

A STUDY OF ATTITUDINAL CHANGES OF STUDENT  
TEACHERS IN AGRICULTURAL EDUCATION

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A STUDY OF ATTITUDINAL CHANGES OF STUDENT  
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## CHAPTER I

### INTRODUCTION

#### Significance of Problem

Vocational agriculture has traditionally been used for training persons "who have entered upon or who are preparing to enter upon the work of the farm." President Kennedy's Panel on Vocational Education, reporting in January, 1963, recommended a broadening of vocational education in agriculture to include education for non-farm occupations requiring knowledge and skills in agriculture. This recommendation was implemented by the passage of the Vocational Education Act of 1963 (Public Law 88-210). According to projections under this act, by 1970 at least 35% of all high school students will be enrolled in a vocational education program gaining the necessary skill and knowledge that will enable them to obtain gainful employment or continue training in post-secondary programs for such employment. (1) This recent legislation has undoubtedly expanded the scope of local programs and as a result, they vary more than ever before in subject matter content and opportunity for participation in intra-curricular activities.

The teacher of vocational agriculture has always experienced a considerable amount of freedom in developing the local program. Phipps (2) comments: "Many departments of agriculture in the public schools are operating under unwritten policies that have developed through

tradition. . ." The statement is true, but the schools can now develop programs to meet the total needs of their students and still comply with the Vocational Education Act of 1963.

The type of local program is a product of the interaction of the teacher, community, parents, school officials, and students. But, in reality, the vocational agriculture teacher's interest, values, and attitudes are probably the most important factors in determining content and emphasis of these programs. Local socio-economic and agricultural conditions, and geographic location are important factors and should not be overlooked.

The variety of schools and programs is an asset in selecting local schools for teacher training centers since these varying conditions make it possible for student teachers to do their student teaching in a relatively unfamiliar setting. This has the advantage of enriching their experiences and giving them better preparation for coping with the variety of conditions they will meet as a teacher.

In Oklahoma, teacher training centers in agricultural education are selected according to the following criteria: geographic location; type of program; physical plant and facilities; and qualifications of the teacher. These student teaching centers are considered by many to be the outstanding vocational agriculture departments in the state.

The student teachers are assigned to the teacher training centers and they are expected to participate in as many learning experiences in connection with teaching vocational agriculture as possible. They are often asked to teach one or more classes or to assist in farm shop with instruction or supervision. Sometimes they are given complete responsibility for training FFA judging teams, preparing for an FFA banquet

or presenting an FFA assembly program. They are expected to participate in the same civic and community events as does the cooperating teacher. This broad participation provides many experiences of a real nature which student teachers can use for ideas when they become teachers.

Actually, the student teaching concept combines a theoretical background with a practical approach which, hopefully, will result in an experienced product that is capable of assuming the role of vocational agriculture teacher. Will this experience alter the student teacher's idea of what should be taught and emphasized in a local program?

Teaching is undoubtedly a rich and rewarding experience for the student teachers. Upon returning to the university campus, they often boast about the fact that their school was the best in the state. This type of reaction would indicate that they have been influenced by their experience and that possibly their attitudes have changed in certain areas. Some students will undoubtedly experience more attitudinal change than others. This difference could be attributed to both the nature of the individual and the characteristic(s) of the experience. Sherif and Sherif (3) state:

Attitudes are formed in relation to situation, person or groups with which the individual comes into contact in the course of his development, once formed, they determine that the individual reacts in a characteristic way to these or related situations, persons, or groups. This characteristic feature, which is inferred from behavior (verbal or non-verbal), denotes a functional state of readiness in relation to stimulus situation which elicit it.

## Clarification of Terms

In order to have understanding and avoid confusion, many of the special terms should be identified, defined and explained at this point. Therefore, the following list of terms has been included in this section of the study.

Student teaching. Student teaching is the culminating professional laboratory experience in which the college student assumes increasing degrees of responsibility for certain aspects of the program in the role of a teacher at the secondary level but under the supervision of a fully qualified vocational agriculture teacher and a college supervisor. (4)

Cooperating teacher. The cooperating teacher is a fully qualified, regularly employed vocational agriculture teacher who guides and supervises the observation, participation, and teaching activities of a college student as he gains competence in performing the roles of a teacher. (4)

Student teacher. The student teacher is a college student who is doing student teaching. (4)

College supervisor. The college supervisor is the college faculty member who cooperates in assigning, supervising, and evaluating student teachers. (4)

Student teaching center. A student teaching center is a public school which has been approved by Oklahoma State University for participation in the student teaching program.

Future Farmers of America or FFA. The Future Farmers of America, or "FFA" as it is commonly known, is the national organization for boys

studying vocational agriculture in public secondary schools under provisions of the National Vocational Education Acts. As an integral part of the program of vocational education in agriculture in the public school system of America, the FFA has become well known in recent years. No national student organization enjoys greater freedom of self-government under adult counsel and guidance, than the Future Farmers of America. (5)

State Department of Vocational Education. The State Department of Vocational Education is the agency that supervises and administers all vocational education programs in Oklahoma.

District supervisors. The district supervisors in this case are the five men supervising the vocational agriculture program in Oklahoma. Their immediate superior is the state supervisor of vocational agriculture.

High participators, Medium participators, or Low participators. Each student teaching center was placed into one of these categories by their respective district supervisor. This placement or rating was made on the extent of participation in FFA activities as assessed by these individuals.

Pretest. The pretest is the test administered at the beginning of the student teaching experience. This test is an attitude inventory designed by the writer for use in this study.

Post-test. The post-test is the test given at the conclusion of the student teaching experience. This test is the same as the pretest.

Dogmatism Scale. The Dogmatism Scale refers to the instrument developed by Rokeach to measure open-mindedness and close-mindedness.

Attitude. Attitude as used in this study refers to the ideas of student teachers toward participation in FFA activities.

#### The Statement of the Problem

The basic problem of this investigation was to sample and explore the attitudes of student teachers in agricultural education toward participation in FFA activities before and after their student teaching experience. This problem was explored in an effort to determine whether attitudinal change regarding participation in FFA activities had occurred. A second aspect of the problem was to ascertain whether the direction of attitudinal change, if any, was toward the expressed attitude of the cooperating teacher. A third aspect of the problem was to ascertain if students who were close-minded would change less than students who were open-minded.

#### The Purpose of the Study

The purposes of the study are:

1. To determine whether "high" participating student teaching centers have more or less influence on the attitudes of student teachers than "medium" or "low" participating student teaching centers.
2. To determine whether the close association of student teachers with cooperating teachers would tend to produce a similarity of expressed attitudes.
3. To determine the effect of dogmatism on attitude change in student teachers.
4. To determine the opinions of cooperating teachers on participation in certain FFA activities.

### Assumptions

There were basic assumptions that had to be identified in a study of this nature. The validity of the findings of this study was subject to the correctness of the following assumptions:

1. The district supervisors were qualified to rate the student teaching centers regarding their participation in FFA activities.
2. The attitudes expressed by the student teachers and the cooperating teachers were honest expressions of their concern and feelings toward all the items presented.
3. The responses on the Dogmatism Scale were honest expressions of the student teachers' feelings.
4. The activities referred to on the attitude scale were representative of FFA activities in general.
5. If there are any changes in attitude these changes can be measured.

### Delimitation of the Problem

This research was conducted during the second semester of the 1966-1967 academic year and the first semester of the 1967-1968 academic year at Oklahoma State University. All the student teachers in agricultural education for these particular semesters were used in the study. There was no effort made to assign students to certain teaching centers for the purpose of this study. However, student teaching assignments were based on meeting the following criteria:

1. No student teacher was permitted to return to his home

school or to a school within a 50 mile radius of his home.

2. Student teachers were not permitted to train under their former high school vocational agriculture teachers.
3. Student teachers were encouraged to train in a different geographic area other than their home school area.

The cooperating teachers who participated in this study were all the regular cooperating teachers normally used for this purpose. They were not informed that the study was being conducted until after the student teachers had returned to the campus.

The student teaching centers were rated on participation in FFA activities by the district supervisors. This rating was made after the nature of the study had been explained to the supervisors.

#### Limitations of the Study

The responses of the subjects in a form of agreement, disagreement, or a neutral statement was the only method used in determining attitude toward a general area and a specific statement. It seems unlikely that such limited expression could be conclusive evidence in an attitudinal investigation in regard to one area in education. It should be noted further that situational responses were limited to participation in FFA activities.

The investigation was limited to the change that took place during the student teaching experience for only one brief period of the school year.

It should also be noted that the instrument(s) were administered during periods of anxiety for the student teachers. The pretest and

the Dogmatism Scale were given immediately prior to their departure from the university campus and the post-test was administered immediately upon their return which was just prior to the closing of the regular school semester.

It must be stated that the conclusions derived from this study were within the confines of the described limitations and were relative to this study only.

## CHAPTER II

### THEORETICAL BACKGROUND

#### Introduction

This study involves the attitudinal change that took place with 75 student teachers in agricultural education during their seven weeks of student teaching. The characteristic of attitudinal change under study is the effect of the student teaching experience upon attitudes toward participation in FFA activities. The theoretical background covering the entire study will be presented in five different sections.

The first section will cover attitudes, attitude measurement and attitude change. The second area to be reviewed will be general information on student teaching regarding its value and place in teacher education. The purpose of student teaching will also be included in this section. The third part explains the selection of cooperating teachers and student teaching centers. It has been assumed that the cooperating teacher has considerable influence upon the student teacher, therefore, it is important that the selection criteria for both the cooperating teachers and student teaching centers be explained.

