothesis 1. An independent sample t-test of statistical difference was used to test if there was a difference in the teaching ability and job performance of teachers prepared at the two types of institutions as perceived by the school administrator.

Hypothesis 2. A formula for arriving at program quality score was developed by the researcher in conjunction with the advisory committee to test this hypothesis. In addition, the formula was sent to ten prominent agricultural education professionals in the nation for
their comments. The formula was modified by the researcher after this input. Since the formulas are somewhat complex they are presented in Chapter 4 along with the findings so the reader can more easily understand how the formulas work.

An independent sample t-test of statistical difference was performed on the scores derived by the formula to determine if there were differences in program quality according to type of institution from which the teacher graduated.

**Hypothesis 3.** An independent sample t-test of statistical difference was used to determine if there were differences in the attitude scores of the teachers according to type of institution from which they graduated.

**Hypothesis 4.** A one-sample t-test was used to test the ratings of the supervisors.

After a statistically significant t-value was found in the supervisors' ratings of teacher preparation at land-grant and nonland-grant universities, a stepwise multiple regression analysis was performed on the supervisors' demographic data in an attempt to explain why there was a difference.

The .05 level of significance was used in all statistical analysis. All statistical procedures were selected from the subprograms of the Statistical Package for Social Sciences-SPSS (Nie, Hull, Jenkins, Steinberenner, and Bent, 1975).
Research Design

The design of this study can best be described as an ex post facto design. In ex post facto designs research data are collected after the fact. That is, after the treatment has occurred. In this study, the vocational agriculture teachers had already received their training at land-grant and nonland-grant universities. Kerlinger (1973) defined ex post facto research as:

Systematic empirical inquiry in which the scientist does not have direct control of independent variables because their manifestations have already occurred or because they are inherently not manipulable. Inferences about relations among variables are made without direct intervention, from concomitant variation of independent and dependent variables (p. 379).

The independent variable in this study is the type of institution from which the vocational agriculture teacher graduated. One level of the independent variable is land-grant universities while the second level of the independent variable is nonland-grant universities.

Four dependent variables were identified. The four dependent variables used were:

1. The evaluation of the vocational agriculture teachers by the school administrators where the teachers taught.
2. Quality of the program conducted by the vocational agriculture teachers.
3. Attitudes of the teachers.
4. The perceptions of the state supervisors of agricultural education.
CHAPTER 4

PRESENTATION OF DATA

The purpose of this chapter is to present data pertaining to the teaching ability, job performance, and attitudes of vocational agriculture teachers who received their undergraduate degrees from selected land-grant and nonland-grant universities during the 1981-82 school year.

Questionnaires were sent to 200 vocational agriculture teachers, 200 principals/administrators of the school where the teachers taught, and 57 state supervisors of agricultural education in the ten states used in this study.

Specific objectives in this study were:

1. To determine if there were differences in the teaching ability and job performance of vocational agriculture teachers according to the type of institution from which they graduated as perceived by administrators of the schools where the teachers were employed.

2. To determine if there were differences in the quality of Future Farmers of America (FFA), Supervised Occupational Experience Programs (SOEP), and the Young and/or Adult programs conducted by the vocational agriculture teachers according to the type of institution from which the teachers graduated.
3. To determine if there were differences in the attitudes of the vocational agriculture teachers concerning the Future Farmers of America (FFA), the Supervised Occupational Experience Programs (SOEP), and the Adult and/or Young Farmer programs according to type of institution from which the teachers graduated.

4. To determine the opinions of state supervisors of agricultural education concerning the quality of preparation of teachers at nonland-grant and land-grant universities.

Data were collected from 151 vocational agriculture teachers, 165 principals, and 53 states supervisors of agricultural education.

Frequency distribution of demographic data, t-tests, multiple regression analysis and quality scores developed by the researcher were used in data analysis.

Demographic data are presented according to objectives. Each objective and hypotheses is discussed separately.

Data presented in this chapter will form the bases for the conclusions, and recommendations resulting from this study.

**CHARACTERISTICS OF ADMINISTRATORS**

High school administrators were asked to rate the teaching ability and job performance of the vocational agriculture teachers. One hundred and sixty five of the 200 administrators responded. Forty-eight administrators had between one and five years experience as administrators. This represented 29.09% of the total number of
administrators who responded. Forty-eight administrators indicated that they had between six and ten years experience as administrators. This accounted for another 20.09% of the total number of administrators who responded. Sixty-nine (41.82%) of the administrators reported that they had eleven or more years experience as administrators. The data are reported in Table 1.

Most administrators (91%) had eleven or more total years of experience as educators. Only 9% indicated that they had less than eleven years experience as educators.

Most administrators (92.7%) held the position of principal. The remainder of the respondents with the exception of one were vocational supervisors.

Most of the administrators (85.5%) reported they observed the vocational agriculture teacher more than twice per year. Only 12.1% of the vocational agriculture teachers were observed once or twice. Four administrators (2.4%) did not observe the vocational agriculture teachers under them.

Objective One - To determine if there were differences in the teaching ability and job performance of vocational agriculture teachers according to the type of institution from which they graduated as perceived by administrators of the schools where the teachers were employed.

Teaching ability and job performance were measured by the ratings of the vocational agriculture teachers' teaching ability and job performance as perceived by the administrators using the administrators' instrument (Appendix 0).
Table 1

Characteristics of Administrators

<table>
<thead>
<tr>
<th>Characteristics</th>
<th>Number of Administrators</th>
<th>Percent (Total = 100)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of years experience as administrators:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1 - 5</td>
<td>48</td>
<td>29.09</td>
</tr>
<tr>
<td>6 - 10</td>
<td>48</td>
<td>29.09</td>
</tr>
<tr>
<td>11 or over</td>
<td>69</td>
<td>41.82</td>
</tr>
<tr>
<td>Number of years experience as an educator:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1 - 5</td>
<td>2</td>
<td>1.2</td>
</tr>
<tr>
<td>6 - 10</td>
<td>13</td>
<td>7.9</td>
</tr>
<tr>
<td>11 or over</td>
<td>150</td>
<td>90.9</td>
</tr>
<tr>
<td>Title of position:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Principal</td>
<td>153</td>
<td>92.7</td>
</tr>
<tr>
<td>Vocational Supervisor</td>
<td>11</td>
<td>6.7</td>
</tr>
<tr>
<td>No Response</td>
<td>1</td>
<td>0.6</td>
</tr>
<tr>
<td>Number of times Vo-Ag Teacher was observed by administrator:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Once or twice</td>
<td>20</td>
<td>12.1</td>
</tr>
<tr>
<td>More than 2 times</td>
<td>141</td>
<td>85.5</td>
</tr>
<tr>
<td>None</td>
<td>4</td>
<td>2.4</td>
</tr>
</tbody>
</table>
Table 2 contains the administrators ratings of the vocational agriculture teachers according to the type of institution from which the teachers graduated. Teachers from both the land-grant and nonland-grant universities were rated above average by the administrators. The mean rating of all teachers by the administrators was 68.85. The mean rating of teachers prepared at land-grant universities was 68.83 while the mean ratings of teachers prepared at nonland-grant universities by administrators was 69.10. The 22 items on the instrument were summed to give a total teaching ability score. The land-grant teachers scored 1229.52 and the nonland-grant teachers scored 1226.84.

The highest mean rating of teachers prepared at land-grant universities was 82.31 (Teacher work with FFA). One the same item (Teacher work with FFA), the administrators rating of the teachers prepared at nonland-grant universities was 83.26 which was also the highest rating. The lowest mean rating of the teachers prepared at land-grant and nonland-grant universities was on the item on the instrument which measured teacher participation in vocational instruction for adults. The mean rating of the teachers prepared at nonland-grant universities was 72.74 while the mean rating of the teachers prepared at land-grant universities was 71.93.

The vocational agriculture teachers who were prepared at nonland-grant universities were rated lowest (score less than 70) on student motivation, use of questions while teaching, uses a variety of teaching methods, classroom management, skills in horticulture, and adult education.
Table 2
Administrator's Ratings of the Vo-Ag Teachers According to Type of Institution From Which the Teacher Graduated

<table>
<thead>
<tr>
<th>Item</th>
<th>Mean Rating According to Type of Institution</th>
<th>Mean</th>
<th>SD</th>
<th>Mean</th>
<th>SD</th>
<th>Mean</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Teacher ability to motivate students.</td>
<td>Land-Grant University (N=56)</td>
<td>65.17</td>
<td>18.99</td>
<td>69.86</td>
<td>17.60</td>
<td>68.32</td>
<td>18.15</td>
</tr>
<tr>
<td>2. Teacher ability to relate to students.</td>
<td>Non-Grant University (N=111)</td>
<td>68.66</td>
<td>19.09</td>
<td>72.29</td>
<td>17.76</td>
<td>71.10</td>
<td>16.23</td>
</tr>
<tr>
<td>3. Teacher use of questions while teaching.</td>
<td>Overall (N=165)</td>
<td>68.32</td>
<td>18.15</td>
<td>68.32</td>
<td>18.15</td>
<td>68.32</td>
<td>18.15</td>
</tr>
<tr>
<td>4. Teacher use of variety of teaching methods.</td>
<td></td>
<td>69.33</td>
<td>13.42</td>
<td>69.46</td>
<td>16.38</td>
<td>69.42</td>
<td>15.46</td>
</tr>
<tr>
<td>5. Teacher enthusiasm.</td>
<td></td>
<td>68.00</td>
<td>16.76</td>
<td>68.00</td>
<td>17.10</td>
<td>68.00</td>
<td>16.94</td>
</tr>
<tr>
<td>6. Teacher ability to plan lessons.</td>
<td></td>
<td>74.26</td>
<td>16.36</td>
<td>77.31</td>
<td>17.11</td>
<td>76.31</td>
<td>16.88</td>
</tr>
<tr>
<td>7. Teacher ability to hold attention of class.</td>
<td></td>
<td>70.42</td>
<td>16.55</td>
<td>68.58</td>
<td>19.25</td>
<td>69.18</td>
<td>18.38</td>
</tr>
<tr>
<td>8. Teacher classroom control.</td>
<td></td>
<td>68.67</td>
<td>19.16</td>
<td>70.06</td>
<td>17.05</td>
<td>69.60</td>
<td>17.73</td>
</tr>
<tr>
<td>9. Teacher participation in professional activities.</td>
<td></td>
<td>70.13</td>
<td>21.30</td>
<td>72.20</td>
<td>19.21</td>
<td>71.52</td>
<td>19.88</td>
</tr>
<tr>
<td>10. Teacher work with FFA.</td>
<td></td>
<td>74.55</td>
<td>17.40</td>
<td>77.41</td>
<td>18.20</td>
<td>76.50</td>
<td>17.97</td>
</tr>
<tr>
<td>11. Teacher supervision of student farm projects or job placement.</td>
<td></td>
<td>82.31</td>
<td>14.63</td>
<td>83.73</td>
<td>12.90</td>
<td>83.61</td>
<td>14.26</td>
</tr>
<tr>
<td>12. Teacher management of agricultural laboratory.</td>
<td></td>
<td>75.90</td>
<td>14.83</td>
<td>75.96</td>
<td>17.31</td>
<td>75.96</td>
<td>16.50</td>
</tr>
<tr>
<td>13. Teacher knowledge and skills in horticulture.</td>
<td></td>
<td>69.64</td>
<td>18.56</td>
<td>71.60</td>
<td>19.82</td>
<td>70.67</td>
<td>19.39</td>
</tr>
<tr>
<td>14. Teacher knowledge and skills in agricultural mechanics.</td>
<td></td>
<td>68.02</td>
<td>16.34</td>
<td>70.63</td>
<td>16.92</td>
<td>69.81</td>
<td>16.73</td>
</tr>
<tr>
<td>15. Teacher knowledge and skills in animal science.</td>
<td></td>
<td>74.74</td>
<td>15.40</td>
<td>70.85</td>
<td>17.17</td>
<td>72.09</td>
<td>16.68</td>
</tr>
<tr>
<td>16. Teacher knowledge and skills in crop production.</td>
<td></td>
<td>77.82</td>
<td>13.57</td>
<td>79.30</td>
<td>12.38</td>
<td>78.59</td>
<td>12.78</td>
</tr>
<tr>
<td>17. Teacher knowledge and skills in resource conservation.</td>
<td></td>
<td>75.26</td>
<td>14.74</td>
<td>74.98</td>
<td>13.68</td>
<td>75.07</td>
<td>13.96</td>
</tr>
<tr>
<td>18. Teacher knowledge and skills in farm management.</td>
<td></td>
<td>73.89</td>
<td>13.91</td>
<td>72.56</td>
<td>13.28</td>
<td>72.99</td>
<td>13.45</td>
</tr>
<tr>
<td>19. Teacher participation in vocational instruction for adults.</td>
<td></td>
<td>76.67</td>
<td>13.80</td>
<td>75.73</td>
<td>13.90</td>
<td>76.03</td>
<td>13.83</td>
</tr>
<tr>
<td>Overall mean rating</td>
<td></td>
<td>71.93</td>
<td>**</td>
<td>72.74</td>
<td>**</td>
<td>72.50</td>
<td>**</td>
</tr>
<tr>
<td>Total Teaching Ability Score**</td>
<td></td>
<td>1219.52</td>
<td>252.37</td>
<td>1226.86</td>
<td>254.21</td>
<td>--</td>
<td>**</td>
</tr>
</tbody>
</table>

* Rating scale: 1 = very poor  50 = average  99 = excellent
** t = 0.89  df = 163  p = .376
The vocational agriculture teachers prepared at land-grant universities were rated lowest (score less than 70) on student motivation, ability to relate to students, use of questions while teaching, teachers ability to hold attention of class, management of agricultural laboratory, skills in horticulture and adult education.

Both groups of teachers were rated higher on teacher enthusiasm, work with FFA, SOEP, agricultural mechanics, animal science and farm management. They were rated 70 or higher on these items.

HYPOTHESIS ONE - Administrators of the schools where the vocational teachers were employed would perceive the teaching ability and job performance of teachers who were trained at land-grant universities superior to those teachers prepared at nonland-grant universities.

An independent t-test was used to determine the difference in teaching ability and job performance of the vocational agriculture teachers according to the type of institution from which they graduated. No significant difference was found, t(163) = .89, p = .376. Therefore, the research hypothesis was not supported.