The fourth area concerns the Future Farmers of America or the FFA organization. The FFA program is a part of every vocational agriculture department and it is under the banner of the FFA that vocational agriculture students participate in the many activities associated with

the vocational agriculture department. It is necessary to understand the structure of the organization and to be somewhat familiar with the many activities that are used in the organization to support the learning process.

The final section of this chapter discusses the construction of the attitude scale. It also explains the general use of the Dogmatism Scale and its special use in this study.

#### Attitudes, Attitude Measurement and Attitude Change

Though there are many definitions of attitude and opinion, Thurstone's (6) definition of an attitude and opinion will be used to explain the two terms as they apply to this study:

An attitude "is the sum total of a man's inclinations and feelings, prejudice or fears, thoughts, and convictions about any specified topic." The term opinion will be used as the "verbal expression of the attitude."

If a teacher says that students should be as punctual as teachers, this statement is spoken as an opinion. The term opinion is restricted to the verbal expression. But it is an expression of what? It expresses an attitude, supposedly. This should remove any difficulty in understanding the use of the two terms. (6)

Our next point concerns what it is that we want to measure. According to Thurstone (6), when a teacher says that all students should belong to a youth organization, the thing that interests them is not actually the string of words or even the meaning of the statement, but rather the attitude of the speakers' thoughts, and the feelings of the teacher about students and youth organizations. It is the teacher's attitude then that actually interests his students. For this

study the opinion has interest only in so far as it is interpreted as a symbol of attitude. It is therefore something about attitudes that will be measured. Opinions shall be used as the means to measure attitudes.

Murphy and Likert (7) state:

Attitude measurement is not an end in itself. Its purpose is usually to provide information concerning motives of individuals or groups in situations or assist social planners and controllers to understand behavior dynamics.

Attitude measurement was used in this study in determining the amount of change that takes place during student teaching. The student teachers were given a pretest and a post-test and the difference was considered "change." The cooperating teachers were administered the same test but their responses were used only as reference points in determining direction of change for each statement providing there was a difference on the student teacher's pretest and post-test response.

Murphy and Likert (7) discuss the need for a distinction between attitude and opinion with these statements:

It has been said that an attitude is a set or adjustment in preparation for a certain sort of overt behavior, whereas an opinion is merely a judgment stated in verbal terms. The words "attitudinal" and "opinion" are loose terms borrowed from daily life, and have not yet received any final definition through concrete empirical work: their meaning is far indeed from realizing the crisp finality of such terms as "ohm" and "erg."

According to Thurstone (6):

When we measure a man's attitude in some certain area, we shall not declare that this is an ending condition, but we take for granted people's attitudes are subject to change.

Lehman (8) says: "that there is no denying the fact that students do change in their attitudes and values while attending college."

Sells and Trites (1) state:

Attitude change is constantly occurring as a result of learning and to achieve some deliberate changes it appears possible to communicate directly with individuals, as by talks, classes and workshops.

Interactions of this nature are a common occurrence in student teaching practices. It is the responsibility of the cooperating teacher to discuss and explain the local program to the student teacher and to help him learn and better understand the reasons for having a particular type of vocational agriculture program.

According to Oppenheim (10):

Most definitions of attitude agree that an attitude is a state of readiness to react to stimuli. The individual's attitudes are present but dormant most of the time; but attitudes are reinforced by beliefs and often attract strong feelings.

"The first restriction on the problem of measuring attitudes is to specify an attitude variable and to limit the measurement to that variable," according to Thurstone. (6) The variable in this study was attitude toward participation in FFA activities. The scale to measure this attitude was developed especially for this study.

Sells and Trites (9) state:

Attitude change depends first on ascertaining motive patterns of individuals. Each individual seeks some degree of recognition and sense of importance. Achievement of goals, particularly if they are reinforced by work associates and family members, provides a feeling of accomplishment and recognition.

Osgood and Tannenbaum (11) approached the problem of attitude change with a theoretical model that was based on the principle of congruity to predict change or resistance to change. Their model was based on "reference to the original attitude toward the source of the message," which, for purposes of this study, could apply to the cooperating teacher or the learning situation such as an area of the total

program. The second part of their model referred to "original attitude toward the object evaluated by the message," which, for use in this study, could apply to the feelings of the student teacher previous to the experience. The final part of their model was concerned with "the nature of the evaluative assertion" and this could apply in this study as the importance of the situation as determined by the student teacher. Degree and direction of attitude changes are assumed to be functions of the congruity of the above quoted items.

#### General Information on Student Teaching

A question may be raised at this point: How does student teaching fit into this concept of attitudinal change and what is its influence on role expectation? Following are selected comments on this question.

It has been said by Reynard (12) that "professional laboratory experience (student teaching) seems to be the area least challenged in teacher education." On the other hand, Corrigan and Griswold (13) said "there does not seem to be . . . strong research evidence regarding the value of student teaching." Although the desirability of student teaching is not often questioned by educators, critics, or students, studies of the value of this training are often based upon opinions rather than upon observable behavior, according to Ryans (14).

Student teaching in agricultural education is a different experience than student teaching in regular secondary education. This difference may be attributed to the nature of the subject matter area. The actual teaching of vocational agriculture in a public school involves much more than classroom teaching. The student teacher becomes

involved in classroom and laboratory teaching, field trips, community service projects, civic responsibilities, and sponsorship of FFA activities. For these reasons student teaching is a highly valued experience in teacher preparation in agricultural education.

In general, there seems to be some evidence and many good reasons for suspecting that teaching is more of an art than a science. If this is the case, then one probably learns more in terms of habits and skills from imitation and practice than from formal courses in education. Formal study of education may, of course, help one to formulate concepts of teaching and arrive at some fairly systematic opinions on the subject. (15)

The student teachers are encouraged to become involved in all the problems and activities associated with teaching vocational agriculture. If this is done, it is true that learning how to teach may be more of an art than a science.

Miller (16) states:

The learning of a role cannot be achieved by reading or observations alone, though these should be included. The student must encounter reality in the form of participation in a situation in which he has some degree of responsibility and in which insight and performance can be appraised. . . . Role-awareness is less well developed in teacher preparation than in other occupations. Thus, the student teaching experience provides the teacher trainee with his first extended opportunity to examine the applicability of previously formed attitudes about teaching.

"If, then, the conceptual expectations of the student teacher are not in accord with his perception once he enters into the school, then he must change his attitudes," according to Elwell. (17)

Placement is another important factor in attitudinal changes in

student teachers. Elwell (17) comments:

While some attitude changes can be expected in all student teachers, the extent of change may be influenced by any factor which would tend to maximize the probably dissonance. The cultural and experimental background of student teachers enrolled in state supported teacher education institutions is predominantly middle class. The probability of attitude change, therefore, should be greater for those students placed in schools culturally different. . . .

It is expected that some changes in attitude will be found in this study because the student teachers, in many cases, were placed in an almost entirely new environment in regard to type of programs, geographic location, and general school characteristics. How much effect these conditions had on the student teachers is yet to be determined.

According to Adams and Dickey (18):

. . . functionally speaking, student teaching becomes the experience resulting from the interaction of the student teacher with an environment designed to produce changes in his behavior aimed toward becoming a teacher.

One may pose the question about the purposes of student teaching and how they relate to the study. The fourth purpose as stated in the Student Teaching Manual (4) seems very pertinent at this point. It is:

To provide student teaching experiences that will give prospective teachers an opportunity to try out, in practical situations, the concepts, attitudes, skills, and knowledges, which they have developed.

Student teaching gives the individual a chance to try out many of the things they have learned either previous to or during their college training. Student teaching is, therefore, an interaction and a learning experience for all concerned. The student teacher learns from the cooperating teacher, the students and the community. According to Rex (19):

The student teaching experience provides the realistic environment where the applicability of previously acquired and formal preparation are assessed in light of the students' perceptions of the public school experience.

#### Selection of Cooperating Teachers and Student Training Centers

This study is designed to show how student teaching in agricultural education may bring about a change of attitude in student teachers in some special area, which in this case is participation in activities of the Future Farmers of America Organization.

There are nearly 400 vocational agriculture teachers in Oklahoma and slightly less than 50 of them have been selected to serve as cooperating teachers. The Student Teaching Manual (4) makes the following statement regarding the cooperating teachers:

The public school teacher who cooperates with the training institutions by supervising and evaluating the student teacher on a day-by-day basis is an indispensable part of an effective program of teacher development. The cooperating teacher cannot escape the fact that his influence is one of the strongest factors in determining the type of teacher that will be produced. The future of our profession depends to a great degree on the quality of the professional character which experience provides the student teacher.

According to Reeves (20), there has been little research in the area of selection of cooperating teachers and student teaching centers.

He continues:

The characteristic of teachers best qualified to introduce others into the complexities of teaching would seem to be a subject around which considerable literature could be located. On the contrary, the cooperating teacher has been almost completely overlooked as a subject for objective research. Availability and willingness of the cooperating teachers, are, apparently, the only determining factors most frequently employed in their selection.

The teacher training institutions in Oklahoma are indeed

fortunate in having many public school teachers who are willing to train student teachers. This is especially true with regard to training vocational agriculture teachers because, among other rewards, the cooperating teachers are remunerated for each trainee placed under their supervision.

The Student Teaching Manual (4) lists the following criteria for selecting cooperative teachers:

Criteria for cooperating teachers should include:

1. A minimum of 3 years successful teaching experiences.
2. At least 2 years in the current teaching assignment.
3. An expresses willingness to accept student teachers with adequate understanding of the time necessary for their supervision.
4. A demonstrated capacity for conveying both theoretical and practical ideas to others.