CHARACTERISTICS OF VOCATIONAL AGRICULTURE TEACHERS

One hundred and forty five of the 200 teachers identified for this study responded. Most of the vocational agriculture teachers (85.5%) had between two and three years teaching experience. Only 6.9% of the vocational agriculture teachers had more than three years teaching experience. Eleven (7.5%) of the teachers had one year teaching experience. This information is contained in Table 3.
Table 3

Characteristics of Vocational Agriculture Teachers

<table>
<thead>
<tr>
<th>Characteristics</th>
<th>Number of Teachers</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Teaching Experience in years:</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>11</td>
<td>7.6</td>
</tr>
<tr>
<td>2</td>
<td>102</td>
<td>70.3</td>
</tr>
<tr>
<td>3</td>
<td>22</td>
<td>15.2</td>
</tr>
<tr>
<td>4</td>
<td>6</td>
<td>4.1</td>
</tr>
<tr>
<td>6</td>
<td>4</td>
<td>2.8</td>
</tr>
<tr>
<td><strong>Educational Level:</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bachelors</td>
<td>121</td>
<td>83.4</td>
</tr>
<tr>
<td>Masters</td>
<td>17</td>
<td>11.7</td>
</tr>
<tr>
<td>Masters + 30</td>
<td>5</td>
<td>3.4</td>
</tr>
<tr>
<td>Education Specialist</td>
<td>1</td>
<td>0.7</td>
</tr>
<tr>
<td>No Response</td>
<td>1</td>
<td>0.7</td>
</tr>
<tr>
<td><strong>Type of University:</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Land-Grant</td>
<td>43</td>
<td>29.7</td>
</tr>
<tr>
<td>Nonland-Grant</td>
<td>102</td>
<td>70.3</td>
</tr>
<tr>
<td><strong>Number of teachers in department:</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>73</td>
<td>50.3</td>
</tr>
<tr>
<td>2</td>
<td>45</td>
<td>31.0</td>
</tr>
<tr>
<td>3</td>
<td>18</td>
<td>12.4</td>
</tr>
<tr>
<td>4</td>
<td>6</td>
<td>4.1</td>
</tr>
<tr>
<td>5</td>
<td>2</td>
<td>1.4</td>
</tr>
<tr>
<td>6</td>
<td>1</td>
<td>0.7</td>
</tr>
<tr>
<td><strong>Length of contract in months:</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>9</td>
<td>4</td>
<td>2.8</td>
</tr>
<tr>
<td>9.5</td>
<td>7</td>
<td>4.8</td>
</tr>
<tr>
<td>10</td>
<td>12</td>
<td>8.3</td>
</tr>
<tr>
<td>10.5</td>
<td>10</td>
<td>6.9</td>
</tr>
<tr>
<td>12</td>
<td>97</td>
<td>66.9</td>
</tr>
<tr>
<td>No Response</td>
<td>7</td>
<td>4.8</td>
</tr>
<tr>
<td><strong>Budget for travel in dollars:</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>&lt; 100</td>
<td>7</td>
<td>4.8</td>
</tr>
<tr>
<td>101 - 500</td>
<td>27</td>
<td>18.6</td>
</tr>
<tr>
<td>501 - 1000</td>
<td>39</td>
<td>26.9</td>
</tr>
<tr>
<td>1001 or over</td>
<td>66</td>
<td>45.5</td>
</tr>
<tr>
<td>No Response</td>
<td>6</td>
<td>4.1</td>
</tr>
</tbody>
</table>
One hundred and twenty-one (83.4%) of the teachers had a bachelors degree. Only 23 (15.8%) had more than a bachelors degree. One teacher (0.7%) did not indicate degree. This information is contained in Table 3.

Forty-three teachers (29.7%) received their degrees from land-grant universities. One hundred two teacher (70.3%) received their degrees from nonland-grant universities.

The number of teachers in the departments where the vocational agriculture teachers taught ranged from one to six. One hundred and eighteen (81.3%) teachers were in one or two teacher departments. Only 12.4% had three teachers in the vocational agriculture department. Nine (6.2%) of the teachers reported there were more than three teachers in the vocational agriculture department.

More than half the teachers (66.9%) had twelve-month contracts. Only 2.8% reported that they had nine-month contracts. Twelve (5.5%) teachers had ten-month contracts, while 6.9% had ten-and-half month contracts. Seven teachers (4.8%) did not respond to the item.

Sixty-six teachers (45.5%) had budgets of more than $1000 for travel. Another thirty nine (26.9%) reported that their budgets ranged from $501 to $1000. Twenty-seven teachers (18.6%) had travel budgets of $101-500. Only 7 teachers had (4.8%) budgets less than $100 for travel. Six teachers (4.1%) did not give information on their budget for travels.
Objective Two - To Determine if there were Differences in the Quality of Future Farmers of America (FFA), Supervised Occupational Experience Programs (SOEP), and the Adult and/or Young Farmer Programs Conducted by the Vocational Agriculture Teachers according to the type of Institution from which they teachers graduated.

Future Farmers of America (FFA)

The teachers were asked to provide information about the FFA activities of their chapters. This information is presented in Table 4. Teachers who were prepared at land-grant universities reported that 92.19% of their students were FFA members while the teachers prepared at nonland-grant universities reported 84.67% of their students were members of the FFA. Both groups of teachers reported that their FFA chapters met about 10 times a year. Most of the teachers (95.35%) prepared at land-grant universities reported that their chapters used the official opening and closing ceremonies at FFA meetings. About 89.22% of the nonland-grant university prepared teachers reported that their chapters used the official opening and closing ceremonies at FFA meetings.

Eighty percent of both groups of teachers reported that their FFA officers recite from memory their parts in the opening and closing of FFA meetings. Over 90% of both groups of teachers reported that their chapters have annual parent-member banquets. The two groups of teachers reported that over 90% of the chapters used committees to carry out program of activities.
<table>
<thead>
<tr>
<th>Variables</th>
<th>Land-Grant Universities</th>
<th>Non-Land-Grant Universities</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. What percentage of your students are members of the FFA chapter?</td>
<td>93.19</td>
<td>84.69</td>
</tr>
<tr>
<td>2. During the last school year (including the following summer), how many FFA meetings were held?</td>
<td>9.95</td>
<td>10.54</td>
</tr>
<tr>
<td>3. Are the official opening and closing ceremonies used at FFA meetings?</td>
<td>95.35%</td>
<td>90.92%</td>
</tr>
<tr>
<td>4. Do the FFA officers recite from memory their parts in the opening and closing meeting?</td>
<td>81.40%</td>
<td>80.93%</td>
</tr>
<tr>
<td>5. Does the chapter have a written program of activities?</td>
<td>93.02%</td>
<td>87.25%</td>
</tr>
<tr>
<td>6. At your FFA meetings, do you generally have guest speakers or formal programs?</td>
<td>39.51%</td>
<td>39.21%</td>
</tr>
<tr>
<td>7. If your answer to (item 7) is yes, how many did you have last year?</td>
<td>6.16</td>
<td>4.95</td>
</tr>
<tr>
<td>8. Were FFA calendars used to promote the chapter in the community?</td>
<td>23.26%</td>
<td>23.57%</td>
</tr>
<tr>
<td>9. Does your chapter have an annual parent-member banquet?</td>
<td>95.35%</td>
<td>90.20%</td>
</tr>
<tr>
<td>10. Does the chapter use the official FFA secretaries book?</td>
<td>83.27%</td>
<td>72.35%</td>
</tr>
<tr>
<td>11. Does the chapter use the official FFA Treasurers book?</td>
<td>72.10%</td>
<td>68.63%</td>
</tr>
<tr>
<td>12. Did your chapter submit applications for proficiency awards above the chapter level?</td>
<td>51.16%</td>
<td>53.80%</td>
</tr>
<tr>
<td>13. How many (if yes to item 13)?</td>
<td>5.77</td>
<td>5.75</td>
</tr>
<tr>
<td>14. If yes to item 13, how many placed 3rd or higher at the district level?</td>
<td>4.90</td>
<td>3.05</td>
</tr>
<tr>
<td>15. Were committees developed to carry out the program of activities?</td>
<td>93.35%</td>
<td>91.18%</td>
</tr>
<tr>
<td>16. How many judging contest teams qualified for the state FFA judging contest from your chapter?</td>
<td>3.10</td>
<td>3.43</td>
</tr>
<tr>
<td>17. How many students from your chapter applied for the State Farmer degree last year?</td>
<td>4.15</td>
<td>3.70</td>
</tr>
<tr>
<td>18. How many students from your chapter who applied for the State Farmer degree last year received it?</td>
<td>3.58</td>
<td>3.96</td>
</tr>
<tr>
<td>19. On the average, what percentage of your members participated in fairs and livestock shows at the local level?</td>
<td>39.50</td>
<td>42.70</td>
</tr>
<tr>
<td>At the regional or state level?</td>
<td>16.71</td>
<td>19.89</td>
</tr>
<tr>
<td>20. How many proficiency awards were awarded at the local level the last two years?</td>
<td>17.67/2 = 8.84</td>
<td>10.59</td>
</tr>
<tr>
<td>21. In which of the following programs did your chapter participate?</td>
<td><strong>Note:</strong> These items require &quot;yes&quot; or &quot;no&quot; answers. The number is the percentage of teachers who responded yes.</td>
<td><strong>Note:</strong> These items require &quot;yes&quot; or &quot;no&quot; answers. The number is the percentage of teachers who responded yes.</td>
</tr>
<tr>
<td><strong>Building Our America Community Activities.</strong></td>
<td>46.51%</td>
<td>44.12%</td>
</tr>
<tr>
<td><strong>Food for America Activities.</strong></td>
<td>34.88%</td>
<td>26.31%</td>
</tr>
<tr>
<td><strong>National FFA Week.</strong></td>
<td>74.42%</td>
<td>75.09%</td>
</tr>
</tbody>
</table>

* The items marked with an asterisk require "yes" or "no" answers. The number is the percentage of teachers who responded yes.
About 39% of the chapters from both groups of teachers reported that their students have guest speakers in FFA meetings. The mean number of speakers at FFA meetings was 6.14 for chapters organized by land-grant university prepared teacher while the mean number of speakers for the chapters organized by teachers produced at nonland-grant universities was 4.95. Both groups of teachers reported a mean of about six on applications for proficiency awards above the chapter level.

The mean number of student applicants for state farmer degree for FFA chapters organized by land-grant universities was 4.15 while the mean for the chapter organized by nonland-grant university prepared teacher was 3.70. Both groups of teachers reported that about 3 of the students who applied for the state farmer degree received it.

The mean number of proficiency awards given at the local level in chapters organized by land-grant university prepared teachers was 8.84 while the mean for chapters organized by nonland-grant university prepared teachers was 8.45 per year. Both group of teachers reported that their students participated in national FFA Week activities (above 70%) but were less active in Building Our America Community activities and Food for America activities (less than 50% in each case).

**FFA Quality Score**

The quality score of the FFA was calculated by using the data in Table 4 and the formula in Figure 1. In using the formula, the teachers were given points based on the percentage of students
<table>
<thead>
<tr>
<th>Variables</th>
<th>Points Assigned</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. What percentage of your students are members of the FFA chapter?</td>
<td>% members x .1</td>
</tr>
<tr>
<td>2. During the last school year (including the following summer), how many FFA meetings were held?</td>
<td>Number of meetings x .5</td>
</tr>
<tr>
<td>3. Are the official opening and closing ceremonies used at FFA meetings?</td>
<td>If Yes 3</td>
</tr>
<tr>
<td>4. Does the FFA officers recite from memory their parts in the opening and closing meeting?</td>
<td>If Yes 3</td>
</tr>
<tr>
<td>5. Does the chapter have a written program of activities?</td>
<td>If Yes 3</td>
</tr>
<tr>
<td>6. At your FFA meetings, do you generally have guest speakers or formal programs?</td>
<td>If Yes 3</td>
</tr>
<tr>
<td>7. If your answer to (item 7) is yes, how many did you have last year (specify)?</td>
<td>Number of speakers x .5</td>
</tr>
<tr>
<td>8. Were FFA calendars used to promote the chapter in the community?</td>
<td>If Yes 3</td>
</tr>
<tr>
<td>9. Does the chapter have an annual parent-member banquet?</td>
<td>If Yes 4</td>
</tr>
<tr>
<td>10. Does the chapter use the official FFA secretaries book?</td>
<td>If Yes 3</td>
</tr>
<tr>
<td>11. Does the chapter use the official FFA treasurers book?</td>
<td>If Yes 3</td>
</tr>
<tr>
<td>12. Did your chapter submit applications for proficiency awards above the chapter level?</td>
<td>If Yes 3</td>
</tr>
<tr>
<td>13. If yes to item 13, how many placed 3rd or higher at the district level?</td>
<td>Number of placed x 1</td>
</tr>
<tr>
<td>14. Were committees developed to carry out the program of activities?</td>
<td>If Yes 3</td>
</tr>
<tr>
<td>15. How many judging contest teams qualified for the state FFA judging contest from your chapter?</td>
<td>Number of Teams x 1</td>
</tr>
<tr>
<td>16. How many students from your chapter applied for the State Farmer degree last year?</td>
<td>Number of Students x 1</td>
</tr>
<tr>
<td>17. How many students from your chapter who applied for the State Farmer degree last year received it?</td>
<td>Number of Recipients x 1</td>
</tr>
<tr>
<td>18. On the average, what percentage of your members participated in fairs and livestock shows at the local level?</td>
<td>% of Participants x .1</td>
</tr>
<tr>
<td>At the regional or state level?</td>
<td>% of Participants x .1</td>
</tr>
<tr>
<td>19. How many proficiency awards were awarded at the local level the last two years?</td>
<td>Number of awards x .5</td>
</tr>
</tbody>
</table>

21. In which of the following programs did your chapter participate?  
   (1) Building Our America Communities Activities                    | If checked 5                          
   (2) Food For America Activities                                     | If checked 5                          
   (3) National FFA Week                                                | If checked 5                          

Figure 1. Quality score of the future farmers of America (FFA) component of the teachers vocational agriculture program.
enrolled in the classes who were FFA members. The percentage was then multiplied by .1. Next, the number of FFA meetings per year was multiplied by a factor of .5. Three points were awarded if they used official opening and closing ceremonies at FFA meetings and three points were given if the FFA officers recited from memory their parts in the official opening and closing ceremonies. Next, three points were awarded if there was a program of activities. Three points were awarded if they had guest speakers in their FFA meetings. The number of guest speakers was multiplied by factor of .5.

The teachers were given three points if their FFA chapters used FFA calendars. The teachers were given four points if they had a parent-member banquet. The teachers were also given three points if they used FFA secretary's and treasurers book, and three points if they submitted proficiency awards applications above the chapter level. The number of applications submitted and the number of applications which placed 3rd or higher at the district level were multiplied by a factor of 1.0. If committees were developed to carry out program of activities three points were given. The number of teams qualified to participate in the state FFA judging contests from the chapter was multiplied by a factor of 1.0. The number of students from the teachers' chapter who applied for the state farmer degree was multiplied by a factor of 1.0. The number of students who received the state farmer degree was multiplied by a factor of 1.0.

The percentage of members from the FFA chapter who participated in fairs and livestock shows at the local level was multiplied by a factor of .1. The percentage of members from the FFA chapter who
participated in fairs, and livestock shows at the district/state level was multiplied by a factor of .1.

The teachers were given five points if their chapters participated in the Building Our American Communities (BOAC) program. The teachers were also given five points if their chapter participated in Food for America activities and five points if they participated in National FFA week.

All of the above calculations were made and then added together to arrive at a total FFA quality score. The researcher projected that a high quality FFA program would score 100 points. It should be noted that it is possible to score more than 100 points.

A chapter that had 100% student membership in FFA, held twelve meetings a year; used the opening and closing ceremonies; had officers recite their parts in official opening and closing; had a program of activities; had six guest speakers; used FFA calendars to promote the chapter; had a parent-member banquet; used FFA secretaries and treasurers books; submitted 3 applications for proficiency awards and had three of the awards place 3rd or higher at the district level; formed committees to carry on activities; had three judging teams qualify for state contest; had three state farmer degree applicants who received the degree; had 50% participation in local fairs; had 10% participation in state fairs; awarded 28 local proficiency awards; and participated in BOAC, National FFA week and Food for American activities would score 100 points.
The FFA quality score of the chapters organized by teachers prepared at land-grant universities was 74.33 and 72.33 for chapters organized by the teachers from nonland-grant universities.

**Supervised Occupational Experience Programs (SOEP)**

The information in Table 5 relates to SOEP conducted by teachers prepared at land-grant and nonland-grant universities. Fifty-eight percent of the students enrolled in the classes taught by teachers prepared at land-grant universities had one "project" or one type of SOEP while 57% of the students enrolled in the classes taught by teachers produced at land-grant universities had one "project" or one type of SOEP. About 21% of the students taught by teachers prepared at land-grant universities and 20.22% of the students taught by the teachers prepared at nonland-grant universities had two or more projects. The teachers prepared at land-grant universities reported that 19.60% of their students had no SOEPs while 21.78% of the students taught by teachers prepared at nonland-grant universities had no SOEPs.

Over 40% of the students enrolled in the classes taught by both groups of teachers were visited more than two times during the year. Twenty-four percent of the students enrolled in classes taught by land-grant university prepared teachers were not visited, while 21% of the students enrolled in classes taught by teachers prepared at nonland-grant universities were not visited during the year.

Most teachers (83%) prepared at land-grant universities reported that they required their students to keep records on their
Table 5
The Quality of Supervised Occupational Experience Programs (SOEP) According to The Type Of Institution From Which The Teachers Graduated

<table>
<thead>
<tr>
<th>Variable</th>
<th>Land-Grant Universities</th>
<th></th>
<th>Non-Land-Grant Universities</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>N=43</td>
<td>Mean</td>
<td>S.D.</td>
<td>N=102</td>
</tr>
<tr>
<td>1. Approximately, what percentage of the students in your class have one &quot;project&quot; or one type of SOEP?</td>
<td>58.17</td>
<td>28.23</td>
<td>57.23</td>
<td>25.49</td>
</tr>
<tr>
<td>2. Approximately, what percentage of the students in your class have two or more &quot;projects&quot; or types of SOE programs?</td>
<td>21.09</td>
<td>10.74</td>
<td>20.22</td>
<td>21.10</td>
</tr>
<tr>
<td>3. Approximately, what percentage of the students in your class have no SOE programs?</td>
<td>19.60</td>
<td>33.64</td>
<td>21.76</td>
<td>27.10</td>
</tr>
<tr>
<td>4. Are not visited during the year (observing their SOEPS)?</td>
<td>24.00</td>
<td>30.37</td>
<td>21.58</td>
<td>20.99</td>
</tr>
<tr>
<td>5. Are visited once during the year?</td>
<td>33.21</td>
<td>29.71</td>
<td>33.19</td>
<td>25.51</td>
</tr>
<tr>
<td>6. Are visited two times during the year?</td>
<td>30.99</td>
<td>25.01</td>
<td>25.01</td>
<td>25.19</td>
</tr>
<tr>
<td>7. Are visited thrice or more during the year?</td>
<td>13.03</td>
<td>39.36</td>
<td>20.02</td>
<td>37.89</td>
</tr>
<tr>
<td>8. Are students required to keep record books on their SOE programs?</td>
<td>93.02%</td>
<td>--</td>
<td>88.24%</td>
<td>--</td>
</tr>
<tr>
<td>9. Are students given class time on a periodic basis (every week, every month, etc.) to update their SOE program record books?</td>
<td>86.05%</td>
<td>--</td>
<td>83.33%</td>
<td>--</td>
</tr>
<tr>
<td>10. In your department, how much time in weeks is allocated to teaching about SOE in:</td>
<td>81.40%</td>
<td>--</td>
<td>75.40%</td>
<td>--</td>
</tr>
<tr>
<td>11. If yes, what percentage of the class grade is determined by record book/SOE?</td>
<td>17.5%</td>
<td>9.89</td>
<td>17.42%</td>
<td>8.518</td>
</tr>
<tr>
<td>12. Vocational Agriculture I</td>
<td>3.44</td>
<td>1.67</td>
<td>3.51</td>
<td>1.98</td>
</tr>
<tr>
<td>13. Vocational Agriculture II</td>
<td>2.32</td>
<td>1.61</td>
<td>2.26</td>
<td>1.64</td>
</tr>
<tr>
<td>14. Vocational Agriculture III</td>
<td>1.73</td>
<td>1.20</td>
<td>2.02</td>
<td>1.36</td>
</tr>
<tr>
<td>15. Vocational Agriculture IV</td>
<td>1.86</td>
<td>1.51</td>
<td>1.82</td>
<td>1.10</td>
</tr>
<tr>
<td>16. Does the State Department of Education (Agricultural Education Section) require you to submit a summary of the student's SOE program?</td>
<td>83.72%</td>
<td>--</td>
<td>58.82%</td>
<td>--</td>
</tr>
</tbody>
</table>

* These items require "Yes" or "No" answers. The number is the percentage of teachers who responded yes.
SOEP while 88% of the teachers prepared at nonland-grant universities reported they required their students to keep records on their SOEP. Over 80% of the teachers from the two types of institutions reported that they gave their students class time on a periodic basis to update their SOEP record books.

The teachers (81%) prepared at land-grant universities reported that they considered SOEP record books in assigning grades, while 75% of the teachers prepared at nonland-grant universities considered SOEP record books in assigning grades. Both groups of teachers who used record books in assigning grades, reported that about 17% of the class grade was determined by SOEP record books. The two groups of teachers allocated three weeks in Vocational Agriculture I to teaching about SOEP; and two weeks each in Vocational Agriculture II, III, and IV.

**SOEP Quality Score**

Using the data in Table 5 and the formula in Figure 2, the SOEP quality score was calculated. In using this formula, the percentage of students in the teachers' vocational agriculture class who had one SOEP was multiplied by a factor of .25. The percentage of students with two or more projects was multiplied by a factor of .35. If the teacher reported that some students did not have any projects, no point was given for these students. Next, the percentage of students who were visited once during the year was multiplied by a factor of .15. The percentage of students who were visited two times by the teacher was multiplied by factor of .3. The percentage of
**Figure 2.** Quality score of the supervised occupational experience program (SOEP) component of the teachers vocational agriculture program.

<table>
<thead>
<tr>
<th>Variable</th>
<th>Points Assigned</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Approximately, what percentage of the students in your class have one &quot;project&quot; or one type of SOEP?</td>
<td>% of Students x 0.25</td>
</tr>
<tr>
<td>2. Approximately, what percentage of the students in your class have two or more &quot;projects&quot; or types of SOE programs?</td>
<td>% of Students x 0.35</td>
</tr>
<tr>
<td>3. Approximately, what percentage of your students were not visited during the year?</td>
<td>% of Students x 0</td>
</tr>
<tr>
<td>4. Approximately, what percentage of your students were visited once during the year?</td>
<td>% of Students x 0.15</td>
</tr>
<tr>
<td>5. Approximately, what percentage of your students were visited twice during the year?</td>
<td>% of Students x 0.3</td>
</tr>
<tr>
<td>6. Approximately, what percentage of your students were visited thrice or more?</td>
<td>% of Students x 0.5</td>
</tr>
<tr>
<td>7. Are students required to keep record books on their SOE programs?</td>
<td>If Yes, 4</td>
</tr>
<tr>
<td>8. Are students given class time on a periodic basis (every week, every month, etc.) to update their SOE program record books?</td>
<td>If Yes, 3</td>
</tr>
<tr>
<td>9. Are record books/SOE considered in assigning grades?</td>
<td>If Yes, 3</td>
</tr>
<tr>
<td>10. If yes to item 8, what percentage of the class grade is determined by record book/SOEP?</td>
<td>Percentage x 0.6</td>
</tr>
</tbody>
</table>

**In your department, how much time in weeks is allocated to teaching about SOEP in:**

<table>
<thead>
<tr>
<th>Course</th>
<th>Points Assigned</th>
</tr>
</thead>
<tbody>
<tr>
<td>11. Vocational Agriculture I</td>
<td>Number of Weeks x 2</td>
</tr>
<tr>
<td>12. Vocational Agriculture II</td>
<td>Number of Weeks x 2</td>
</tr>
<tr>
<td>13. Vocational Agriculture III</td>
<td>Number of Weeks x 2</td>
</tr>
<tr>
<td>14. Vocational Agriculture IV</td>
<td>Number of Weeks x 2</td>
</tr>
</tbody>
</table>
students in the teacher's class who were visited thrice or more was multiplied by .5.

If the teacher reported that students were required to keep record books on their SOEP they were given four points. If the students were given class time to upgrade their SOEP record books the teacher was given three points. The teacher was given three points if SOEP record books were considered in assigning grades. The percentage of the class grade that SOEP record books accounted for were multiplied by a factor of .6 (with a maximum of 15 points).

The number of weeks that teacher allocated to teaching about SOEP in Vo-Ag I was multiplied by a factor of 2. The number of weeks that the teacher allocated to teaching about SOEP in Vo-Ag II was multiplied by a factor 2. The number of weeks the teacher allocated to teaching about SOEP in Vo-Ag III was multiplied by a factor of 2. The number of weeks that the teacher allocated to teaching Vo-Ag IV was multiplied by a factor of 2.

All of the above factors are added together to arrive at sum score. The researcher projected that a teacher who conducted a quality SOEP would score 100 points. It should be noted that it is possible to score more than 100 points.

If a teacher had 25% of his/her students with one SOEP; 75% percent of the students with two SOEPS; 10% of the students with SOEP visited once; 70% of the students with SOEP visited twice; 20% of the students with SOEP visited three times or more; required students to keep SOEP record books; gave class time for SOEP record book update; used the record books in grades; assigned 15% of grade to SOEP record
books; used 4 weeks teaching about SOEP in Vo-Ag I; used 2 weeks teaching about SOEP in Vo-Ag II; used 2 weeks teaching about SOEP in Vo-Ag III; used 2 weeks teaching about SOEP in Vo-Ag IV; and the State Department of Education required a summary of SOEP, the teacher should score 100 points. The quality score of the SOEP conducted by teachers prepared at land-grant university was 85.97 and 86.09 for nonland-grant universities. (This result is in Table 7.)

Adult and/or Young Farmer Program

The teachers were asked to provide information about the adult and/or young farmer programs that they conducted. This information is presented in Table 6. Forty-one percent of the teachers prepared at land-grant universities had adult programs. Seventeen percent of the teachers prepared at nonland-grant universities reported that they had adult programs.

The teachers prepared at land-grant universities reported that they had an average of 19 adults enrolled in the adult classes that they conducted. The teachers prepared at nonland-grant universities reported they had an average of 31 adults enrolled in their classes. An average of 13 students attended each class meeting held by teachers prepared at land-grant universities while 18 was the average number of students that attended each class meeting held by teachers prepared at nonland-grant universities. The average number of class meetings was 8.9 per year for classes conducted by teachers prepared at land-grant universities while the average number of class meetings conducted by
Table 6

The Quality of Adult and/or Young Farmer Programs According To The Type Of Institution From Which The Vocational Agriculture Teachers Graduated

<table>
<thead>
<tr>
<th></th>
<th>Land-Grant Universities N=43</th>
<th>Nonland-Grant Universities N=102</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Mean</td>
<td>S.D.</td>
</tr>
<tr>
<td>1. Do you have young and/or adult farmer classes in your vocational agriculture program?</td>
<td>41.86%*</td>
<td>--</td>
</tr>
<tr>
<td>2. On the average, how many students/farmers are enrolled in the adult and/or young farmer class that you conduct?</td>
<td>19.39</td>
<td>11.025</td>
</tr>
<tr>
<td>3. How many meetings per year do your adult and/or young farmer class have?</td>
<td>8.9</td>
<td>0.81</td>
</tr>
<tr>
<td>4. On the average, how many students/farmers attend each adult class meeting?</td>
<td>13.53</td>
<td>5.31</td>
</tr>
<tr>
<td>5. Last year, how many total visits did you make to your adult and/or young farmers?</td>
<td>19.23</td>
<td>20.46</td>
</tr>
<tr>
<td>6. Are adult and/or young farmers officially affiliated with the FFA alumni or Young Farmer Association?</td>
<td>25.58%*</td>
<td>--</td>
</tr>
</tbody>
</table>

* These items require "Yes" or "No" answers. The number is the percentage of teachers who said yes.
teachers prepared at nonland-grant universities was 11.05 per year.

The teachers prepared at land-grant universities reported that the mean total visits they made to their adult farmers was 19 while the nonland-grant university prepared teachers had a mean of 29. About 25% of the adult programs organized by teachers prepared at land-grant universities were affiliated with the FFA Alumni or the Young Farmer Association. Only about 9% of the adult programs conducted by teachers prepared at nonland-grant universities were affiliated with the FFA Alumni or Young Farmer Associations.

Adult Program Quality

The quality score for adult programs conducted by the vocational agriculture teacher was calculated using data from Table 6 and the formula from Figure 3. In using this formula, the teachers with adult programs were given two points for having a program. Next, the number of adults enrolled in the program were multiplied by factor of .5. The number of class meetings was multiplied by a factor of 1.2. The average number of farmers that attended each class meeting was multiplied by a factor of 1.0. The total number of visits made by the teacher to adult farmers was multiplied by a factor of .4. If the adult farmers were officially affiliated with FFA alumni or Young Farmer Association, the teacher was given 7.5 points.

All of the above factors were added together to arrive at a sum score. The researcher projected that a quality adult program would score 50 points. It should be noted that it is possible to score more than 50 points.
Figure 3. Quality score of adult and/or young farmer component of the teachers vocational agriculture program.

<table>
<thead>
<tr>
<th>Variables</th>
<th>Points Assigned</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Do you have young and/or adult farmer classes in your vocational agriculture program?</td>
<td>If Yes, 2</td>
</tr>
<tr>
<td>2. On the average, how many students/farmers are enrolled in the adult and/or young farmer class that you conduct?</td>
<td>Number of Farmers x .5</td>
</tr>
<tr>
<td>3. How many meetings per year do your adult and/or young farmer class have?</td>
<td>Number of Meetings 1.2</td>
</tr>
<tr>
<td>4. One the average, how many students/farmers attend each adult class meeting?</td>
<td>Number of Farmers x 1</td>
</tr>
<tr>
<td>5. Last year, how many total visits did you make to your adult and/or young farmers?</td>
<td>Number of Visits x .4</td>
</tr>
<tr>
<td>6. Are adult and/or young farmers officially affiliated with the FFA alumni or Young Farmer Association?</td>
<td>If Yes, 7.5</td>
</tr>
</tbody>
</table>
If the teacher had an adult program, had an average adult enrollment of 15, had an average adult attendance of 10, had 9 adult meetings, visited adults 30 times in the year, and the adult programs were affiliated with the FFA Alumni and Young Farmer Association, the teacher should score 50 points. The quality score for adult programs was 16.30 for teachers produced at land-grant universities, and 9.33 for adult programs conducted by teachers prepared at nonland-grant universities. (This result is presented on Table 7.)

Hypothesis Two - The Quality of the Supervised Occupational Experence Programs (SOEP), the Future Farmers of America (FFA) and the Adult and/or Young Farmer programs of vocational agriculture teachers who received their training at Land-Grant Universities would be higher than those teachers trained at Nonland-Grant Universities.

The quality scores of the FFA, SOEP, and Adult Education were added together to arrive at a total program quality score. The researcher developed the formula for arriving at the program quality score so that the FFA and SOEP scores should each contribute 40 percent to the total score and the adult education score should contribute 20 percent. It was anticipated that a high quality program would score 250 points.