Additional desirable criteria:

1. The cooperating teacher should possess a master's degree.
2. The cooperating teacher should be skilled at demonstrating ways that learning can be stimulated and ways in which the democratic processes can function in the classroom.
3. The cooperating teacher should be able to evaluate the work of the student objectively.
4. The cooperating teacher should be able to allow someone else (the student teacher) to become a teacher in his classroom.
5. The cooperating teacher should have the opportunity to experiment in his classroom with his students.
6. The cooperating teacher should be flexible enough to allow new methods and approaches to be used in his classroom.

The characteristics of the cooperating teacher are the most

important factors in selecting student teaching centers. Unless he is willing to accept student teachers and work with them the necessary hours, the program cannot be successful. Finding suitable cooperating teachers does not seem to be a great problem because there is a certain amount of honor and prestige connected with this assignment in vocational agriculture in Oklahoma. The cooperating teachers are considered by many to be the outstanding teachers in the state, but their programs may be quite different and the amount of emphasis they place on FFA activities varies a great deal.

In addition to having a teacher with the necessary qualifications, schools used for training prospective vocational agriculture teachers must meet special requirements which include geographic location, program emphasis, as well as having available suitable buildings and equipment for use in the training program.

The geographic location is important because it is essential that student teachers have an opportunity to be placed outside their home area. It is important to have the many different agricultural areas represented, which is accomplished by selecting student teaching centers throughout the state.

Each public school that wishes to qualify as a cooperating school must have an outstanding program in their department of vocational agriculture. Strong points such as shows and fair participation, classroom instruction, community service, and adult programs are all considered in selecting these centers.

It is currently the policy for the district supervisors to recommend a group of schools from their respective districts to serve as teacher training centers. These recommended schools are visited by

staff members in agricultural education and agricultural engineering in an evaluation effort to obtain the ones which would be of superior quality. In addition to evidence of professional improvement by the teacher, a complete and well-rounded program must be present. (21)

The physical plant and facilities are sometimes limiting factors in determining kinds of programs in vocational agriculture. Until very recently, the local school could not get much outside help in obtaining equipment and supplies. Limited funds in many school districts are often reflected in the inadequacy of buildings, especially in the vocational areas because these areas have not had high enrollments. It is important that many different types of buildings and facilities be represented in student teaching centers. Variations in local programs due to a difference in cooperating teachers and facilities provides an opportunity to study change in attitudes of student teachers regarding their ideas on participation in FFA activities. This raises a question concerning the FFA, what it is, what it does, and how it fits into the local program of vocational agriculture.

#### Future Farmers of America

There seems to be many versions of the proper role or place of the organization and this variation in thinking results from the fact that the destiny of the FFA is left almost wholly to the local school, as long as certain basic requirements are met.

The Official Manual (5) gives the following description of the FFA:

. . . The FFA is an intra-curricular activity having its origin and root in a definite part of the school curriculum-vocational agriculture. Among other things, members learn through active participation how to conduct and take part in a public meeting; to speak in public; to buy and sell cooperatively; to solve their own problems; to finance themselves; and to assume civic responsibility.

The Future Farmers of America exists today because of a cooperative spirit and a desire on the part of farm boys, 14 to about 21 years of age, preparing for farming through vocational agriculture, to have a national organization of their own in which they may secure practical business experience, act as their own instructors, and enjoy the fellowship of one another. Improved agriculture, better local communities, a more satisfying farm home life, and more efficient farmer-citizens are emerging as a result of the boys' experiences. . . .

In Oklahoma, the local program of work is planned by the chapter officers and the advisor. The local vocational agriculture teacher serves as the advisor. This group works closely with the school officials in determining the activities of the chapter for the school year and summer months. The Official Manual (5) suggests: "When FFA activities are approved by the administrator it eliminates the possible duplication of school activities and promotes cooperation between school departments."

Phipps (2, p. 359-360), of Illinois, is considered by many to be an authority on FFA activities and he has made the following remarks:

Contests and awards are means of motivating FFA members to carry out their chapter's program of work and to develop their individual abilities. There are a number of contests which FFA members may enter. Some of these are national in scope, while others are on the state or district level. When a contest puts too much emphasis on first place, some teachers may put in more time than is justified in preparing a team or individual for the contest.

FFA chapters and members should be encouraged by their chapter advisors to evaluate a contest or award carefully.

Each contest in which participation is anticipated should be evaluated to determine whether it develops desirable or undesirable attitudes or interests.

All awards and contests should be checked to see whether they have become ends instead of means. Some awards and contests may degenerate until they become ends in themselves. An award or contest is not justified if its only value is creating interest among the participants and capturing the attention of the public. A contest should highlight the winning team or individual to the extent that some teachers, administrators, and portions of the public will assume that the winning of the contest is a principal criterion of the success of a vocational agriculture department.

Contests and awards are a very important function in the Oklahoma program. This is evidenced by the proportionately high number of national award winners each year at the national convention. State programs are large in scope. For example, the Junior Spring Livestock Show in Oklahoma City is the largest state junior fat stock show in the nation and the state FFA members are perhaps responsible for the largest number of exhibits. A high rate of participation at all levels has traditionally been a part of the Oklahoma program.

Many local chapters have become identified with certain activities and many of their members, both individuals and teams, have attained fame for setting records in certain areas. In many schools the FFA program of work has centered around participation in contests. Many other schools have become recognized for moderate participation in FFA activities. The different kinds of teaching centers also train student teachers with different viewpoints and backgrounds. These factors should make feasible a study in change of attitudes.

## Attitude Scale

Oppenheim (10) offers some suggestions for developing attitude scales. It is essential to make a pilot study of the area in question. This should be done after reviewing the available literature, and the pilot study should have depth and purpose. It should explore the origins, complexities, and ramifications of the attitude in question. This should help determine precisely what should be measured. The pilot study should also supply a group of suitable statements to be used in the final scale.

Oppenheim (10) offers the following suggestions on writing attitude statements:

Having decided on the general pattern which our attitude scale should have, we now must compare the item pool, the collection of attitude statements from which the scale will be built. Perhaps the best guide to the writing of statements is to say that they should be meaningful and interesting, even exciting to the respondents. There are many attitude scales which falter because the items have been composed in the office according to some theoretical plan and fail to arouse much interest in the respondents.

It goes without saying that attitude statements should avoid double negatives and should be short and uncomplicated rather than long and garlanded with subordinate clauses. Proverbs and well-known sayings are also best avoided. Attitude statements are better when they have a certain freshness forcing the respondent to think and take a stand.

The attitude scale used in this study was developed according to many of the suggestions that were offered by Oppenheim. The scale was used to obtain opinions of student teachers and cooperating teachers regarding participation in FFA activities. This scale was administered as a pretest and as a post-test to the student teachers and as an opinionnaire for the cooperating teachers.

The scale used by the writer contained 25 statements with instructions to respond at one interval on a five point continuum. Corrigan and Griswold (13) have made the following comments regarding the measurement of attitudes in this manner:

The students responded to the items on the inventory on a five-point continuum of strongly agree, agree, uncertain, disagree, or strongly disagree. These responses were scored on a five point numerical scale. A comparison of each students' responses prior to and upon completion of student teaching was considered a measure of his attitude change during the semester.

The scale used in this study was constructed according to the plan described by Corrigan and Griswold (13).

All that we can do with an attitude scale, according to Thurstone (6), is to measure the attitude actually expressed with the full realization that the subject may be consciously hiding his true attitude or that the social pressure of the situation has made him really believe what he expresses . . . all we can do is to minimize as far as possible the conditions that prevent our subjects from telling the truth. . . .

#### Dogmatism Scale

The writer felt that it would enhance the nature of this investigation if another area could be incorporated into the study on change in attitude of student teachers. It was with this thought in mind that it was decided to use Rokeach's Dogmatism Scale to measure open-mindedness and close-mindedness.

Rokeach (22) reported that people who score extremely high on the Dogmatism Scale are shown to differ consistently from those who score extremely low in their ability to form new belief systems, whether

these new systems are conceptual, perceptual, or aesthetic in nature.

It would seem that the student teaching experience would provide an opportunity to develop new belief systems. Rokeach (22) points out that there were definite differences in those who were open-minded and close-minded in problem solving, remembering and perceiving, and also in emotional experiences.

Rokeach (22) made the following remarks about his scale:

. . . each statement in the scale had to be designed to transcend specific ideological positions in order to penetrate to the formal and structural characteristics of all positions.

Persons adhering dogmatically to such diverse viewpoints as capitalism and communism, Catholicism and anti-Catholicism, should all score together at one end of the continuum, and should all score in a direction opposite to others having equally diverse yet undogmatic viewpoints.

Rokeach's Dogmatism Scale has been used in a great number of studies. These studies deal with such topics as compartmentalization, analysis, synthesis, rigidity, critical thinking, and teaching success.

There have been a number of studies involving change of attitude in student teachers. Most of these studies were made by using the Minnesota Teacher Attitude Inventory as a pretest and post-test method in determining change in attitude in regard to becoming a better teacher. Finally, the review of literature did not reveal a study similar to the one done by this writer.

Student teachers in agricultural education experience a period of growth and development during the period when they are working under the supervision of their cooperating teacher. It is hoped that this period will help them develop the proper attitudes about participation in FFA activities and teaching vocational agriculture in general.

## CHAPTER III

### DESIGN AND METHODOLOGY

#### Introduction

The purpose and design of this study is presented in the first part of this chapter and is followed by a description of the sample, an explanation of the instruments used, a calendar for data collection and activities, a discussion of the hypotheses to be tested, and an explanation of the statistical procedures used in testing the hypotheses.