The mean total program quality score for teachers prepared at land-grant universities was 176.60. The mean total program quality score for teachers prepared at nonland-grant universities was 167.75, t(68) = 0.69, \( p = .494 \). (See Table 7.)

The mean quality FFA scores for teachers prepared at land-grant universities was 74.33 while the mean quality score for teacher
Table 7

The Total Quality Score Of The Vocational Agriculture Program According To The Type of Institution From Which The Teachers Graduated

<table>
<thead>
<tr>
<th>Scores</th>
<th>Land-grant Universities</th>
<th>Nonland-grant Universities</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Mean</td>
<td>S.D.</td>
</tr>
<tr>
<td>1. FFA Quality(^a)</td>
<td>74.33</td>
<td>36.78</td>
</tr>
<tr>
<td>2. SOEP Quality(^b)</td>
<td>85.97</td>
<td>34.34</td>
</tr>
<tr>
<td>3. Adult and/or Young(^c) Farmer Program</td>
<td>16.30</td>
<td>22.68</td>
</tr>
<tr>
<td>4. Total Quality of Program(^d)</td>
<td>176.60</td>
<td>74.06</td>
</tr>
</tbody>
</table>

\(^a\) t = 0.31 \ df = 72.13 \ p = .759
\(^b\) t = 0.02 \ df = 80.38 \ p = .985
\(^c\) t = 1.67 \ df = 81.34 \ p = .098
\(^d\) t = 0.69 \ df = 68.30 \ p = .494
prepared at nonland-grant universities was 72.33, \( t(72) = .31, P = .759 \). The mean SOEP quality score for teachers prepared at land-grant universities was 85.97 while the mean SOEP quality score for teachers prepared at nonland-grant universities was 86.09, \( t(80) = .02, P = .985 \). The mean adult education quality score for teachers prepared at land-grant universities was 16.30 while the mean adult education quality score for teachers prepared at nonland-grant universities was 9.33, \( t(81) = 1.67, P = .098 \).

An independent sample t-test was used to test for statistical differences between the two groups of teachers. No significant difference was found. Therefore, the research hypothesis was not supported.

Objective Three - To determine if there were differences in the attitudes of the vocational agriculture teachers concerning the Future Farmers of America (FFA), Supervised Occupational Experience Programs (SOEP), and the Adult and/or Young Farmer programs according to type of institution from which the teachers graduated.

The attitudes of the teachers toward the FFA component of vocational agriculture is presented in Table 8. The summated attitude scores for teachers prepared at land-grant universities was 79.9 while the overall score for teachers prepared at nonland-grant universities
Table 8

Attitudes of Vocational Agriculture Teachers Toward Future Farmers of America (FFA) Component of Vocational Agriculture

<table>
<thead>
<tr>
<th>Variables</th>
<th>Land-Grant University Mean</th>
<th>S.D.</th>
<th>Nonland-Grant University Mean</th>
<th>S.D.</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Most Vocational Agriculture teachers put too much emphasis on the FFA.</td>
<td>5.60</td>
<td>3.42</td>
<td>5.44</td>
<td>3.19</td>
</tr>
<tr>
<td>2. There is too much emphasis on contests and competition at the expense of classroom instruction.</td>
<td>6.84</td>
<td>2.47</td>
<td>6.43</td>
<td>3.03</td>
</tr>
<tr>
<td>3. FFA is a motivational tool for students.</td>
<td>9.88</td>
<td>1.79</td>
<td>9.92</td>
<td>1.60</td>
</tr>
<tr>
<td>4. FFA activities present a challenging program for students.</td>
<td>9.95</td>
<td>1.62</td>
<td>9.93</td>
<td>1.47</td>
</tr>
<tr>
<td>5. FFA is an integral component of Vocational Agriculture.</td>
<td>10.26</td>
<td>1.79</td>
<td>10.05</td>
<td>1.54</td>
</tr>
<tr>
<td>6. FFA should involve only students who want to participate in its activities.</td>
<td>5.53</td>
<td>3.18</td>
<td>4.62</td>
<td>3.28</td>
</tr>
<tr>
<td>7. FFA develops leadership in the student.</td>
<td>10.28</td>
<td>1.64</td>
<td>10.33</td>
<td>1.39</td>
</tr>
<tr>
<td>8. FFA is time consuming and should not be included in Vocational Agriculture.</td>
<td>10.44</td>
<td>1.66</td>
<td>10.16</td>
<td>2.07</td>
</tr>
<tr>
<td>9. FFA is essential to make Vocational Agriculture more attuned to the 1980's.</td>
<td>10.07</td>
<td>1.81</td>
<td>9.70</td>
<td>1.79</td>
</tr>
<tr>
<td>10. FFA develops civic and patriotic responsibilities in the student.</td>
<td>10.10</td>
<td>1.46</td>
<td>9.83</td>
<td>1.64</td>
</tr>
<tr>
<td>Overall FFA Attitude Score</td>
<td>79.9</td>
<td>11.08</td>
<td>75.94</td>
<td>14.48</td>
</tr>
</tbody>
</table>

* Since these are negative statements, the coding was reversed. The higher the score, the more positive the attitude.

* Rating scale 1 = Strongly Disagree, 6 = Undecided, 11 = Strongly Agree
was 75.84. The teachers prepared at both the land-grant and nonland-grant universities had strong positive attitudes toward the statement that: FFA is an integral part of vocational agriculture, FFA is a motivational tool for students, FFA is challenging to students, FFA develops leadership, and FFA develops civic and patriotic responsibilities in the student. The mean score on the above items by both groups of teachers was about 10 (out of a possible 11).

The two groups of teachers have strong negative attitudes on the statement: FFA is time consuming and should not be included in vocational agriculture. After the scoring was reversed both group of teachers had a mean score of about 10.

The two groups of teachers were undecided when they were asked to respond to the following items: Most vocational agriculture teachers put too much emphasis on FFA and FFA should involve only students who want to participate in its activities. The mean rating for these items was about 6 for both groups of teachers.

The Vocational Agriculture Teachers' Attitude Toward the SOEP Component of Vocational Agriculture

The attitudes of the teachers toward SOEP is presented in Table 9. The overall mean rating by teachers prepared at land-grant universities was 86.79 while the overall mean attitude rating by the teachers prepared at nonland-grant universities was 83.84.

The teachers prepared at both types institutions had strong positive attitudes in rating the following items: All students
Table 9
Attitudes of Vocational Agriculture Teachers Toward Supervised Occupational Experience Programs (SOEP) Component Of Vocational Agriculture

<table>
<thead>
<tr>
<th>Variables</th>
<th>Land-Grant University N=43</th>
<th>Nonland-Grant University N=102</th>
</tr>
</thead>
<tbody>
<tr>
<td>+1. SOE programs are no longer a viable part of Vocational Agriculture.</td>
<td>10.26 1.71</td>
<td>9.48 2.54</td>
</tr>
<tr>
<td>+2. Computers can simulate SOE programs thereby eliminating their use.</td>
<td>10.07 1.54</td>
<td>9.32 2.65</td>
</tr>
<tr>
<td>+3. The elimination of SOE programs would make Vocational Agriculture more attuned to the 80's.</td>
<td>10.29 1.87</td>
<td>10.23 1.41</td>
</tr>
<tr>
<td>4. All students enrolled in Vocational Agriculture should have SOE programs.</td>
<td>8.72 3.29</td>
<td>9.30 2.40</td>
</tr>
<tr>
<td>+5. Too much emphasis is placed on SOE programs.</td>
<td>8.74 2.67</td>
<td>8.46 2.67</td>
</tr>
<tr>
<td>6. SOEP's are integral to the classroom instruction.</td>
<td>9.33 2.66</td>
<td>8.89 2.45</td>
</tr>
<tr>
<td>7. SOE programs help Vocational Agriculture teachers to be knowledgeable of the community.</td>
<td>9.53 2.10</td>
<td>9.27 2.17</td>
</tr>
<tr>
<td>8. Vocational Agriculture students can use their experience in SOEP in understanding classroom instruction.</td>
<td>9.86 1.81</td>
<td>9.51 2.21</td>
</tr>
<tr>
<td>9. SOE programs are good public relations tool for the school, department and the teacher.</td>
<td>9.74 1.84</td>
<td>9.51 2.16</td>
</tr>
<tr>
<td>+10. SOE programs are time consuming and should not be part of Vocational Agriculture programs.</td>
<td>9.74 2.19</td>
<td>9.86 2.05</td>
</tr>
<tr>
<td>Overall SOEP Attitude Score</td>
<td>86.79 14.94</td>
<td>83.84 15.80</td>
</tr>
</tbody>
</table>

* Since these are negative statements, the coding was reversed. The higher the score, the more positive the attitude.

* Rating scale 1 = Strongly Disagree, 6 = Undecided, 11 = Strongly Agree
enrolled in vocational agriculture should have SOEP, SOEP's are integral to the classroom instruction, SOEP help vocational agriculture teachers be knowledgeable of the community, and SOEP are good public relations tool for the school, department and the teacher. The mean rating for the above items by both groups of teachers was above 9.0.

The teachers from both types of institutions had strong negative attitudes toward the following items: SOEP are no longer a viable part of vocational agriculture, computers can simulate SOEP, the elimination of SOEP would make vocational agriculture more attuned to the 1980's, and SOEP is time consuming. After the scoring was reversed the mean rating by both groups of teachers was above 9.0 on these items.

The Vocational Agriculture Teachers Attitude Toward Adult and/or Young Farmers Programs

The attitudes of the vocational agriculture teachers toward adult and/or young farmer programs are presented in Table 10. The mean rating by teachers prepared at land-grant universities was 67.63. The mean attitude rating of teachers produced at nonland-grant universities was 62.21.

The vocational agriculture teachers strongly agreed that adult programs promote good community-school relation. The mean rating was 9.48 by teachers prepared at land-grant universities and 8.92 by teachers prepared at nonland-grant universities.

On the item that stated that vocational agriculture teachers should conduct adult programs, the teachers prepared at land-grant
### Table 10

<table>
<thead>
<tr>
<th>Variables</th>
<th>Land-Grant University</th>
<th>Nonland-Grant University</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>N=43</td>
<td>N=102</td>
</tr>
<tr>
<td>+1. There is too much emphasis by Vocational Agriculture teachers on adult and/or young farmer programs.</td>
<td>7.64, 2.34</td>
<td>7.93, 2.02</td>
</tr>
<tr>
<td>+2. Adult and/or young farmer education is not important in Vocational Agriculture.</td>
<td>9.17, 2.08</td>
<td>8.21, 2.42</td>
</tr>
<tr>
<td>3. Adult and/or young farmer programs promote good community-school relationships.</td>
<td>9.48, 1.73</td>
<td>8.92, 2.05</td>
</tr>
<tr>
<td>4. There is not much emphasis on adult and/or young farmer programs.</td>
<td>5.78, 2.93</td>
<td>6.37, 2.64</td>
</tr>
<tr>
<td>+5. Adult and/or young farmer programs should be primarily conducted by extension personnel.</td>
<td>4.62, 2.33</td>
<td>5.3, 2.85</td>
</tr>
<tr>
<td>6. Adult and/or young farmer programs should be part of the total Vocational Agriculture program.</td>
<td>8.43, 1.84</td>
<td>6.95, 2.72</td>
</tr>
<tr>
<td>7. Vocational Agriculture teachers should conduct adult and/or young farmer programs.</td>
<td>7.71, 2.03</td>
<td>6.58, 2.55</td>
</tr>
<tr>
<td>8. Adult and/or young farmer programs are essential for Vocational Agriculture to meet the challenges of the 80's.</td>
<td>8.71, 2.03</td>
<td>7.62, 2.33</td>
</tr>
<tr>
<td>+9. Adult and/or young farmer programs are time consuming and should be provided by special adult teachers only.</td>
<td>7.31, 2.90</td>
<td>6.73, 2.87</td>
</tr>
<tr>
<td>10. Adult and/or young farmer programs should be conducted only at the post-secondary level.</td>
<td>6.80, 2.76</td>
<td>6.67, 2.62</td>
</tr>
<tr>
<td>Overall Adult Program Attitude Score</td>
<td>67.63, 14.14</td>
<td>62.21, 17.96</td>
</tr>
</tbody>
</table>

* Since there are negative statements, the coding was reversed. The higher the score, the more positive the attitude.

* Rating scale 1 = Strongly Disagree, 6 = Undecided, 11 = Strongly Agree
universities had a slight positive attitude (7.7) while those teachers prepared at nonland-grant universities were undecided.

Both group of teachers were undecided when asked to rate the statement that adult programs should be conducted only at the secondary level and by extension personnel only (mean rating about 6).

Hypothesis Three - Vocational agriculture teachers who received their training at land-grant universities would exhibit more positive attitudes toward the Future Farmers of America (FFA), the Supervised Occupational Experience Program (SOEP), and the Adult and/or Young Farmer programs than vocational agriculture teachers trained at nonland-grant universities.

Independent sample t-tests was used to test for statistical differences in the attitudes of vocational agriculture teachers toward FFA, SOEP, and adult programs according to the types of institutions from which the teachers graduated. Following the analysis, no significant difference was found. The mean attitude score of land-grant teachers toward the FFA was 79.9 while the mean attitude score of the nonland-grant teachers was 75.9, t(102) = 1.79, P = .077. The mean attitude score of land-grant universities prepared teachers toward SOEP was 86.79 while the mean attitude score of the nonland-grant universities prepared teachers was 83.84, t(83) = 1.03, P = .305. The mean attitude score of the land-grant university prepared teachers toward adult and/or young farmer programs was 67.63 while the mean attitude score of the teachers prepared at nonland-grant universities was 17.96, t(99) = 1.94, P = .056. The research hypothesis was not supported. (See Table 11.)
Table 11

Attitudes of Vocational Agriculture Teachers Toward FFA, SOEP, and Adult and/or Young Farmer Components of Vocational Agriculture

<table>
<thead>
<tr>
<th>Variables</th>
<th>Land-Grant University N=43</th>
<th>Nonland-Grant University N=102</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Mean</td>
<td>S.D.</td>
</tr>
<tr>
<td>Attitudes Score on FFA&lt;sup&gt;A&lt;/sup&gt;</td>
<td>79.90</td>
<td>11.08</td>
</tr>
<tr>
<td>Attitudes Score on SOEP&lt;sup&gt;B&lt;/sup&gt;</td>
<td>86.79</td>
<td>14.94</td>
</tr>
<tr>
<td>Attitudes Score on Adult Programs&lt;sup&gt;C&lt;/sup&gt;</td>
<td>67.63</td>
<td>14.14</td>
</tr>
</tbody>
</table>

<sup>A</sup> t-value = 1.79  Df = 102.23  P = .077

<sup>B</sup> t-value = 1.03  Df = 83.20  P = .305

<sup>C</sup> t-value = 1.94  Df = 99.45  P = .056
The characteristics of states supervisors of agricultural education is presented in Table 12. Eighteen supervisors (36.7%) had between one and six years experience as supervisors. Eleven supervisors (22.4%) had between seven and ten years teaching experience as administrators while twenty (40.8%) supervisors had eleven or more years experience as supervisors.