The main purpose of this study was to determine whether significant differences occur between student teaching centers as they affect the attitude of student teachers toward participation in FFA activities.

At this point, there are three terms which are used extensively in the chapter that should be defined. The first term is "participation in FFA activities" which may be defined as the degree of involvement in regular intra-curricular activities which are commonly associated with a program of vocational agriculture in Oklahoma. The second term is "treatment" which may be defined as the total student teaching experience. The third and final term is "treatment groups" which may be defined as the categories in which the student teaching centers were placed by the state department officials for use in this study.

## Design

The officials in the State Department of Vocational Education and other knowledgeable persons readily agree that differences exist in the amount of participation in FFA activities by local departments of vocational agriculture in Oklahoma. The fact that this difference exists makes it possible to conduct this study because treatment groups were based upon differences in the amount of participation in FFA activities by student teaching centers.

In accomplishing the purpose of this study, a quasi-experimental design consisting of three treatment groups was used. In order to determine treatment groups, it was necessary to rank the student teaching centers in regard to their degree of participation in FFA activities. The writer's advisory committee suggested that perhaps the state supervisory staff for vocational agriculture was the best qualified group to competently rank these centers by degree of FFA participation. The state supervisors were contacted (See Appendix D) and they agreed to have the district supervisors rank the student teaching centers in their respective districts. Thirty-two schools, which the Agricultural Education Department at Oklahoma State University used as teacher training centers during the spring semester of 1966-67 school year and the fall semester of the 1967-68 school year, were ranked and used in the study. The members of the state staff who were involved in the ranking of these 32 schools were:

1. Mr. Byrle Killian, State Supervisor, Oklahoma Vocational Agriculture;
2. Mr. Herb Mackey, State Supervisor, Oklahoma Vocational Agriculture;

3. Mr. Donald D. Brown, District Supervisor, Oklahoma Vocational Agriculture;
4. Mr. Cleo A. Collins, District Supervisor, Oklahoma Vocational Agriculture;
5. Mr. Ralph R. Dreessen, District Supervisor, Oklahoma Vocational Agriculture;
6. Mr. Olen D. Joyner, District Supervisor, Oklahoma Vocational Agriculture;
7. Dr. J. B. Morton, District Supervisor, Oklahoma Vocational Agriculture;
8. Mr. Benton F. Thomason, District Supervisor, Oklahoma Vocational Agriculture.

The following criteria for ranking were suggested by the writer: a rank of "low" was to be given to those schools which limited their FFA participation to local and district activities; a "medium" rank was to be given to those schools which participated at the local, district, and state level; a "high" rank was to be given to those schools which participated at all possible levels including out-of-state and national events. It should be added that these rankings would not be published and that they should be kept confidential; therefore, these rankings do not appear in this study. Of the 32 centers ranked, there were 5 in the "low" group, 16 in the "medium" group, and 11 in the "high" group and these were considered the treatment groups.

It is realized that the design of this study would have been greatly enhanced if randomization could have been followed in selecting teacher training centers from all vocational agriculture departments in the state. Kerlinger (23) contends:

Randomize whenever possible: select subjects at random; assign subjects to groups at random; assign experimental treatments to groups at random.

Campbell and Stanley (24) suggest using opportunities for experimental research by stating:

There are many natural social settings in which the research person can introduce something like experimental design into his scheduling of data collection procedures even though he lacks the full control over the scheduling of experimental stimuli. . . .

This study followed Campbell's suggestion because it was not possible to randomly select schools for student teaching centers nor was it possible to randomly assign subjects to the centers.

Since randomization of assignment could not be followed it should be understood that natural selection of student teaching centers by student teachers was in operation. The amount of natural selection could not be measured nor could the effect of this variable on attitude change be measured. This is a weakness in the design of the study was recognized from the beginning, but it could not be corrected because of existing circumstances.

#### Description of the Sample

The original subjects in this study were 81 senior agricultural education majors enrolled in Agricultural Education 4200-1 (470), Student Teaching in Vocational Agriculture, during either the spring semester of the 1966-67 school year or the fall semester of the 1967-68 school year. The first group consisted of 43 student teachers, but one individual was not available to complete all his tests\* and another individual changed schools during his student teaching experience.

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\* All tests means (1) attitude scales (both pretest and post-test) and Rokeach's Dogmatism Scale. See Appendix A.

This left a total of 41 subjects who completed all the tests and were included in the first group.

The second group consisted of 38 student teachers, but 4 individuals of this group were not available to complete all of their tests and this left a total of 34 subjects in this group. The two groups combined made a total of 75 student teachers who completed all the tests and were included in the study.

It should be pointed out that selection of teacher training centers and assignment of subjects was made completely independent of this study.

#### Instruments Used

There were two instruments used in this study. One was an attitude scale which covered participation in FFA activities and was developed by the writer and the other was Rokeach's Dogmatism Scale. The attitude scale covered most of the activities in which a local chapter may participate. (See Appendix A) The specific areas of participation included livestock shows, fairs, judging contests, summer trips, community projects, publicity programs, national conventions, membership, awards, academic achievement, banquets, money raising projects, and school farms. This range of activities covered local, district, state, regional and national events whenever applicable. Attitude statements were formulated in these areas. Textbooks, manuals, and magazines were reviewed for ideas for possible statements. Individuals in the field of agricultural education were also contacted and asked to contribute suggestions. All the ideas were reviewed and then formulated into actual statements based upon suggestions found in

related literature. Authorities, Bird (25), Thurstone (6), Murphy and Likert (7), and Edwards (26), offer both criteria and suggestions for writing attitude statements.

Oppenheim (10) suggested that attitude scales be tested and refined before they are put into use. It was decided to call upon qualified and locally available personnel to carry out this function. The people used to test and refine the instrument were former vocational agriculture teachers, present vocational agriculture teachers who are not cooperating teachers, undergraduates in agricultural education, graduate students in agricultural education, and staff members in the Agricultural Education Department. The final statements selected and used in the attitude scale were those that had the greatest variation in distribution of responses as determined by the 69 members of the above groups. The final form of the attitude scale was discussed with the writer's advisory committee and it was agreed to use 25 statements on the attitude scale.

The attitude scale was given as a pretest and as a post-test to each subject and as an attitude inventory to each subject's cooperating teacher. The subjects and the cooperating teachers responded to the statements on a five-point continuum of strongly agree, agree, neutral, disagree, or strongly disagree. Statements were individually analyzed by comparing the pretest response with the post-test response for each subject. If the responses were the same, the subject was given a "no change" score. If, however, the responses for a particular statement were different, such as a pretest response of agree and a post-test response of disagree, then the direction of change had to

be determined by checking the response of the cooperating teacher. If the cooperating teacher responded with neutral, disagree, or strongly disagree, then it was a "plus change." If, however, the cooperating teacher's response was strongly agree or agree, then the subject received a "minus change." Theoretically, this procedure should yield a total of 1875 possible "changes" in attitude, but because of incomplete responses by either the subjects or the cooperating teachers, only 1867 possible "changes" were available for use in this study.

The Rokeach Dogmatism Scale, Form E, was used in addition to the attitude scale in this study. The Dogmatism Scale is a general measure of the degree to which a person's "total mind is an open mind or a closed one." (22) Paraphrasing Rokeach, those who score extremely high on this scale are seen to differ consistently from those who score extremely low in the formation of new belief systems, whether or not the systems are conceptual, perceptual, or aesthetic in nature. A basic characteristic that defines how open or closed a person's belief system according to Rokeach (22) is:

. . . the extent to which the person can receive, evaluate, and act on relevant information received from the outside on its own intrinsic merits, unencumbered by irrelevant internal pressures that interfere with the realistic reception of information are unrelated habits, beliefs, and perceptual cues, irrational ego motives, power needs, the need for self-aggrandizement, the need to allay anxiety, and so forth.

The more open one's belief system, the more should evaluation and acting on information proceed independently on its own merits, in accord with the inner structural requirements of the situation. Also, the more open the belief system, the more should the person be governed in his actions by internal self-actualizing forces and the less irrational inner forces.

The Rokeach Dogmatism Scale was administered to the subjects at

the same time as the pretest. A copy of the Dogmatism Scale is found in Appendix A. Of the 60 items that comprise the instrument only 40 are specifically a part of Rokeach's Dogmatism Scale, Form E. The test was administered according to instructions sent to the writer by Mr. Rokeach. The subjects were instructed to respond by placing values ranging from +3 to -3 in front of each item. A +3 meant the respondent agreed very much with the statement. At the other end of the continuum a -3 meant that the respondent disagreed very much with the statement. In scoring the instrument a +4 was added to each value assigned by the respondent. For example, a +4 added to a -3 would result in a +1 for a particular statement. Therefore, the lowest possible score would be 40 and the highest possible score would be 280.

#### Time Schedule

The following time schedule was used in administering the treatment and instruments of this study:

<u>Group</u>	<u>Approximate Date</u>	<u>Activity</u>
Group I	March 13, 1967	Ranking of Student Teaching Centers
	March 23, 1967	Pretest and Dogmatism Scale
	April 3, 1967 to May 21, 1967	Treatment Period
	May 23, 1967	Post-test
	June 1, 1967	Attitude Scale sent to Cooperating Teachers
Group II	November 7, 1967	Pretest and Dogmatism Scale
	November 13, 1967 to January 20, 1968	Treatment Period
	January 22, 1968	Post-test

<u>Group II</u>	<u>Approximate Date</u>	<u>Activity</u>
	January 29, 1968	Ranking of Remaining Student Teaching Centers
	January 30, 1968	Attitude Scale sent to Remaining Cooperating Teachers

#### Hypotheses to be Tested

##### Major Hypotheses:

1. Total attitude changes will differ between the student teachers in each of the three treatment levels.
2. Student teacher attitudes toward FFA participation will change in the direction of the emphasis placed on FFA activities by the teacher training center.