Fourteen supervisors (28.6%) had between one and six years experience as vocational agriculture teachers. Eleven supervisors (22.4%) had between seven and ten years experience as vocational agriculture teachers. Twenty-four supervisors (49%) had eleven or more years experience as vocational agriculture teachers.

Over one-half (55.1%) of the supervisors received their bachelors degrees from land-grant universities. Twenty supervisors (40.8%) received their bachelors degrees from nonland-grant universities. Two supervisors (4.1%) did not indicate the type of university from which they received the bachelors degree.

Twenty-four (49%) of the supervisors received their masters degrees from land-grant universities while eighteen (36.7%) received their masters degrees from nonland-grant universities. Seven supervisors (14.3%) did not report the type of university from which they received their masters degree.

Only 6% of the supervisors had more than the masters degree.
Table 12

Characteristics of State Supervisors of Agricultural Education

<table>
<thead>
<tr>
<th>Characteristics</th>
<th>Number (N=49)</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Experience as a supervisor/consultant</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1-3 years</td>
<td>6</td>
<td>12.2</td>
</tr>
<tr>
<td>4-6 years</td>
<td>12</td>
<td>24.5</td>
</tr>
<tr>
<td>7-10</td>
<td>11</td>
<td>22.4</td>
</tr>
<tr>
<td>11 or over</td>
<td>20</td>
<td>40.8</td>
</tr>
<tr>
<td>Experience teaching vo-ag</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1-3 years</td>
<td>2</td>
<td>4.1</td>
</tr>
<tr>
<td>4-6 years</td>
<td>12</td>
<td>24.5</td>
</tr>
<tr>
<td>7-10</td>
<td>11</td>
<td>22.4</td>
</tr>
<tr>
<td>11 or over</td>
<td>24</td>
<td>49</td>
</tr>
<tr>
<td>Type of University where supervisor received bachelors degree</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Land-Grant University</td>
<td>27</td>
<td>55.1</td>
</tr>
<tr>
<td>Nonland-Grant University</td>
<td>20</td>
<td>40.8</td>
</tr>
<tr>
<td>No Response</td>
<td>2</td>
<td>4.1</td>
</tr>
<tr>
<td>Type of University where supervisor received the Masters degree</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Land-Grant University</td>
<td>24</td>
<td>49.0</td>
</tr>
<tr>
<td>Nonland-Grant University</td>
<td>18</td>
<td>36.7</td>
</tr>
<tr>
<td>No Response</td>
<td>7</td>
<td>14.3</td>
</tr>
<tr>
<td>Type of university where supervisor received Ed.S</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Land-Grant University</td>
<td>2</td>
<td>4.1</td>
</tr>
<tr>
<td>Nonland-Grant University</td>
<td>1</td>
<td>2.0</td>
</tr>
<tr>
<td>No Response</td>
<td>46</td>
<td>93.9</td>
</tr>
<tr>
<td>Type of university where supervisor received Doctorate</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Land-Grant University</td>
<td>2</td>
<td>4.1</td>
</tr>
<tr>
<td>Nonland-Grant University</td>
<td>1</td>
<td>2.0</td>
</tr>
<tr>
<td>No Response</td>
<td>46</td>
<td>93.9</td>
</tr>
</tbody>
</table>
Objective Four - To determine the opinions of States' Supervisors of agricultural education concerning the preparation of teachers at nonland-grant and land-grant universities.

**Supervisors of Agricultural Education Ratings of teacher preparation at Land-Grant and Nonland-Grant Universities**

The ratings of the teacher preparation at land-grant and nonland-grant universities by states' supervisors of agricultural education is presented in Table 13.

A mean rating of 3.00 on a particular item indicates that there were no differences in the teacher preparation of the two types of institutions. A mean rating above 3.00 indicates that teacher preparation at land-grant universities was rated better than nonland-grant universities. A mean rating less than 3.00 indicates that teacher preparation in nonland-grant universities was rated better than land-grant universities. Since there are 22 items on the instrument a total rating of 66 would be neutral. The overall summated rating was 69.35.

The teacher preparation at land-grant universities was rated better than teacher preparation at nonland-grant universities by the State Supervisors on twenty items. Teacher preparation at nonland-grant universities was rated better than teacher preparation at land-grant universities on only two items.

**Hypothesis Four - The state supervisors of agricultural education would perceive the quality of preparation of vocational agriculture teachers at land-grant universities superior to the quality**
<table>
<thead>
<tr>
<th>Variables</th>
<th>Mean</th>
<th>Standard Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Emphasized the importance of FFA.</td>
<td>3.27</td>
<td>0.87</td>
</tr>
<tr>
<td>2. Does a good job of preparing FFA advisors.</td>
<td>3.31</td>
<td>0.74</td>
</tr>
<tr>
<td>3. Prepares teachers to participate in fairs, contests, and other activities.</td>
<td>3.20</td>
<td>0.84</td>
</tr>
<tr>
<td>4. Teach prospective teachers how to keep record books.</td>
<td>3.45</td>
<td>0.84</td>
</tr>
<tr>
<td>5. Stresses the importance of supervised occupational experience programs (SOEP) to prospective teachers.</td>
<td>3.31</td>
<td>0.74</td>
</tr>
<tr>
<td>6. Teaches how to conduct adult classes.</td>
<td>3.27</td>
<td>0.70</td>
</tr>
<tr>
<td>7. Emphasizes adult programs as a vital component of Voc. Ag.</td>
<td>3.29</td>
<td>0.87</td>
</tr>
<tr>
<td>8. Has Faculty in Agricultural Education who are in touch with the teachers in state.</td>
<td>3.25</td>
<td>0.99</td>
</tr>
<tr>
<td>9. Has courses in technical agriculture which are too theoretical.</td>
<td>3.38</td>
<td>0.86</td>
</tr>
<tr>
<td>10. Has faculty in technical agriculture who are more concerned with research than teaching.</td>
<td>3.59</td>
<td>1.24</td>
</tr>
<tr>
<td>11. Has faculty in technical agriculture who are effective teachers.</td>
<td>3.20</td>
<td>0.79</td>
</tr>
<tr>
<td>12. Has faculty in technical agriculture who are spread too thin. They are required to teach courses in areas that they are not properly trained.</td>
<td>2.63</td>
<td>1.07</td>
</tr>
<tr>
<td>13. Has courses in technical agriculture which are practical.</td>
<td>2.86</td>
<td>1.12</td>
</tr>
<tr>
<td>14. Has adequate facilities (school farms, shops, etc.).</td>
<td>3.55</td>
<td>0.96</td>
</tr>
<tr>
<td>15. Has Agricultural Education faculty who are known and respected nationally.</td>
<td>3.63</td>
<td>0.81</td>
</tr>
<tr>
<td>16. Has Agricultural Education faculty who are effective teachers.</td>
<td>3.29</td>
<td>0.71</td>
</tr>
<tr>
<td>17. Has Agricultural Education faculty who provide in-service education to vocational agriculture teachers.</td>
<td>3.35</td>
<td>1.01</td>
</tr>
<tr>
<td>18. Produces all-around well prepared teachers.</td>
<td>3.14</td>
<td>0.87</td>
</tr>
<tr>
<td>19. Teaches teachers how to handle discipline.</td>
<td>3.18</td>
<td>0.73</td>
</tr>
<tr>
<td>Variables</td>
<td>Mean*</td>
<td>Standard Deviation</td>
</tr>
<tr>
<td>-----------------------------------------------</td>
<td>-------</td>
<td>--------------------</td>
</tr>
<tr>
<td>20. Produces teachers who are competent.</td>
<td>3.20</td>
<td>0.61</td>
</tr>
<tr>
<td>21. Has graduates who are dedicated to teaching.</td>
<td>3.10</td>
<td>0.71</td>
</tr>
<tr>
<td>22. Attracts higher caliber of students.</td>
<td>3.41</td>
<td>0.64</td>
</tr>
<tr>
<td>Overall mean Rating**</td>
<td>69.35</td>
<td>11.43</td>
</tr>
</tbody>
</table>

* These are negative statements. They were reversed during coding.

* Rating Scale  
1 = Nonland-Grant Universities much better than land-grant universities  
2 = Nonland-Grant Universities somewhat better than land-grant universities  
3 = No difference between universities  
4 = Land-Grant universities somewhat better than nonland-grant universities  
5 = Land-Grant universities much better than nonland-grant universities

** T-value = 1.85, Df = 39, p < .05.
of preparation of vocational agriculture teachers at nonland-grant universities.

A one-sample t-test was used to test the differences in the rating of the supervisors concerning the quality of teacher preparation at land-grant and nonland-grant universities. Following the analysis, a significant difference was found, *t*(39) = 1.85, *p* < .05. Therefore the research hypothesis was supported.

As there were unequal number of supervisors who received their degrees at land-grant and nonland-grant universities, the researcher decided to run a multiple regression analysis to determine if the type of institutions, years experience as supervisors and years teaching vocational agriculture contributed to the variance in supervisor ratings. This is presented in Table 14.

The type of institution from which the supervisor received the bachelors degree explained 29% of the variance in supervisors rating. *R*² = .29; DF = 1, 38; *p* < .05. This variable explained most of the variance compared to the other variables.
Table 14

Stepwise Multiple Regression Analysis of Supervisors Total Rating of Teacher Preparation at Land-Grant and Nonland-Grant Universities

<table>
<thead>
<tr>
<th>Variables</th>
<th>$R^2$</th>
<th>$F^*$</th>
</tr>
</thead>
<tbody>
<tr>
<td>Type of Institution From Which Supervisor Received:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bachelors</td>
<td>.291</td>
<td>15.60</td>
</tr>
<tr>
<td>Masters Degree</td>
<td>.317</td>
<td>8.59</td>
</tr>
<tr>
<td>Experience in Years As Supervisor</td>
<td>.345</td>
<td>6.32</td>
</tr>
<tr>
<td>Years of Experience Teaching Vocational Agriculture</td>
<td>.386</td>
<td>5.49</td>
</tr>
</tbody>
</table>

A DF 1,38 p < .05
B DF 2,37 p < .05
C DF 3,36 p < .05
D DF 4,35 p < .05
CHAPTER 5

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

This study was designed to determine the differences in the teaching ability, job performance and attitudes of vocational agriculture teachers who received their undergraduate degrees from selected land-grant and nonland-grant universities in the United States during the 1981-82 school year.

Ten states were identified that have both types of institutions which prepare teachers of vocational agriculture. There were 38 universities that offer agricultural education programs in the ten states. A list of 300 teachers who received their undergraduate degrees during the 1981-82 school year and who were currently teaching were received from the 38 universities identified. A proportionate random sample of 200 was drawn from this list. There were 134 teachers from nonland-grant universities and 66 teachers from land-grant universities in the sample drawn. These teachers were asked to give information on instruments designed to measure the quality of their vocational agriculture programs and their attitudes towards FFA, SOEP and Adult and/or Young farmer programs.

Data were also collected from the school administrators where the teachers taught. The administrators were asked to respond to an instrument designed to measure the teaching ability and job performance of the vocational agriculture teachers.
Data were also collected from state supervisors of agricultural education in the ten states used in this study. The supervisors were sent instruments that measured the quality of teacher preparation at land-grant and nonland-grant universities.

The statistical subprograms of SPSS was used in data analysis. The following objectives and hypotheses were established for the study:

Objectives:

1. To determine if there were differences in the teaching ability and job performance of vocational agriculture teachers according to the type of institution (land-grant or nonland-grant) from which they graduated as perceived by administrators of the schools where the teachers were employed.

2. To determine if there were differences in the quality of Future Farmers of American (FFA), Supervised Occupational Experience Programs (SOEP), and the Young and/or Adult programs conducted by the vocational agriculture teachers according to the type of institution from which they graduated.

3. To determine if there were differences in the attitudes of the vocational agriculture teachers concerning the Future Farmers of America (FFA), Supervised Occupational Experience Programs (SOEP), and the Adult and/or Young Farmer programs according to type of institution from which the teachers graduated.

4. To determine the opinions of state supervisors of agri-
cultural education concerning the quality of preparation of teachers at nonland-grant and land-grant universities.

Hypotheses:

1. Administrators of the schools where the vocational agriculture teachers were employed would perceive the teaching ability and job performance of teachers who were trained at land-grant universities superior to those teachers prepared at nonland-grant universities.

2. The quality of the Future Farmers of America (FFA), the Supervised Occupational Experience Program (SOEP), and the Adult and/or Young Farmer programs of vocational agriculture teachers who received their training at land-grant universities would be higher than teachers trained at nonland-grant universities.

3. Vocational agriculture teachers who received their training at land-grant universities would exhibit more positive attitudes toward the Future Farmers of America (FFA), the Supervised Occupational Experience Program (SOEP), and the Adult and/or Young Farmer programs than vocational agriculture teachers trained at nonland-grant universities.

4. The state supervisors of agricultural education would perceive the quality of preparation of vocational agriculture teachers at land-grant universities superior to the quality of preparation of vocational agriculture teachers at nonland-grant universities.
Summary of the Findings

1. An independent sample t-test of statistical difference showed no difference between the teaching ability and job performance of teachers who graduated at land-grant and nonland-grant universities as perceived by their school administrators.

2. An independent sample t-test was used to test the differences in the quality of FFA according to the type of institutions from which the teachers graduated. No significant difference was found.

3. An independent sample t-test was used to test the differences in the quality of SOEP according to the type of institution from which the teacher graduated. No significant difference was found.

4. An independent sample t-test was used to determine the differences in the quality of adult programs according to the type of institution from which the teacher graduated. No significant difference was found.

5. An independent sample t-test showed that there were no significant differences in the attitudes of the two groups of teachers toward FFA.

6. An independent sample t-test showed that there was no significant differences in the attitudes of the two groups of teachers toward SOEP.

7. An independent sample t-test showed that there were no significant differences in the attitudes of both groups of teachers toward adult and/or young farmer programs in vocational agriculture.

8. A one-sample t-test showed that there were significant differences in the teacher preparation at land-grant and nonland-grant
universities as perceived by state supervisors. A stepwise multiple regression analysis indicated that the type of institution from which the supervisor received the bachelor's degree substantially explained the variance in the rating of the teacher preparation by the supervisors. Twenty-nine percent of the variance was explained by the type of institution where the supervisor received the bachelor's degree.

Conclusions

The major conclusion reached in this study was that there is no difference in the attitudes, teaching ability and job performance of vocational agriculture teachers prepared at land-grant and nonland-grant universities.

A careful examination of the data reveals several minor conclusions which may be of interest to agricultural educators. They are:

1. The findings relative to teacher ability and job performance as perceived by school administrators where the teachers taught suggested that the teachers from both types of institutions seemed to have a general knowledge of the subject matter of vocational agriculture. The strength of this knowledge of subject matter appeared more in areas of agricultural mechanics, animal science, crop production, farm management and resource management. This strength seems appropriate as most of the vocational agriculture teachers in the study taught production agriculture.

The teachers prepared at land-grant and nonland-grant universities seemed weaker in classroom teaching skills such as teacher ability to motivate students, ability to use questions while teaching,
universities had mean quality score of 16.30 while the mean quality score of adult programs of teachers prepared at nonland-grant universities was 9.33. Since the scores of the adult programs of both groups of teachers were low it appeared that most of the vocational agriculture teachers in this study placed little emphasis on the adult education component of vocational agriculture.

5. There were no significant differences in the attitudes of vocational agriculture teachers who were prepared at land-grant and nonland-grant universities toward FFA, SOEP, and adult programs. The vocational agriculture teachers in this study had strong positive attitudes toward FFA and SOEP and both groups of teachers had less positive attitudes toward adult programs.

6. The state supervisors of agricultural education perceived that land-grant universities were doing a better job of preparing vocational agriculture teachers.

However, it should be remembered that more supervisors in the study were trained at land-grant universities than at nonland-grant universities.

Recommendations

The following recommendations are based on the findings of this study:

1. Since there were, in general, no differences in the teaching ability, job performance and attitudes of vocational agriculture teachers trained by land-grant and nonland-grant universities, one solution to the teacher shortage
is to have more nonland-grant universities prepare teachers of vocational agriculture. The land-grant universities should also be encouraged to prepare more vocational agriculture teachers.

2. Since the vocational agriculture teachers were rated lower in teaching methods and skills than subject matter by the administrators, it is recommended that land-grant and nonland-grant universities should place additional emphasis on teaching skills and methods in their preservice curricula.

3. Land-grant and nonland-grant universities should continue placing emphasis on FFA in their teacher education programs.

4. Twenty percent of the students did not have SOEP. Therefore it is recommended that land-grant and nonland-grant universities put additional emphasis on the SOEP component of vocational agriculture.

5. If the agricultural education profession truly believes that adult education is a vital component of vocational agriculture, land-grant and nonland-grant universities should put additional emphasis on the adult education component of vocational agriculture.

Recommended Research

1. Research should be conducted to further validate the methods and formulas used in this study to determine
quality of local vocational agriculture programs. This research was concerned primarily with second year teachers. The formulas should be used with more experienced teachers to see what type of quality scores would be generated. The profession should strive to establish some norm scores.

2. This research was concerned primarily with process evaluation as opposed to product evaluation. In the future, research should be conducted to determine the differences in the performance (job placement, enrollment in college etc.) of the students taught by teachers trained at land-grant and nonland-grant universities after their graduation.

3. In this study, and other studies in agricultural education, adult education has not been rated as high as other components of agriculture education. The profession needs to reexamine their stance on adult education in agriculture.
REFERENCES


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Lee, et al. (1978b). Procedure for Recruiting, Selecting and Preparing Persons with Non-Teaching Professional Degrees to be
Teachers of Vocational Agriculture/Agribusiness. Programs for Training Vocational Teachers in Selected Areas of Teacher Shortage. Part II of Final Report. ERIC Document Reproduction Service Number ED 166 385.


Woodin, R. J. (1968). Supply and Demand for Teachers of Vocational Agriculture in the United States for the 1967-68 School Year. Columbus: The Ohio State University.


APPENDICES
January 19, 1984

Dear Dr. :

One of my Ph.D. advisees (Cyril Asiabaka) is conducting a nationwide study of second and third year vocational agriculture teachers. We plan on surveying 333 second and third year teachers. We are interested in examining their views and perceptions of FFA, SOEP, adult education, and classroom instruction. I hope to do some longitudinal studies of this group of teachers, after Cyril completes his study.

We need your help in identifying our sample of teachers. The 1981-82 graduates of your department have been selected to comprise a part of our sample. According to David Craig's 1982 study on the supply and demand of vo-ag teachers in the 1981-82 year, 9 graduates from your department entered vocational agriculture teaching.

Would you be able to send us the names of these graduates and their current address? We are interested in them even if they have left teaching. We realize this will require some effort on your part but we will certainly appreciate it. Conducting a study of second and third year vo-ag teachers is a difficult task to attempt but with your help, we hope to get it done. We'll be glad to share the results of our study with you.

Could you send us the list of names and addresses by February 10? We plan on conducting our research during the spring semester. Thanks for your help.

Sincerely,

Gary E. Moore
Associate Professor
Dear Dr.:

We need your help. On January 19, 1984, I mailed a letter requesting the names and current addresses of your 1981-82 graduates who entered vocational agriculture teaching. Twenty nine universities out of 38 have sent us a list of the graduates. We need your list in order to have a complete frame. We are conducting a national longitudinal study of 333 second and third year teachers. The purpose of this study is to examine their views or perceptions of FFA, SOEP, adult and/or young farmer programs and classroom instruction.

We are still depending on your help in identifying our sample teachers. The 1981-82 graduates of your department have been selected to be a part of our sample. According to David Craig's 1982 study on the supply and demand of vocational agriculture teachers in the 1981-1982 school year, 15 graduates from your department entered vocational agriculture teaching.

Would you please send us the names and addresses of these graduates as they are essential for the success of our study. We would be interested in them even if they have left teaching. We will appreciate it if you take some minutes of your time to compile and send these important names in our study.

Could you send us the list of their names and current school addresses by March 12, 1984. Thanks for cooperating.

Sincerely,

Gary E. Moore
Associate Professor

C. Cyril Asiabaka
Graduate Research Assistant

Enclosure
FROM: Dr. Cary E. Moore  
Associate Professor  

C. Cyril Asiabaka  
Graduate Research Assistant  

TO: Selected Vocational Agriculture Teachers in the United States  

You have been selected to participate in field testing an instrument designed for a nationwide longitudinal study of vocational agriculture teachers. The purpose of the study is to examine the views and perceptions of selected vocational agriculture teachers regarding FFA, SOEP programs, adult and/or young farmer programs and classroom instruction.

This information when analyzed will identify strengths and weaknesses of vocational agriculture. Your participation in field testing this instrument will help the researchers to improve or modify the instrument for final use.

We are aware that completing this instrument will require some effort on your part but we will appreciate you taking a few minutes to complete and return it. You are welcome to add any comments or any important information related to FFA, SOEP, adult and/or young farmer programs of the vocational agriculture classes that you teach.

Could you please return this instrument by March 14, 1984. The information you give will be analyzed in a group and you will not be identified as an individual. All responses will be treated as strictly confidential.

Your cooperation and assistance will be appreciated.

Sincerely yours,

Gary E. Moore  
Associate Professor  

C. Cyril Asiabaka  
Graduate Research Assistant  

Enclosure
FROM: Dr. G. E. Moore
Associate Professor

C. Cyril Asiabaka
Graduate Research Assistant

TO: Selected State Supervisors
for Agricultural Education
in the United States

We are conducting a nationwide study of second and third year vocational agriculture teachers. The purpose of this study is to examine the views and perceptions of these teachers regarding FFA, SOE programs, adult and/or young farmer programs and classroom instruction.

As a state official responsible for agricultural education, you have been selected to participate in field testing an instrument designed to seek opinions and views of states' supervisors of agricultural education relating to the quality or preparation of vocational agriculture teachers by both land grant and non-land grant universities. The strengths and weaknesses identified by this study will be beneficial to teacher educators in land grant and non-land grant universities in planning quality preservice curricula. It is also believed that the findings of this study will be beneficial to vocational agriculture teachers in improving their teaching and integrating the four important components of vocational agriculture.

We realize that you do not have both land grant and non-land grant universities in your state but we still feel that you may have had experiences working with graduates from both systems. We are aware that completing this instrument requires some effort on your part but we will certainly appreciate it. All information from you will be treated as confidential. Please return completed instrument by March 16, 1984.

Sincerely yours,

Gary E. Moore
Associate Professor

C. Cyril Asiabaka
Graduate Research Assistant

Enclosure
March 29, 1984

FROM: Dr. Gary E. Moore
Associate Professor

C. Cyril Asiabaka
Graduate Research Assistant

TO: Selected Vocational Agriculture Teachers in the United States

You have been selected to participate in a nationwide longitudinal study of vocational agriculture teachers. The purpose of the study is to examine the views and perceptions of selected vocational agriculture teachers regarding FFA, SOE programs, adult and/or young farmer programs and classroom instruction. This study when analyzed will identify strengths and weaknesses of vocational agriculture. It is also believed that the findings will be beneficial to vocational agriculture teachers in improving their teaching and integrating the four components of vocational agriculture. The findings of this study will be useful to teacher educators in agriculture in planning preservice curricula.

We are aware that completing this instrument will require some effort on your part but we will appreciate you taking a few minutes to complete and return it. You are welcome to add any comments or any important information related to FFA, SOE, adult and/or young farmer programs of the vocational agriculture classes that you teach.

Could you please return this instrument by April 16, 1984. The information you give will be analyzed in a group and you will not be identified as an individual. All responses will be treated as strictly confidential.

Your cooperation and assistance will be appreciated.

Sincerely yours,

Gary E. Moore
Associate Professor

C. Cyril Asiabaka
Graduate Research Assistant

Enclosure
April 23, 1984

FROM: Dr. Gary E. Moore
Associate Professor
C. Cyril Asiabaka
Graduate Research Assistant

TO: Selected Vocational Agriculture Teachers in the United States

We need your help. On March 29, 1984, we mailed a questionnaire for a nationwide longitudinal study of vocational agriculture teachers. The purpose of the study is to examine the views and perceptions of selected vocational agriculture teachers regarding FFA, SOEP programs, adult and/or young farmer programs and classroom instruction. We are still depending on your help in completing and returning the instrument as you are an important part of our study.

This study when analyzed will identify strengths and weaknesses of vocational agriculture. It is also believed that the findings will be beneficial to vocational agriculture teachers in improving their teaching and integrating the four components of vocational agriculture. The findings of this study will be useful to teacher educators in agriculture in planning preservice curricula.

We are aware that completing this instrument will require some effort on your part but we will appreciate you taking a few minutes to complete and return it. You are welcome to add any comments or any important information related to FFA, SOEP, adult and/or young farmer programs of the vocational agriculture classes that you teach.

Could you please return this instrument by May 8, 1984. The information you give will be analyzed in a group and you will not be identified as an individual. All responses will be treated as strictly confidential.

Your cooperation and assistance will be appreciated.

Sincerely yours,

Gary E. Moore
Associate Professor

C. Cyril Asiabaka
Graduate Research Assistant

Enclosure
FROM: Dr. Gary E. Moore
Associate Professor

C. Cyril Asiabaka
Graduate Research Assistant

TO: Selected Vocational Agriculture
Teachers in the United States

We still need your help. On March 29, and April 23, 1984, we mailed a questionnaire for a nationwide longitudinal study of vocational agriculture teachers. The purpose of the study is to examine the views and perceptions of selected vocational agriculture teachers regarding FFA, SOEP programs, adult and/or young farmer programs and classroom instruction. We are still depending on your help in completing and returning the instrument as you are an important part of our study.

This study when analyzed will identify strengths and weaknesses of vocational agriculture. It is also believed that the findings will be beneficial to vocational agriculture teachers in improving their teaching and integrating the four components of vocational agriculture. The findings of this study will be useful to teacher educators in agriculture in planning preservice curricula.

We are aware that completing this instrument will require some effort on your part but we will appreciate you taking a few minutes to complete and return it. You are welcome to add any comments or any important information related to FFA, SOEP, adult and/or young farmer programs of the vocational agriculture classes that you teach.

Could you please return this instrument by May 30, 1984. The information you give will be analyzed in a group and you will not be identified as an individual. All responses will be treated as strictly confidential.

Your cooperation and assistance will be appreciated.

Sincerely yours,

Gary E. Moore
Associate Professor

C. Cyril Asiabaka
Graduate Research Assistant

Enclosure
APPENDIX H
FROM: Gary E. Moore  
Associate Professor  

C. Cyril Asiabaka  
Graduate Research Assistant  

TO: Selected Principals and Vocational Administrators in the United States  

You have been selected to participate in a nationwide study of second and third year vocational agriculture teachers. The purpose of this study is to determine the views and perceptions of these teachers regarding FFA, SOE programs, adult and/or young farmer programs and classroom instruction.

As the principal or vocational administrator of this teacher, we request your honest assessment of his/her performance/teaching effectiveness. The strengths and weaknesses identified by this study will be beneficial to teacher educators in planning quality preservice curricula. It is also believed that the findings of this study will be beneficial to vocational agriculture teachers in improving their teaching and integrating the four components of vocational agriculture.

It is important to point out that all information from you will be analyzed as a group data and should be treated as strictly confidential. We are aware that completing this instrument requires some effort on your part but we certainly appreciate it. Please return completed instrument by April 28, 1984.

Sincerely yours,

Gary E. Moore  
Associate Professor  

C. Cyril Asiabaka  
Graduate Research Assistant  

Enclosure
APPENDIX I
April 28, 1984

FROM: Gary E. Moore  
Associate Professor  

C. Cyril Asiabaka  
Graduate Research Assistant  

TO: Selected Principals and Vocational Administrators in the United States  

We need your help. On April 4, 1984, we mailed an instrument for a nationwide study of second and third year vocational agriculture teachers. The purpose of this study is to determine the views and perceptions of these teachers regarding FFA, SOE programs, adult and/or young farmer programs and classroom instruction. You are an important part of our study and we are still depending on your completing and returning the enclosed questionnaire.

As the principal or vocational administrator of this teacher, we request your honest assessment of his/her performance/teaching effectiveness. The strengths and weaknesses identified by this study will be beneficial to teacher educators in planning quality preservice curricula. It is also believed that the findings of this study will be beneficial to vocational agriculture teachers in improving their teaching and integrating the four components of vocational agriculture.

It is important to point out that all information from you will be analyzed as a group data and should be treated as strictly confidential. We are aware that completing this instrument requires some effort on your part but we certainly appreciate it. Please return completed instrument by May 7, 1984.

Sincerely yours,

Gary E. Moore  
Associate Professor  

C. Cyril Asiabaka  
Graduate Research Assistant  

Enclosure
APPENDIX J
FROM: Gary E. Moore  
Associate Professor

C. Cyril Asiabaka  
Graduate Research Assistant

TO: Selected Principals and Vocational  
Administrators in the United States

We still need your help. On April 4, and April 28, 1984, we  
mailed an instrument for a nationwide study of second and third year  
vocational agriculture teachers. The purpose of this study is to  
determine the views and perceptions of these teachers regarding FFA,  
SOE programs, adult and/or young farmers programs and classroom  
instruction. You are an important part of our study and we are  
still depending on your completing and returning the enclosed  
questionnaire.

As the principal or vocational administrator of this teacher,  
we request your honest assessment of his/her performance/teaching  
effectiveness. The strengths and weaknesses identified by this  
study will be beneficial to teacher educators in planning quality  
pre-service curricula. It is also believed that the findings of this  
study will be beneficial to vocational agriculture teachers in improving  
their teaching and integrating the four components of vocational  
agriculture.

It is important to point out that all information from you  
will be analyzed as a group data and should be treated as strictly  
confidential. We are aware that completing this instrument requires  
some effort on your part but we certainly appreciate it. Please  

Sincerely yours,

Gary E. Moore  
Associate Professor

C. Cyril Asiabaka  
Graduate Research Assistant

Enclosure
FROM: Dr. G. E. Moore  
Associate Professor

C. Cyril Asiabaka  
Graduate Research Assistant

TO: Selected State Supervisors for Agricultural Education in the United States

We are conducting a nationwide study of second and third year vocational agriculture teachers. The purpose of this study is to examine the views and perceptions of these teachers regarding FFA, SOE programs, adult and/or young farmer programs and classroom instruction.

As a state official responsible for agricultural education, you have been selected to participate in the aspect of the study designed to seek opinions and views of states' supervisors of vocational agriculture relating to the quality or preparation of vocational agriculture teachers by both land grant and non-land grant universities. The strengths and weaknesses identified by this study will be beneficial to teacher educators in land grant and non-land grant universities in planning quality preservice curricula. It is also believed that the findings of this study will be beneficial to vocational agriculture teachers in improving their teaching and integrating the four important components of vocational agriculture.