##### Minor Hypotheses:

1. Attitudes of student teachers who are closed-minded will change less than student teachers who are opened-minded.
2. Attitudes will differ among cooperating teachers.

#### Statistical Analysis

Some of the data in this study are suitable for analyzing with only non-parametric statistics, while other data are subject to parametric tests. The chi-square test, as outlined by Siegel (27) was used in determining if there were significant differences in total attitude changes of the student teachers between treatment levels.

A parametric test, the Pearson-product moment correlation, described by Dixon and Massey (28), was used in figuring the correlation between total plus and minus changes and the scores made on the

Dogmatism Scale. Another parametric test, the t-test, described by Garrett (29) was used to see if the differences in the number of plus changes and minus changes per student teacher were significant. An analysis of variance test which is described by Wert (30), was used to see if the cooperating teachers in each treatment level differed significantly in their opinions about participation in FFA activities.

## CHAPTER IV

### RESULTS OF THE STUDY

#### Introduction

The results of this study are presented in seven sections. The first section explains total attitude change and the chi-square test results for all the statements. The second section is a comparison of the plus and minus changes per subject. The third section is a brief discussion of attitude change as it compares with open-mindedness and closed-mindedness as determined by Rokeach's Dogmatism Scale. The fourth section discusses the chi-square results of the individual statements and the procedure used in ranking the statements for discussion. The fifth section is a discussion of the individual statements. The sixth section is a brief discussion of the individual statements by treatment levels. The seventh and final section is a discussion of the cooperating teachers' responses to the statements by treatment groups.

#### Total Attitude Change

The writer developed an attitude scale containing 25 statements on participation in FFA activities. The student teachers in each treatment level responded to each of the statements on a pretest and post-test basis. When differences existed on the pretest and post-test

responses for a particular statement, then a comparison was made with the particular cooperating teacher's response to determine direction of change. The response for each statement was then placed into one of the following categories: "no change," "plus change," or "minus change."

Total attitude change refers to the summation of the responses for all 25 of the attitude statements and for the total 75 subjects that were used in the study. Each response of a subject to each item was considered independent of other items. Consequently, there were 1875 responses, but eight of these were incomplete and could not be considered. This left 1867 responses that were usable and considered in computing the total attitude change.

The 75 student teachers were trained in 32 student teaching centers; 12 in the low treatment level centers, 34 in the medium treatment level centers, and 29 in the high treatment level centers. The treatment level category for each student teaching center was a ranking made by the district supervisors and was based upon participation in FFA activities.

Table I presents a summary of the changes in the responses of the subjects according to treatment levels. Changes refer to the subject's response for each statement and this response is expressed as no change, plus change or minus change. A chi-square test was used to determine if the differences in the number of responses in each category, when compared to the treatment levels, were significant.

The chi-square test yielded a value of 13.5871 which is significant at the .01 level. This is interpreted to mean that a difference

exists between treatment levels as they affected the attitudes of the subjects toward participation in FFA activities. This finding makes the first major hypothesis tenable.

TABLE I  
TOTAL ATTITUDE CHANGE OF 75 SUBJECTS  
FOR 25 ATTITUDE STATEMENTS  
BY TREATMENT LEVELS

Treatment Group	No Change	Plus Change	Minus Change	TOTAL
Low	173	68	58	299
Medium	388	262	195	845
High	366	207	150	723
TOTAL	927	537	403	1867

$\chi^2 = 13.5871$                        $df = 4$                        $p < .01$

Table II shows the responses for the different categories of attitude changes expressed in percentages. The subjects in the low treatment level had the largest percentage of no change responses.

TABLE II  
PERCENTAGE ANALYSIS OF THE 25 ATTITUDINAL  
STATEMENTS FOR 75 SUBJECTS

Treatment Group	Percentage No Change	Percentage Plus Change	Percentage Minus Change	TOTAL
Low	57.86	22.74	19.40	100%
Medium	45.92	31.00	23.08	100%
High	50.62	28.63	20.75	100%

This means the student teachers who trained in the low participating schools were the least influenced to change their attitude on participation in FFA activities as a result of student teaching.

The subjects in the middle treatment level had the highest percentages of total attitude change including both plus changes and minus changes. These student teachers were the most influenced by the student teaching experience to change their attitudes on participation in FFA activities.

The subjects in the high treatment level were in between the subjects in the low and medium treatment levels in all categories of response in percentages of attitude changes. This means the student teachers in the high participating schools were more influenced to change their attitude toward participation in FFA activities than those in the low participating schools but not as much as those in the medium participating schools.

#### A Comparison of Plus Changes and Minus Changes per Subject

The difference in the pretest and post-test responses showed considerable variation in the total number of plus and minus changes in attitude per subject. Some subjects had as low as a total of only four plus and minus changes while other subjects had as many as 19 plus and minus changes. A further analysis reveals that the number of plus changes ranged from one to 14 per subject and the minus changes ranged from one to 12 per subject.

The total plus and minus changes for all subjects was 537 plus changes and 403 minus changes. A t-test, described by Wert (30) was used to determine if the subjects' attitudes changed significantly

toward their teacher's attitude. Table III indicates a t-value of 3.94 was obtained which is significant at the .0005 level. This finding makes the second major hypothesis tenable.

TABLE III  
TEST OF SIGNIFICANCE OF DIFFERENCE BETWEEN  
PLUS AND MINUS ATTITUDE CHANGES

Sum of Changes	Number	$\bar{X}$ Change	Standard Error	t	Probability
134	75	1.7867	.4537	3.94	.0005

#### Open-Mindedness and Closed-Mindedness

Open-mindedness and closed-mindedness refers to the structure of the belief system, and the instrument used to gather the data of this study was the Dogmatism Scale, Form E, developed by Rokeach.

The range for all the scores was 106 to 204 with a mean of 159.9189. Dick (31) reported that a group of 50 student teachers in science education at Oklahoma State University, in 1967, had a range of 105 to 200 with a mean score of 141.3 for the same form of the same scale.

In this study, it was expected that the subjects that made the lowest scores on the Dogmatism Scale would have the greatest number of changes in attitude. This relationship would have yielded a minus correlation coefficient. However, the Pearson-product moment coefficient of correlation, which was described by Garrett (29), yielded a positive .05 which was too small to be considered as having any statistical consideration. The first minor hypothesis was not tenable.

## Individual Statements and Attitude Change

Table IV gives the chi-square values for the individual statements. The chi-square test was used to test the significance of change as compared to no change. The chi-square value for one statement, which was concerned with using class time for training potential winning judging teams was 13.8657 which is significant at the .001 level. Another statement, which dealt with selling shop projects to raise chapter funds had a chi-square value of 10.2741 which is significant at the .01 level. Three other statements were significant at the .05 level. These three statements dealt with school farms, quality of livestock at the county fairs, and the title for the vocational agriculture instructor. The chi-square values for other statements were not significant at the .05 level. (See Appendix C)

The chi-square values for the individual statements failed to show an adequate comparison of the responses by the different categories between the treatment levels. Therefore, another method which would give a more detailed accurate examination was necessary to establish a basis for discussion of the individual statements and determine those that measured the greatest attitude change for each treatment level. It was decided to use the following plan in discussing the individual statements.

Each student response on each statement of the attitude scale was placed into one of the following categories, "no change," "plus change," or "minus change." These responses were tabulated in percentages of response by treatment levels. The statements in each change category for each treatment level with the greatest percentage of

responses were ranked. The number of statements ranked varied from two to five depending upon the number of tied percentages. (See Appendix B)

TABLE IV  
CHI-SQUARE VALUES FOR INDIVIDUAL STATEMENTS

Statement	Chi-Square	Statement	Chi-Square
1	1.6466	14	.2035
2	4.0255	15	.3673
3	.7772	16	10.2741*
4	.8643	17	13.8657*
5	7.3753*	18	.4716
6	3.7926	19	4.6068
7	.1640	20	3.1759
8	1.9324	21	1.7169
9	6.4814*	22	.1604
10	.3981	23	4.4488
11	.1375	24	7.2354*
12	3.2439	25	1.0858
13	.2364		

\* Significant at the .05 level

Table V is the rank in percentages by categories of response for treatment levels of individual statements. The percentages are figured by considering all the statements in each category of change in each treatment level. It should be noted that in the case of ties in percentages, the same rank value is given to all the tied statements

TABLE V

RANK OF STATEMENTS IN THE THREE UPPER  
PERCENTAGES FOR EACH CATEGORY OF  
CHANGE IN ALL TREATMENT LEVELS

Statement Number	No Change	<u>Low</u>		No Change	<u>Medium</u>		No Change	<u>High</u>	
		+	-		+	-		+	-
1		2-t							
2							1		
3			2-t						
4									
5		1			3-t				
6									
7									
8						2-t			
9			2-t			1			1
10		2-t						2-t	
11									
12	2-t								
13									
14				2			2-t		
15			2-t		2			1	
16					1		3-t		
17	1					2-t			
18			2-t						
19								2-t	
20			1	1			3-t		
21									
22									3
23									2
24	2-t				3-t				
25							2-t		

t - Represents ties

and these statements are designated with a "t" after the rank value, for example, 2-t.

The attitude statements are presented in Table VI in a rank order listing by number and subject area as they are involved in total attitude change of student teachers as a result of student teaching. In case of ties, it should be noted that numerical rank of the statements as they appeared on the attitude scale, held precedence in listing the statements.