We are aware that completing this instrument requires some effort on your part but we will certainly appreciate it. All information from you will be treated as confidential. Please return completed instrument by April 16, 1984.

Sincerely yours,

Gary E. Moore  
Associate Professor

C. Cyril Asiabaka  
Graduate Research Assistant

Enclosure
FROM: Dr. G. E. Moore  
Associate Professor  

C. Cyril Asiabaka  
Graduate Research Assistant  

TO: Selected State Supervisors  
for Agricultural Education  
in the United States  

We still need your help. On March 29, 1984, we mailed an instrument for a nationwide study of second and third year vocational agriculture teachers. The purpose of this study is to examine the views and perceptions of these teachers regarding FFA, SOE programs, adult and/or young farmer programs and classroom instruction. You are an important part of our study and we are still depending on your help in completing and returning the enclosed questionnaire.

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Sincerely yours,

Gary E. Moore  
Associate Professor  

C. Cyril Asiabaka  
Graduate Research Assistant  

Enclosure
FROM: Dr. G. E. Moore  
Associate Professor  
C. Cyril Asiabaka  
Graduate Research Assistant  

TO: Selected State Supervisors for Agricultural Education in the United States  

We still need your help. On March 29, and April 23, 1984, we mailed an instrument for a nationwide study of second and third year vocational agriculture teachers. The purpose of this study is to examine the views and perceptions of these teachers regarding FFA, SOE programs, adult and/or young farmer programs and classroom instruction. You are an important part of our study and we are still depending on your help in completing and returning the enclosed questionnaire.

As a state official responsible for agricultural education, you have been selected to participate in the aspect of the study designed to seek opinions and views of states' supervisors of agricultural education relating to the quality or preparation of vocational agriculture teachers by both land grant and non-land grant universities. The strengths and weaknesses identified by this study will be beneficial to teacher educators in land grant and non-land grant universities in planning quality preservice curricula. It is also believed that the findings of this study will be beneficial to vocational agriculture teachers in improving their teaching and integrating the four important components of vocational agriculture.

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Sincerely yours,

Gary E. Moore  
Associate Professor  

C. Cyril Asiabaka  
Graduate Research Assistant  

Enclosure
A NATIONAL LONGITUDINAL STUDY OF VOCATIONAL AGRICULTURE TEACHERS

PART A—Background of Vocational Agriculture Teacher.
Directions: Please check the appropriate response or fill in the blank.

1. Including this year, how many years experience teaching vocational agriculture have you?
   ____ 1 yr. ____ 2 yrs. ____ 3 yrs. ____ 4 yrs. ____ 5 yrs. ____ 6 yrs. or more

2. How many years have you been teaching in your present school? __________

3. Age at last birthday? ____ under 25 yrs. ____ 25 -29 ____ 30 - 39 ____ 40 or over

4. I am a (check one) _____ Female _____ Male

5. Highest Degree earned?
   _____ Bachelors _____ Masters plus 30 _____ Doctorate
   _____ Masters _____ Education Specialist _____ Other (specify) __________

6. At which university or college did you receive your initial preparation as a
   vocational agriculture teacher? _____________________________________________

7. How many teachers are in the vocational agriculture department in which you teach?
   ____ 1 _____ 2 _____ 3 _____ 4 _____ 5 _____ 6 _____ 7 or more

8. In which area do you spend most of your time teaching?
   _____ Production (General) Agriculture  _____ Specialized Agri-business or Cooperative
   Program  _____ Specialized Horticulture  _____ Specialized Agricultural Mechanics
   _____ Other (please specify) ________________________________________________

9. What is the length of your contract?
   ____ 9 months ____ 10 months ____ 11 months ____ 12 months
   ____ 9.5 months ____ 10.5 months ____ 11.5 months ____ Other (specify)

10. How much money is budgeted to you for travel per year?
    ____ $100 or less _____ $101 - 500 _____ $501 - 1000 _____ $1001 or over

11. How many students are enrolled in the vocational agriculture classes that you teach? __________

PART B—Supervised Occupational Experience Programs (SOEP). (Definition of SOEP is on page 5b).
Directions: Please check the appropriate response or fill in the blank.

1. Approximately, what percentage of the students in your class have one "project" or
   one type of SOEP? __________

2. Approximately, what percentage of the students in your class have two or more
   "projects" or types of SOEP programs? __________

3. Approximately, what percentage of the students in your class have no SOEP programs?
   (Total should add to 100%)

4. In a year, how many total visits (approximately) will you make to students observing
   SOEP programs? __________

5. Approximately, what percentage of your students; (Total should add to 100%)
   ____ are not visited during the year. ____ are visited two times in the year.
   ____ are visited once a year. ____ are visited three times or more per year.

6. Are students required to keep record books on their SOEP programs? _____ Yes _____ No
   (If No, please skip to item 9.)

7. Are students given class time on a periodic basis (every week, every month, etc.)
   to update their SOEP program record books? _____ Yes _____ No
8. Are record books/SEI considered in assigning grades? [ ] Yes [ ] No

8a. If yes, what percentage of the class grade is determined by record books/SEI? 

9. In your department, how much time in weeks is allocated to teaching about SEI in:
   - Vocational Agriculture I
   - Vocational Agriculture II
   - Vocational Agriculture III
   - Vocational Agriculture IV
   - Other (please specify)

10. Does the State Department of Education (Agricultural Education Section) require you to submit a summary of the student's SEI programs? [ ] Yes [ ] No

11. On a scale of 1 to 10 (with 10 being excellent, and 1 being poor), how would you rate your undergraduate preparation to conduct SEI aspect of Vocational Agriculture?

SECTION 11:

Directions: On a scale of 1 to 11, indicate your degree of agreement or disagreement to the following items. Circle your response.

<table>
<thead>
<tr>
<th>Strongly Disagree</th>
<th>Undecided</th>
<th>Strongly Agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>2</td>
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<td>9</td>
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<tr>
<td>10</td>
<td>11</td>
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</tbody>
</table>

1. SEI programs are no longer a viable part of Vocational Agriculture.
2. Computers can simulate SEI programs thereby eliminating their use.
3. The elimination of SEI programs would make Vocational Agriculture more attuned to the 80's.
4. All students enrolled in Vocational Agriculture should have SEI programs.
5. Too much emphasis is placed on SEI programs.
6. SEI's are integral to the classroom instruction.
7. SEI programs help Vocational Agriculture teachers to be knowledgeable of the community.
8. Vocational Agriculture students can use their experience in SEI in understanding classroom instruction.
9. SEI programs are good public relations tool for the school, department and the teacher.
10. SEI programs are time consuming and should not be part of Vocational Agriculture programs.
PART C: This part is related to the Future Farmers of America (FFA) chapter activities of your Vocational Agriculture class.

Directions: Please check the appropriate response or fill in the blank.

1. What percentage of your students are members of the FFA chapter? __________
2. Do you have the responsibility as the major or lead advisor of the FFA chapter in your school? Yes No
3. During the last school year (including the following summer), how many FFA meetings were held? __________
4. Are the official opening and closing ceremonies used at FFA meetings? Yes No
5. Do the FFA officers recite from memory their parts in the opening and closing of meeting? Yes No
6. Does the chapter have a written program of activities? Yes No
7. At your FFA meetings, do you generally have guest speakers or formal programs? Yes No
8. If your answer to (item 7) is yes, how many did you have last year (specify)? __________
9. Were FFA calendars used to promote the chapter in the community? Yes No
10. Does your chapter have an annual parent-member banquet? Yes No
11. Does the chapter use the official FFA secretaries book? Yes No
12. Does the chapter use the official FFA treasurers book? Yes No
13. Did your chapter submit applications for proficiency awards above the chapter level? Yes No
13a. How many (if yes to item 13)? __________
13b. If not, how many were placed 3rd or higher at the district level? __________
14. Were committees developed to carry out the program of activities? Yes No
15. How many judging contest teams qualified for the state FFA judging contest from your chapter? __________
16. How many students from your chapter applied for the State Farmer degree last year? __________
17. How many students from your chapter who applied for the State Farmer degree last year received it? __________
18. On the average, what percentage of your members participated in fairs and livestock shows at the local level? __________
At the regional or state level? __________
19. How many proficiency awards were awarded at the local level the last two years? __________
20. In which of the following programs did your chapter participate?
   _____ Building Our America Communities Activities   _____ National FFA Week
   _____ Food For America Activities   _____ Other (specify) __________
21. On a scale of 1 to 10 (10 being excellent, 1 being poor), how would you rate your undergraduate preparation to operate the FFA component of Vocational Agriculture? __________
SECTION II: Your views or opinions toward FFA.

Directions: On a scale of 1 to 11, indicate your response by circling the appropriate response.

<table>
<thead>
<tr>
<th>Strongly Disagree</th>
<th>Undecided</th>
<th>Strongly Agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
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<td>10</td>
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</tbody>
</table>

1. Most Vocational Agriculture teachers put such emphasis on the FFA.
   1  2  3  4  5  6  7  8  9  10  11

2. There is too much emphasis on contests and competition at the expense of classroom instruction.
   1  2  3  4  5  6  7  8  9  10  11

3. FFA is a motivational tool for students.
   1  2  3  4  5  6  7  8  9  10  11

4. FFA activities present a challenging program for students.
   1  2  3  4  5  6  7  8  9  10  11

5. FFA is a component of Vocational Agriculture.
   1  2  3  4  5  6  7  8  9  10  11

6. FFA should involve only students who want to participate in its activities.
   1  2  3  4  5  6  7  8  9  10  11

7. FFA develops leadership in the student.
   1  2  3  4  5  6  7  8  9  10  11

8. FFA is time consuming and should not be included in Vocational Agriculture.
   1  2  3  4  5  6  7  8  9  10  11

9. FFA is essential to make Vocational Agriculture more attuned to the 1980's.
   1  2  3  4  5  6  7  8  9  10  11

10. FFA develops civic and patriotic responsibilities in the student.
    1  2  3  4  5  6  7  8  9  10  11

PART B: This part is related to Young Farmer and/or Adult Farmer component of Vocational Agriculture. (Definition of Young Farmer and/or Adult Farmer Program is on page 5b.)

Directions: Check the appropriate response or fill in the blank.

1. Do you have young and/or adult farmer classes in your Vocational Agriculture program?   ____ Yes   ____ No
   If your answer to item 1 is No, please skip to item 8.

2. On the average, how many students/farmers are enrolled in the adult and/or young farmer class that you teach?
   5 or less   5 - 10   11 or more

3. How many meetings per year do your adult and/or young farmer class have?
   5 or less   5 - 10   11 or more

4. On the average, how many students/farmers attend each adult class meeting?

5. Last year, how many total visits did you make to your adult and/or young farmers?

6. Are adult/young farmers officially affiliated with the FFA alumni or Young Farmers Association?   ____ Yes   ____ No

7. On a scale of 1 to 10 (with 10 being excellent, and 1 being poor), how would you rate the adult and/or young farmer program that you conduct?

8. On a scale of 1 to 10 (with 10 being excellent, and 1 being poor), how would you rate the instruction you received in your undergraduate teacher preparation in adult and/or young farmer programs in Vocational Agriculture?
PART D contd
Section II
This section is seeking your views or opinions toward adult and/or young farmer programs in Vocational Agriculture.
Directions: On a scale of 1 to 11 indicate by circling the appropriate response.

1 2 3 4 5 6 7 8 9 10 11
Strongly Disagree Undecided Strongly Agree

1. There is too much emphasis by Vocational Agriculture teachers on adult and/or young farmer programs.
2. Adult and/or young farmer education is not important in Vocational Agriculture.
3. Adult and/or young farmer programs promote good community-school relationships.
4. There is not much emphasis on adult and/or young farmer programs.
5. Adult and/or young farmer programs should be primarily conducted by extension personnel.
6. Adult and/or young farmer programs should be part of the total Vocational Agriculture program.
7. Vocational Agriculture teachers should conduct adult and/or young farmer programs.
8. Adult and/or young farmer programs are essential for Vocational Agriculture to meet the challenges of the 80's.
9. Adult and/or young farmer programs are time consuming and should be provided by special adult teachers only.
10. Adult and/or young farmer programs should be conducted only at the post-secondary level.

PART E:
Please use the space provided for additional comments about your FFA, BOEP, and Adult and/or Young Farmer programs.

Thank you for completing this instrument
Please return to:
Dr. G. E. Moore,
Dept. of Vocational Agriculture Education,
208 Stubbs Hall, Louisiana State University
Baton Rouge, LA 70803
DEFINITIONS:
Supervised Occupational Experience Programs (SOEP) are defined as supervised occupational learning experiences in vocational agriculture related to instruction which requires development beyond normal school and class hours under the supervision of a teacher, parent, employer, and/or other adult.

The following can be classified as SOE programs:
1. Farm Programs—These are programs that provide opportunities of ownership, self-employment, and management experiences.
   Example: Production projects in crops, livestock, or improvement projects on the farm or farm house, and other supplementary projects.
2. Cooperative Farm Placement—Designed to develop competencies in production agriculture through placements on the farm.
3. Supervised Laboratory Experience—These are experiences on the school farms, shops, school laboratories, ponds, greenhouse, etc.
4. Supervised Exploratory Experience—These include allowing students to interview and observe employers and employees in agricultural firms.
5. Cooperative Agribusiness Placement—These provide experiences in agribusiness for vocational agriculture students.

Adult and/or Young Farmer programs in vocational agriculture refers to all out-of-school instruction related to agriculture or agri-business conducted by the vocational agriculture teacher to youths and/or adults. These include:
1. Courses for young persons who are getting established in farming, or preparing for off-farm occupations requiring knowledge and skills in agriculture.
2. Courses designed for adults who are farmers, or are employed in off-farm occupations requiring knowledge and skills in agriculture.
3. Other non-vocational courses in agriculture, such as citizenship and consumer education in agriculture.
A NATIONAL LONGITUDINAL STUDY OF VOCATIONAL AGRICULTURE TEACHERS

SECTION 1—Background of vocational administrator or school principal.
Please check the appropriate response for each item.

1. How many years of administrative experience in education do you have?
   ___ 1-5
   ___ 6-10
   ___ 11 and over

2. How many years of experience do you have as an educator?
   ___ 1-5
   ___ 6-10
   ___ 11 and over

3. How long have you been in your present position?
   ___ 1-5
   ___ 6-10
   ___ 11 and over

4. What is the title of your present position?
   ___ Principal
   ___ Vocational Supervisor

5. What kind of academic background did you have before becoming an administrator?
   ___ Sciences (Math, Biology, Chemistry, etc.)
   ___ Social Sciences/Humanities (History, English, Government, etc.)
   ___ Fine or Performing Arts (Band, Art, Drama, etc.)
   ___ Physical Education or Drivers Education
   ___ Vocational Education or Industrial Arts
   ___ Other (please specify) ___________________________________

6. I am a ___ male ___ female

7. My age is:
   ___ 29 or under
   ___ 30 - 39
   ___ 40 - 49
   ___ 50 - 59
   ___ 60 or over

8. During the past year, I observed this teacher:
   ___ once or twice
   ___ more than 2 times
   ___ I did not observe this teacher

9. Was this teacher visited by the state supervisory staff in Ag Ed. during the past 3 years? ___ Yes ___ No

10. Was this teacher visited by the university Ag Ed staff during the past 3 years? ___ Yes ___ No
Section II—The following items are concerned with the characteristics, knowledge, and classroom skills of .
Please answer each item as it relates to this teacher. Your responses will be confidential.