The rank order of the statements, which includes the number of treatment levels involved, serves as the criteria for the order of discussion of the individual statements. The first 19 statements will be discussed in rank order on an individual basis. The remaining six statements will be discussed as a group rather than individually because of their lack of importance as based upon their exclusion from the upper three ranked percentages for any category of response in any treatment level.

#### Discussion of the Attitude Statements

The first statements to be discussed are numbers 9, 15, and 20. This group of three statements were in the upper three percentages of some category of change in all three treatment levels.

The first statement to be discussed is number 9 which deals with quality of livestock exhibited at county fairs. Baker (32) offers the following comments about value of shows and fairs:

Fairs and shows have been accepted by agricultural leaders of this country to be of great value to our agricultural economy. It is generally agreed that these events tend to improve the quality of farm products by encouraging,

TABLE VI

RANK ORDER LISTING OF STATEMENT SUBJECTS ACCORDING TO THEIR AFFECT ON ATTITUDE CHANGE AND THE NUMBER OF TREATMENT LEVELS IN WHICH THEY WERE FOUND IN THE UPPER PERCENTAGES OF SOME CATEGORY OF CHANGE

Rank Number	Treatment Levels Affected	Attitude Statement Number	Attitude Statement Subject
1	Three	9	Quality of FFA Livestock at County Fairs
2	Three	15	Changing Production Agriculture Units
3	Three	20	Changing Future Farmers of America Name
4	Two	17	Training Winning FFA Judging Teams
5	Two	5	Title of Vocational Agriculture Teacher
6	Two	16	Selling Shop Projects to Raise Money
7	Two	14	New Ideas for FFA Banquets
8	Two	10	Using FFA Boys to Clean School Yard
9	Two	24	Use of School Farms for FFA Projects
10	One	2	Attending the National FFA Convention
11	One	23	Image of the FFA in Oklahoma
12	One	1	Coordinating FFA Television Programs
13	One	3	Selected Purposes of FFA Summer Trips
14	One	8	Advisor's Role in Oklahoma FFA Leadership
15	One	12	Parent Caring for FFA Livestock at Fairs
16	One	18	Taking FFA Boys out of Class
17	One	19	FFA Activities and Academic Grades
18	One	25	Girls Joining the FFA Organization
19	One	22	FFA Boys Losing Money on Show Steers
20	None	4	Requirement for State Farmer Degrees
21	None	6	Operating on a Modest FFA Budget
22	None	7	All FFA Boys should be on Judging Teams
23	None	11	Academic Grades Influenced by FFA Work
24	None	13	Marriage of Member and FFA Participation
25	None	21	Family Influence and FFA Achievement

through competition, those who participate to strive to produce a better product.

Statement 9:

There is too much emphasis on quality in FFA livestock exhibits at county fairs.

This statement was included because of its wide scope of application since nearly every school in the state has the opportunity to exhibit livestock at the county fair. Fairs, by their very nature, offer an excellent opportunity to evaluate ones' views on quality of livestock and to establish a quality standard to be desired.

The cooperating teachers disagreed with this statement and those in the high treatment level expressed the most disagreement. This response would be expected from this group of cooperating teachers because their students are large exhibitors of livestock and they are extremely conscious of quality exhibits.

Nearly 75 percent of all the student teachers changed their attitude toward this statement as a result of student teaching. The student teachers receiving the high level of treatment had the highest percentage of minus change in attitude. See Table II. This might indicate that too much emphasis was placed on quality of livestock at the high treatment level and the student teachers reacted by changing their attitude in an opposite direction. The student teachers in the medium treatment level had a very similar experience, but the student teachers in the low treatment group had a high percentage (67%) of no change responses to this statement. This lack of change for this group could be interpreted to mean that quality of livestock was of less importance to the schools in the low participating group.

The second statement to be discussed is number 15 which is concerned with changing production agriculture teaching units to those that develop leadership. W. T. Johnson (33), Supervisor in North Carolina, declares:

Vocational agricultural education shares a tremendous responsibility for making available personnel for the many leadership positions that occur as a result of our educational growth.

Statement 15:

Many teaching units on production agriculture should be changed to units that tend to "develop leadership" since the typical boy in vocational agriculture and FFA does not return to the farm.

The statement on teaching units was included because of the recent trend that has developed to place less emphasis on production agriculture and more emphasis in other subject matter areas of vocational agriculture. The cooperating teachers generally disagreed with the idea of teaching less production agriculture, with the most disagreement coming from the group of teachers in the high treatment level.

The student teachers in all three treatment levels were highly influenced as a result of the student teaching experience to change their original attitude toward this statement. In fact, the greatest attitude change of student teachers toward the expressed attitude of the cooperating teachers was with regard to this statement.

The student teachers in the low treatment level had equal distribution between the three categories of possible change. However, the student teachers in the medium and high treatment levels had nearly 50 percent change toward the expressed attitude of the cooperating teacher.

The question remains as to why this change in attitude occurred. One explanation may be that the student teachers, when enrolled in regular college courses, developed an awareness of changes in emphasis from production agriculture to emphasis in other areas. When the student teacher had a chance to delve deeply into an actual program, they may have found that the changes in emphasis away from production agriculture did not really exist.

The third statement is number 20 and it involves changing the name of the Future Farmers of America. There has been considerable discussion of this subject in recent years. In a study on the FFA in 1967, Katner and Bender (34) made this observation:

The time has not yet arrived for a change in name of the organization. Perhaps a period of time is needed to ascertain the impact and direction of the broadened vocational agriculture program.

A Texas educator, N. K. Quares (35), questions keeping the current name by remarking:

The FFA has not changed its name even though most of the members are not farmers and do not plan to farm. Aren't we making a mistake by continuing to call them future farmers when a very small minority will farm?

Statement 20:

The FFA should change its name to one that would be more inclusive and would properly encompass new programs in areas other than agricultural production.

The cooperating teachers in all three treatment levels disagreed with the idea of changing the name of the "Future Farmers of America." The cooperating teachers in the low treatment level were in very mild disagreement but, the cooperating teachers in the high treatment level were in strong disagreement. In fact, everyone of the latter group responded to the statement with a "disagree."

The student teachers in the low treatment level were evenly divided in their changes in attitude between no change and minus change. The other two groups of student teachers had a high percentage of no change responses with the highest percentage in the high treatment level. Incidentally, all student teachers generally disagreed with changing the name of the Future Farmers of America.

It seems evident that vocational agriculture teachers in Oklahoma will be in agreement to keep the name "Future Farmers of America" for a long, long time.

The second group of statements to be discussed are numbers 17, 5, 16, 14, 10, and 24. These statements were in the upper percentages of some category of change for two of the three treatment levels.

The fourth statement, number 17, refers to training potential winning FFA judging teams. Training students to participate in the many, many judging contests in Oklahoma is a big job. The contests range from small, local contests to large, state contests that may involve hundreds of students. Most of the contests are in the fall and spring months, but some contest is held nearly every month.

Who participates in these contests? Many would agree that about the same schools are involved in the same contest year after year. Who wins these contests? The results would indicate about the same schools usually win year after year. Why do the same schools continue to win? It has been said that the "winners" do nothing but work on judging teams during class time.

Watkins (36), in a study on winning teams at the Interscholastics, reports:

A large majority of the vocational agriculture students utilizing their junior and senior class periods, which are allocated in preparation for contests, studied on a specific contest rather than all students studying for the same contest.

Statement 17:

Training potential winning FFA judging teams is a justifiable use of vocational agriculture class periods on a more or less regular basis.

This statement topped the list for no change responses, in one treatment level, on the entire attitude scale. The low treatment level had 91.67 percent of the student teachers who maintained their opinion on this subject during their student teaching experience. This lack of change may be due to the fact that everyone of the cooperating teachers in this treatment level responded "disagree" to this statement.

For some reason, over 35 percent of the student teachers in the medium treatment level were influenced to change their attitude in a negative manner to the opinion of their cooperating teacher. The cooperating teachers in the medium treatment level were in much less disagreement to the statement than those in the low treatment level.

There were no unusual responses from either the student or cooperating teachers in the high treatment level.

The fifth statement, number 5, is concerned with using the title "FFA teacher" for the vocational agriculture teacher. This statement was included in the attitude scale because it is a relatively local change that is emerging and no literature was found on the subject.

Statement 5:

The practice of referring to the vocational agriculture teacher as the "FFA teacher" is undesirable and should be discouraged.

The cooperating teachers in the low treatment level had an equal number of agree and disagree responses to this statement. The cooperating teachers in the medium treatment level reported about the same opinions.

The student teachers in both the low and medium treatment levels were highly influenced to change their attitude on this subject as a result of student teaching. Nearly 67 percent of the student teachers in the low treatment level and nearly 45 percent in the medium treatment level changed their attitude toward the expressed attitude of their cooperating teacher during the student teaching experience.

It should be added that the cooperating teachers in the high treatment level were in nearly complete disagreement with the statement. Apparently, they approve of being called the "FFA teacher." The student teachers who trained under this group of cooperating teachers had fewer changes of attitude toward this subject than did the other two groups of student teachers.

The sixth statement, number 16, involves financing chapter activities.

Kirkland (37) suggests the idea of selling projects constructed in the farm shop as an acceptable method of making chapter money. He states, "constructing articles in farm shop and selling to farmers-- e.g., self-feeders, brooders, porch and lawn furniture. . . ." will help support chapter activities.

Statement 16:

Farm shop projects built during regular scheduled vocational agriculture classes should not be sold to raise funds to sponsor FFA activities.

The student teachers receiving the medium level of treatment had the greatest percentage of plus change for this statement of any in the scale. The other two groups of student teachers had about equal distribution between plus change and minus change categories of response. The cooperating teachers in high and low treatment levels responded with a "disagree" to the statement.

The important point regarding attitude change, as it applies to this statement, is the fact that the cooperating teachers in the middle treatment level were almost neutral in their combined response to this statement, but this group of student teachers were highly influenced to change their attitude toward that expressed by their cooperating teacher.

The seventh statement, number 14, is concerned with injecting new ideas in FFA banquets and conventions. Quarles (35) offers these comments on the subject:

We spend a lot of time telling the public about the value of the FFA. This is as it should be: We are a proud group. Yet, we know that you can not find anything developed by man that is perfect. There is constant need for re-evaluation and improvement.

Statement 14:

Where local, state and national FFA activities such as banquets and conventions tend to be basically the same year after year, new ideas should be strongly encouraged at all levels.

The responses to this statement were nearly equal for all cooperating teachers in all three treatment levels. They all agreed that new ideas should be incorporated. The student teachers in both the medium and high treatment levels had few changes in their pretest and post-test responses. In fact, about 65 percent of the responses, in both

cases, were in the no change category. The student teachers in the low treatment level had a high percentage of no change also. The lack of change would indicate that the student teachers were in agreement with their cooperating teachers.

Everyone, cooperating teachers and student teachers, is in agreement that new ideas are needed in both banquets and conventions at all levels.

The eighth statement, number 10, is concerned with using students to clean up school grounds. Members of the local FFA chapter may be called upon by the school administration to do simple clean up jobs around the school. The students are taken from regular class periods to perform this service. This is especially true when the school sponsors a particular activity such as a school carnival or a football game. The FFA chapter is often asked to prepare school facilities for agricultural events and to clean up after these events are over. All of these activities take time away from classes.

Statement 10:

We should discourage taking FFA boys out of vocational agriculture classes to clean up school buildings or grounds.

The cooperating teachers in the low treatment level mildly agreed with the statement. The cooperating teachers in the medium treatment level were half-way between "agree" and "strongly agree." But the high treatment level of cooperating teachers were evenly distributed in their responses of "agree" and "disagree" which averaged a "neutral" opinion.

As a group, the student teachers had more than 50 percent of no change responses, but the student teachers in the low and high

treatment levels were influenced to change their attitude toward the expressed attitude of their cooperating teacher. The cooperating teachers in the medium treatment level least approved of using vocational agriculture students to clean up school grounds and the student teachers in this treatment level were the least inclined to change their attitude.

The ninth statement, number 24, is concerned with school farms.

Phipps (2) comments:

Early in the history of agricultural education in the United States, schools teaching agriculture commonly maintained farms on which their pupils received experience and instruction. Rufus Stimson, Massachusetts, an early pioneering leader in agricultural education, introduced the home project as a more functional procedure for gaining experience in farming. After the introduction of home projects, many schools sold or disposed of their land. Since that time, interest in school land has fluctuated.

Statement 24:

The school should provide a school farm to insure all FFA members the opportunity to have a production project.

Nearly 84 percent of the student teachers in the low treatment level did not change their attitude about having a school farm as a result of treatment. There were four cooperating teachers out of 32 who strongly agreed to the idea of having a school farm, but none of these teachers were in the low treatment level. This would help explain the no change response of the student teachers in the low treatment group. Three of the four cooperating teachers who strongly agreed to having a school farm were in the middle treatment level. Over 41 percent of the student teachers in this group changed their attitude toward the expressed attitude of the cooperating teacher.

In closing the discussion on school farms, it should be stated

that the cooperating teachers, as a group, have a "neutral" attitude about school farms.

The third group of statements to be discussed are numbers 2, 23, 1, 3, 8, 12, 18, 19, 25, and 22. These statements were in the upper percentages of some category of change for only one of the three treatment groups.

The tenth statement to be discussed, number 2, involves the local chapter attending the National FFA Convention. Phipps (2) offers these comments about the national convention.

A person, after attending one of the national conventions, cannot help realizing the vast importance of this farm-boy organization and the splendid work it is doing.

Statement 2:

All chapters should be represented at the National FFA Convention at least once every three years.

The cooperating teachers in the high treatment level responded with the greatest amount of agreement to this statement. Over 69 percent of the student teachers in this treatment level had a no change response to this statement. The other two groups of cooperating teachers were more neutral in their opinions. The student teachers in these two groups had a high percentage of no change but not nearly so pronounced as those in the high treatment level.

These results would indicate that no group disagreed with attending the national convention and those involved in the high participating group were highly in favor of attending the convention.

The eleventh statement, number 23, is concerned with the image of the FFA. This statement was included in the attitude scale to see if the teachers felt that the competition was too keen and if so, whether

this would influence the student teachers to change their attitude on the subject.

Statement 23:

FFA activities in Oklahoma are becoming so competitive that the organization is tending to present a "win at all costs" image.

The cooperating teachers in the medium treatment level were in the most disagreement with the statement, followed by those in the low treatment level and finally with those in the high treatment level. However, it was the student teachers in the high treatment level who were influenced to change their attitude toward this statement as a result of student teaching. Over 41 percent of this group changed their attitude in an opposite direction of the expressed attitude of their cooperating teacher. There seems to be a logical explanation for this change in attitude in that the student teachers may have reacted to the emphasis that was placed on winning by their cooperating teachers.

The twelfth statement to be discussed, number 1, is concerned with FFA television programs.

Statement 1:

FFA television programs should be coordinated at the state level in order to give all chapters an equal opportunity to participate.

The low treatment level of cooperating teachers responded to the above statement with a stronger than "agree" response. The other two groups were less certain and nearly one-half in the high treatment level were "neutral" in their response. This indicates that the cooperating teachers in the low treatment level were dissatisfied with the number of television programs that they were involved in each

year.

The student teachers in the low treatment level were highly influenced to change their attitude toward the expressed attitude of the cooperating teachers in that group. The other two groups of student teachers had no unusual responses to this statement.

The thirteenth statement to be discussed, number 3, concerns the use of summer trips to help the students broaden their knowledge in fine arts.

Statement 3:

FFA summer trips should be used to help broaden the knowledge in such fields as art, music, literature, and theater.

This statement was included because it was felt that perhaps there was a great difference between the way the different treatment levels of cooperating teachers felt about the subject. If this difference did exist, it seemed reasonable to expect a difference in attitude changes in student teachers.

A small, directional difference did exist in the expressed attitude of the cooperating teachers with the high group showing the most disagreement. The difference in percentages in attitude change for the student teachers was relatively small. The statement did cause the second highest percentage of minus change for any in the low treatment level. In this particular group, over 33 percent developed a minus change when comparing their responses on the pre-test and post-test to the responses of their cooperating teacher. All three groups had a high percentage of no change responses which indicates that the subject was not of great importance to student teachers in any of the groups.

The fourteenth statement to be discussed, number 8, is related to carrying forward the laurels of the Oklahoma Future Farmers of America.

Statement 8:

Every local advisor ought to feel a strong responsibility for contributing toward continuation of the recognition Oklahoma has gained for FFA leadership.

It should be noted that everyone of the cooperating teachers responded with either an "agree" or "strongly agree" response to this statement. Over 84 percent of the middle treatment level of cooperating teachers strongly agreed as compared to 20 percent in the low treatment level. The responses expressed by the student teachers were comparable to that of the cooperating teachers with only two "neutral" responses indicated. The other 148 were either "agree" or "strongly agree."

Upon analyzing the above data, it would seem impossible to have many attitude changes as a result of student teaching. However, over 35 percent of the student teachers in the middle treatment level changed in an opposite direction to the expressed attitude of their cooperating teachers. This change is explained by the unusually high percentage of "strongly agree" responses of the cooperating teachers in this treatment level.

The fifteenth statement to be discussed, number 12, involves parents assisting the FFA members in caring for their livestock at shows and fairs.

Statement 12:

Parents or other adults should care for livestock of FFA members at fairs and shows thus reducing the amount of time the student is away from school.

Major concern has been expressed by school officials, teachers, parents and state school personnel over the amount of time a student may be absent from his regular classes. The officials in charge of state fairs and shows are aware of this concern and they have cooperated by moving the judging events to the weekend in order that the student may actually show his own animals, and then remain in school during regular classes. In fact, it now appears that this practice could develop into a major trend.

The cooperating teachers disapproved of this idea. The greatest amount of actual disagreement came from the high treatment level and the least disagreement came from the low treatment level teachers.

The responses in attitude change were fairly equally distributed for both the high and medium treatment level student teachers, but those in the low treatment level had a high incidence of no change (83.3%) which could indicate that they were in agreement with their cooperating teachers.

The sixteenth statement to be discussed, number 18, refers to developing good relationships with the school administration, teachers in general, and others in regard to students missing classes in connection with FFA activities.

Statement 18:

There is too much concern among school administrators and teachers about students being out of class and too little appreciation of the educational value to be gained from participating in fairs, shows, and contests.

Cardozier (38) comments on this subject:

It is a rare teacher of vocational agriculture who over a period of years does not draw some criticism from fellow teachers in his school for failure to perform all the school duties they do or for taking boys from their classes for field trips and the like.

All the cooperating teachers had a tendency to agree with this statement. The cooperating teachers in the low treatment level were the least critical of the administration and teachers.

The student teachers in the low treatment level were in the upper percentages of no change category for all the statements. This would indicate that this was not a major problem for this group of student teachers and there were no unusual responses in the other two treatment groups of student teachers.