Directions: For each statement please respond with a numerical rating of from 1 to 99. The number 1 is extremely low while a rating of 99 is extremely high. A rating of 59 would be average. You may select any number between 1 and 99. If you are not in a position to respond to a particular item, please mark NA. Thank you.

Examples: This teacher's skill in counseling students is . (Slightly above average)
This teacher's knowledge of swine production is . (Low)
This teacher's knowledge of floral arranging is . (High)

11. This teacher's ability to motivate students is .
12. This teacher's ability to relate to students is .
13. The ability of this teacher to use questions while teaching is .
14. This teacher's ability to use a variety of teaching methods is .
15. The enthusiasm of this teacher is .
16. This teacher's ability to plan lessons is .
17. This teacher's ability to hold the attention of the class is .
18. This teacher's classroom control is .
19. This teacher's participation in professional activities is .
20. This teacher's work with the FFA is .
21. This teacher's supervision of student farm projects or job placement is .
22. This teacher's management and housekeeping in the agricultural lab is .
23. This teacher's knowledge and skills in horticulture are .
24. This teacher's knowledge and skills in agricultural mechanics are .
25. This teacher's knowledge and skills in animal science are .
26. This teacher's knowledge and skills in crop production are .
27. This teacher's knowledge and skills in natural resources/conservation are .
28. This teacher's knowledge and skills in farm management are .
29. This teacher's participation in vocational instruction for adults is .
30. This teacher's overall knowledge and skills in the agricultural subject matter is .
31. The overall teaching effectiveness of this teacher is .
32. This person's teacher preparation program was .

Is the above named teacher still employed by your school? 
If no, why did the teacher leave? 

Thank You!!
APPENDIX P
SECTION A

Background information of Vocational Agriculture Supervisors.

Directions: Please check the appropriate response or fill in the blank.

1. How long have you been a Supervisor/Consultant/Director/ Specialist?
   _____ 1 to 3 yrs. _____ 4 to 6 yrs. _____ 7 to 10 yrs. _____ 11 or over

2. How many years did you teach vocational agriculture?
   _____ 1 to 3 yrs. _____ 4 to 6 yrs. _____ 7 to 10 yrs. _____ 11 or over

3. Age at last birthday?
   _____ 29 or under _____ 30 - 39 _____ 40 - 49 _____ 50 - 59 _____ 60 or over

4. I am a (check one) _____ Female _____ Male

EDUCATIONAL BACKGROUND

5. Check the degree you have, indicate the major for each degree, and circle the type of institution.
   LG = Land-Grant University   NLG = Nonland-Grant University

<table>
<thead>
<tr>
<th>DEGREE</th>
<th>MAJOR</th>
<th>TYPE OF INSTITUTION</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bachelor</td>
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<td>LG</td>
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<tr>
<td>Masters</td>
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<td>LG</td>
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<tr>
<td>Ed Specialist</td>
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<td>LG</td>
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<tr>
<td>Doctorate</td>
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<td>LG</td>
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<tr>
<td>Other</td>
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<td>LG</td>
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</table>
(Specify)    |                | LG  | NLG                  |
### SECTION B

#### Directions:
Following is a listing of 22 items which relate to the preparation of teachers. For each item place a check in the column which most nearly represent your views and experiences in working with vocational agriculture teachers. Your response is confidential.

<table>
<thead>
<tr>
<th>The University Teacher Education Program:</th>
<th>Non Land Grant Universities much (or better) than Land Grant Universities</th>
<th>Non Land Grant Universities somewhat (or better) than Non Land Grant Universities</th>
<th>No Difference between Land Grant Universities and Non Land Grant Universities</th>
<th>Non Land Grant Universities somewhat (or better) than Land Grant Universities</th>
<th>Non Land Grant Universities much (or better) than Non Land Grant Universities</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Emphasized the importance of FFA.</td>
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<tr>
<td>2. Does a good job of preparing FFA advisors.</td>
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<td>3. Prepares teachers to participate in fairs, contests, and other activities.</td>
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<td>4. Teach prospective teachers how to keep record books.</td>
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<td>5. Stresses the importance of supervised occupational experience programs (SOEP) to prospective teachers.</td>
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<td>6. Teaches how to conduct adult classes.</td>
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<td>7. Emphasizes adult programs as a vital component of Voc. Ag.</td>
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<tr>
<td>8. Has Faculty in Agricultural Education who are in touch with the teachers in the state.</td>
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<td>9. Has courses in technical agriculture which are too theoretical.</td>
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<td>10. Has faculty in technical agriculture who are more concerned with research than teaching.</td>
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<td>11. Has faculty in technical agriculture who are effective teachers.</td>
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<td>12. Has faculty in technical agriculture who are spread too thin. They are required to teach courses in areas that they are not properly trained.</td>
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<td>13. Has courses in technical agriculture which are practical.</td>
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<td>14. Has adequate facilities (school farms, shops, etc.).</td>
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<tr>
<td>15. Has Agricultural Education faculty who are known and respected nationally.</td>
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<tr>
<td>16. Has Agricultural Education faculty who are effective teachers.</td>
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<tr>
<td>17. Has Agricultural Education faculty who provide in-service education to vocational agriculture teachers.</td>
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<td>18. Produces all-around well prepared teachers.</td>
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<td>19. Teaches teachers how to handle discipline.</td>
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<td>20. Produces teachers who are competent.</td>
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<td>21. Has graduates who are dedicated to teaching.</td>
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<td>22. Attracts a higher caliber of students.</td>
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</tbody>
</table>

Please use the back of this instrument for other comments concerning Land Grant and Non Land Grant Universities.

Thank you for cooperating.
APPENDIX Q

LAND-GRANT UNIVERSITIES AND COLLEGES, BY STATE

Alabama
   Alabama Agricultural and Mechanical University, Normal 35762*
   Auburn University, Auburn 36830

Alaska
   University of Alaska, College 99701

Arizona
   University of Arizona, Tucson 85721

Arkansas
   University of Arkansas, Fayetteville 72701
   University of Arkansas at Pine Bluff, Pine Bluff 71601*

California
   University of California-Davis, Davis 95616

Colorado
   Colorado State University, Fort Collins 80521

Connecticut
   Connecticut Agricultural Experiment Station, New Haven 06504
   University of Connecticut, Storrs 06268

Delaware
   Delaware State College, Dover 19901*
   University of Delaware, Newark 19711

District of Columbia
   University of the District of Columbia, Washington 20005*

Florida
   Florida Agricultural and Mechanical University, Tallahassee 32307*
   University of Florida, Gainesville 32601

Georgia
   Fort Valley State College, Fort Valley 31030*
   University of Georgia, Athens 30602

Guam
   University of Guam, Agana 96910

Hawaii
   University of Hawaii, Honolulu 96822

Idaho
   University of Idaho, Moscow 83843

Illinois
   University of Illinois, Urbana 61801

Indiana
   Purdue University, Lafayette 47907

Iowa
   Iowa State University of Science and Technology, Ames 50010

*1890 land-grant universities
Kansas
  Kansas State University, Manhattan 66502
Kentucky
  Kentucky State University, Frankfort 40601*
  University of Kentucky, Lexington 40506
Louisiana
  Louisiana State University, Baton Rouge, 70803
  Southern University Agricultural and Mechanical College, Baton Rouge, 70813*
Maine
  University of Maine at Orono, Orono 04073
Maryland
  University of Maryland, College Park 20742
  University of Maryland, Eastern Shore, Princess Anne 21852*
Massachusetts
  Massachusetts Institute of Technology, Cambridge 02139
  University of Massachusetts, Boston 02108
Michigan
  Michigan State University, East Lansing 48823
Minnesota
  University of Minnesota, Minneapolis 55455
Mississippi
  Alcorn State University, Lorman 38966*
  Mississippi State University, State 39762
Missouri
  Lincoln University, Jefferson City 65101*
  University of Missouri, California 65201
Montana
  Montana State University, Bozeman 59715
Nebraska
  University of Nebraska, Lincoln 68583
Nevada
  University of Nevada, Reno 89557
New Hampshire
  University of New Hampshire, Durham 03824
New Jersey
  Rutgers, The State University of New Jersey, New Brunswick 08903
New Mexico
  New Mexico State University, Las Cruces 88003
New York
  Cornell University, Ithaca 14853
North Carolina
  North Carolina Agricultural and Technical State University,
    Greensboro 27411*
  North Carolina State University, Raleigh
North Dakota
  North Dakota State University, Fargo 58102
Ohio
  Ohio State University, Columbus 43210
Oklahoma
   Oklahoma State University, Stillwater 74078
   Langston University, Langston 73050*
Oregon
   Oregon State University, Corvallis 97331
Pennsylvania
   Pennsylvania State University, University Park 16802
Puerto Rico
   University of Puerto Rico, San Juan 00936
Rhode Island
   University of Rhode Island, Kingston 02881
South Carolina
   Clemson University, Clemson 29631
   South Carolina State College, Orangeburg 29117*
South Dakota
   South Dakota State University, Brookings 57007
Tennessee
   Tennessee State University, Nashville 37203*
   University of Tennessee, Knoxville 37916
Texas
   Prairie View Agricultural and Mechanical University, Prairie View
      77445*
   Texas Agricultural and Mechanical University, College Station
      77843
Utah
   Utah State University, Salt Lake City 84112
Vermont
   University of Vermont and State Agricultural College, Burlington
      05401
Virgin Islands
   College of the Virgin Islands, St. Thomas 00901
Virginia
   Virginia Polytechnic Institute and State University, Blacksburg
      24601
   Virginia State College, Petersburg 23803*
Washington
   Washington State University, Pullman 99163
West Virginia
   West Virginia University, Morgantown 26506
Wisconsin
   University of Wisconsin, Madison 53706
Wyoming
   University of Wyoming, Laramie 82071
APPENDIX R

NONLAND-GRANT UNIVERSITIES THAT OFFER AGRICULTURAL EDUCATION PROGRAMS BY STATE

Arkansas
Arkansas State University, State University 72467

California
California State University, Fresno 93740
California State Polytechnic University, Pomona 91768
California State University - Chico 95926
California Polytechnic University, San Luis Obispo 93407

Illinois
Southern Illinois University, Carbondale 62901
Western Illinois University, Macomb 61455
Illinois State University, Normal 61761

Kentucky
Morehead State University, Morehead 40351
Murray State University, Murray 42081
Western Kentucky University, Bowling Green 42101

Louisiana
University of Southwestern Louisiana, Lafayette 40504
Louisiana Technical University, Ruston 71272

Missouri
Northwest Missouri State University, Maryville 64468

Oklahoma
Panhandle State University, Goodwell 73939
Cameron University, Lawton 73505

Tennessee
Middle Tennessee State University, Murfreesboro 37130
Tennessee Technological University, Cookeville 37501

Texas
Southwest Texas State University, San Marcos 78666
East Texas State University, Commerce 75428
Sam Houston State University, Huntsville 77341
Tarleton State University, Stephenville 76402
Texas A&M University, Kingsville 78363
Stephen Austin State University, Nacogdoches 75962
Texas Tech University, Lubbock 79409

Wisconsin
University of Wisconsin, Platteville 53818
University of Wisconsin-River Falls, River Falls 54022
From: Dr. G. E. Moore and C. Cyril Asiabaka
To: Selected Agricultural Educators in the United States

We are conducting a study to determine the teaching ability, job performance and attitudes of vocational agriculture teachers who received their undergraduate degrees from selected land-grant and nonland-grant universities in the United States.

One of the objectives of this study is to determine the quality of the vocational agriculture programs that the teachers conducted.

In order to measure this objective, the researchers developed a formula for arriving at a quality score for each of the components of the vo-ag FFA, SOEP and adult program. To arrive at a total program quality score each of the three individual scores are added together. In developing the formulas the researchers identified what they considered to be a quality program in each of the areas and then assigned weights to each of the variables in the formula according to the perceived importance of the variable. The formulas were designed so that a quality FFA and SOEP program would each score 100 points and a quality adult education program would score 50 points. It is possible for more points to be scored on each component. There is no "top end" limit on the score. The formulas were weighted to place slightly more emphasis on local activities.

We tried to develop the formulas so they would be easy to use and calculate. We realize that assigning adult education half the value of FFA or SOEP may bother some people. Some people may want more weight assigned to it while others may not want any weight assigned to it. If an individual state wanted to adapt our formulas they could weight each of the three components according to the emphasis in their state.

We realize that it is difficult to arrive at a simple formula for determining program quality. It would have been very easy for us to get carried away and add in numerous other variables on each formula. We would like your reactions to the formulas.

You are one of ten people with recognized expertise whom we are asking for input. Would you please look over each of the three formulas, look at the samples provided, and then provide your feedback on the attached form. Would you please return this by November 13? Thank you.

Sincerely,

Gary E. Moore
Associate Professor

C. Cyril Asiabaka
Graduate Research Assistant
REACTION TO QUALITY FORMULAS

Please check:

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What suggestions would you have for the FFA Quality Score?
What suggestions would you have for the SOEP Quality Score?

What suggestions would you have for the Adult Program Quality Score?

What suggestions would you have for the Total Quality Score?

Other Comments (You can use back of page)
VITA

Chigozie Cyril Asiabaka was born on September 29, 1953 in Awoldemili, Imo State, Nigeria. He attended primary and secondary school in Awoldemili. Upon graduation from high school in 1972, he was admitted to the Alvan Ikoku College of Education, Owerri, Nigeria in September 1973 to study Agricultural Science. He received the Nigeria Certificate in Education (N.C.E.) in June 1976. He served the National Youth Service Corps teaching agriculture science at Women Teachers College, Kano, Nigeria. In October 1977, he was employed by the Benue State Public Service Commission as an Assistant Education Officer (Agricultural Science). He served in this capacity as an instructor of Agricultural Science in Government College, Makurdi, Nigeria until the end of 1979.

In 1980 he enrolled at the University of Georgia, Athens and received the Bachelor's degree in Agriculture in 1981 and the Master's degree in Agricultural Education in 1982.

In January 1983 he enrolled at the Louisiana State University and worked as graduate research assistant in the Department of Extension and International Education while pursuing his Ph.D. degree in Agricultural Education.

His professional experience includes the use of tools and technique of research and teaching college level students in agricultural science.
He is married to Ihuoma and is blessed with two children. Chigozie Jr. born in Athens, Georgia while working for the Master's degree and Chinekwu born in Baton Rouge while working for the Ph.D. degree.
Candidate: Chigozie Cyril Asiabaka

Major Field: Vocational Agricultural Education

Title of Thesis: The Teaching Ability, Job Performance, and Attitudes of Vocational Agriculture Teachers Who Received Their Undergraduate Degrees in Selected Land-Grant and Nonland-Grant Universities in the United States

Approved:

[Signature]
Major Professor and Chairman

[Signature]
Dean of the Graduate School

EXAMINING COMMITTEE:

[Signature]
Michael J. Barnett

[Signature]
Joe Kostilik

[Signature]
[Signature]

Date of Examination:

November 19, 1984