The seventeenth statement to be discussed, number 19, is concerned with limiting FFA activities to avoid adverse affect upon students' grades in other courses. Watkins (36) reports that a special committee of teachers and supervisors reported the following statement:

If it is the opinion that extra classroom activities lower the scholastic standard in the schools, our committee would be in favor of raising the scholastic standard in the schools, our committee would be in favor of raising the scholastic requirements for all students participating in all school activities to a minimum of "C".

Statement 19:

The extent of participation in FFA activities should be limited in order to avoid an adverse affect upon grades in other courses.

The cooperating teachers in all three treatment levels had an average opinion of near "neutral" responses. However, their individual opinions ranged from strongly agree to strongly disagree.

The student teachers in the high treatment group were influenced to change their attitude toward the expressed attitude of the cooperating teacher. This response would indicate that the problem of taking students out of class would be of major concern for the student teaching center in this treatment level. The other two groups of student teachers had no unusual responses.

The eighteenth statement to be discussed, number 25, is concerned with girls becoming members of the Future Farmers of America. Rudd

(39) reports:

Some states have opened the Future Farmers of America to girls and others, like California, have initiated companion organizations for girls similar to the FFA--usually called the Farmerettes.

Rudd found that only half of the instructors in California favor the inclusion of girls in the FFA, but the group voted to recommend that girls be allowed to join.

Statement 25:

Girls should continue to be denied membership in the FFA.

The three groups of cooperating teachers were extremely close together in their opinion on girls becoming FFA members. Their responses ranged from strongly agree to strongly disagree but each group had an average response of mild agreement.

The student teachers, like the cooperating teachers, gave all the possible responses to this statement on both the pretest and the post-test. In regard to attitude change, the student teachers in the high treatment level had over 65 percent "no change" responses to the statement.

The nineteenth statement, number 22, is a simple statement involving losing money on show steers. This statement was included because, historically, probably no other activity has caused so much discussion in FFA circles as has this subject.

Statement 22:

FFA boys lose too much money on show steers.

It is not at all surprising to find in analyzing the responses of the cooperating teachers, that many of the responses were "agree" and

many of the responses were "disagree." The low participating cooperating teachers had a tendency to agree with the statement. The cooperating teachers in the medium treatment level had an average response of "neutral." But none of the cooperating teachers in the high treatment level agreed with the statement. In fact, the average of their responses was a firm disagree.

The responses for the student teachers were very average in distribution in all categories except those for the high treatment level in the minus change category of response. This statement was second only to the statement on quality of livestock at county fairs insofar as causing changes in attitude in the opposite direction of the expressed attitude of the cooperating teachers in the high participating group.

There are six statements that have not been discussed individually. This group of statements will be grouped together and discussed as a unit rather than on an individual basis. The six statements are:

Statement 4:

State Farmer awards should require more evidence of extensive leadership activities above the local level than presently is the case.

Statement 6:

It is better to operate on a modest FFA budget than to be involved in many fund raising activities or to extensively engage in soliciting donations.

Statement 7:

Every FFA member should be strongly urged to become a member of some judging team.

Statement 11:

Grades awarded vocational agriculture students should be

determined independently of the student's participation in FFA activities, such as shows, fairs, and contests.

Statement 13:

In schools having rules that prohibit married students from participating in extra-curricular activities, when an FFA member marries, he should become a non-active member.

Statement 21:

Money, family-influence, and social position are most essential for succeeding and becoming recognized in the FFA organization.

None of the above statements were in the upper percentages of change for any category of any of the treatment levels. This fact signifies that the statements were the least important in measuring attitudinal change in this group of student teachers.

Two statements, number 4 and number 11, had nearly normal distribution of responses when compared to all the total responses for all statements. Two other statements, number 6 and number 7, had slightly higher than normal no change responses. The remaining two statements, number 13 and number 21, were quite high in no change responses but not high enough to be included in the upper percentages of any category of any treatment level.

#### Discussion of Treatment Levels

Level of treatment is the term used in this study that is associated with participation in FFA activities. Generally speaking, the more a student teaching center participated in FFA activities, the higher treatment level rank it was given by the district supervisors. All student teaching centers were ranked low, medium or high. One of the underlying questions in this study has been what differences

actually exist and in what areas do the different treatment levels affect attitudes of student teachers. The statements on the attitude scale are broad enough in characteristic of participation in FFA activities to permit responses in certain areas of participation to gravitate toward and become generally associated with one particular treatment level. Selected findings from the discussion of the individual statements, which are generally characteristic of only one treatment level, will form the basis for discussing the treatment levels.

The low treatment group of student teaching centers consisted of only five schools. Four of these centers were small high schools and the fifth was a large city high school.

The student teachers who trained in these schools were not influenced to change their attitude toward parents caring for livestock at the county fair, training winning judging teams during class time or for the school to provide a school farm for FFA boys who need a place for their projects. The student teachers were influenced to change their attitudes in a direction toward the attitude of the cooperating teacher in several subject areas. These areas include the state department scheduling television programs, using FFA teacher as a title for the vocational agriculture teacher, and taking boys out of class to clean up the school grounds.

The student teachers were influenced to change their attitude in an opposite direction to those of the cooperating teacher in the purpose of summer trips, quality of livestock at county fairs, teaching units on production agriculture, and changing the name of the Future Farmers of America.

The greatest single attitude change in the low treatment group was related to the statement concerning the use of class time to train potential winning judging teams. Over 91 percent of the student teachers had a no change response.

The medium treatment group of student teaching centers consisted of 16 schools. These schools ranged in size from very small rural high schools to medium size city high schools.

The student teachers who trained in these schools were not influenced to change their attitude toward changing FFA banquets and conventions, or changing the name of the Future Farmers of America.

The student teachers were influenced to change their attitude toward those of the cooperating teacher in using the title FFA teacher for the vocational agriculture teacher, changing teaching units on production agriculture, and selling farm shop projects to raise FFA funds.

The student teaching experience had a negative effect in changing the attitudes toward the expressed attitude of the cooperating teachers in the following subject matter areas: maintaining the image of the Oklahoma FFA program, emphasizing quality of livestock at the county fair, and training potential winning FFA judging teams during class time.

The greatest single attitude change in the medium treatment group was related to the statement concerned with changing the name of the Future Farmers of America. Over 70 percent of the student teachers had a no change response.

The high treatment group consisted of 11 schools. These schools ranged in size from small rural high schools to large city high schools.

It should be mentioned, however, that most of these schools were either in good agricultural areas or they were located in at least a medium sized Oklahoma town.

The student teachers who trained in these schools were not influenced to change their attitude toward attending the National FFA Convention, changing the name of the Future Farmers of America, or permitting girls to join the Future Farmers of America organization.

The student teachers were influenced to change their attitude toward the expressed attitude of the cooperating teacher in taking boys out of class to clean up the school grounds, changing teaching units on teaching production agriculture and limiting the amount of participation in FFA activities.

The student teachers changed their attitude in an opposite direction of the cooperating teacher in emphasis placed on quality of livestock at the county fairs, on making money on show steers, and "win at all costs" image.

The greatest single change in the high treatment group was on the statement concerning each local chapter being represented at the national convention once every three years. Over 68 percent of the student teachers had a no change response.

In summarizing the responses for all the student teachers, it was found that as a group, they were the least influenced to change their attitude toward changing the name of the Future Farmers of America of all the ideas on the attitude scale. The student teachers were the most influenced to change their attitudes about teaching units on production agriculture. This group reacted and changed their attitudes the most against the expressed attitude of their cooperating

teachers on the statement concerning quality that is placed on livestock at county fairs.

#### Responses of the Cooperating Teachers

The second minor hypothesis is concerned with the attitude difference among cooperating teachers by treatment groups. A basic assumption in this study was that cooperating teachers in the different treatment levels would differ in their responses to the attitude statements. Some of the statements elicited significantly different responses while others had differences that were not significant at the .05 level.

The strongest agreement among cooperating teachers in all treatment groups was on statement 8, which states:

Every local advisor ought to feel a strong responsibility for contributing toward continuation of the recognition Oklahoma has gained for FFA leadership.

The strongest disagreement among cooperating teachers in all treatment groups was on statement 21, which states:

Money, family-influence, and social position are most essential for succeeding and becoming recognized in the FFA organization.

The cooperating teachers in all treatment levels responded only agree or strongly agree to two of the attitude statements, and they also responded disagree or strongly disagree to two other statements. However, the cooperating teachers responded in all possible categories to statement 22, which is: FFA boys lose too much money on show steers.

The responses of the cooperating teachers, when considered on a statement by statement basis, are interval data providing a basic assumption is made that equal distances exist between all responses

on the five point continuum. This assumption has been made for the cooperating teachers' responses in order to explain their combined opinions by treatment levels on each statement and to test the second minor hypothesis.

The cooperating teachers responded to the statements on the attitude scale by selecting one of the following possibilities: strongly agree, agree, neutral, disagree, or strongly disagree. These responses were given a value of 1, 2, 3, 4, and 5 respectively. For example, if "agree" was selected as a response for a particular statement, then a value of 2.00 was recorded. Averaging values for different respondents usually resulted in decimal fractions. For example, if one respondent reported an "agree" and another respondent reported a "neutral," the average value would be 2.50. This procedure will be used to explain the cooperating teachers' responses on the attitude statements.

The cooperating teachers were not considered individually, but rather as a group according to treatment levels. There were three treatment levels of cooperating teachers: low, medium, and high. An analysis of variance test was calculated for each attitude statement. Table VII shows the results and the corresponding probability for each attitude statement.

The results of the analysis of variance test in Table VII show that only four of the 25 attitude statements were significant at the .05 level. This finding offers some statistical support to the second minor hypothesis which states, "attitudes will differ among cooperating teachers." It should be noted that forty percent of the attitude statements had a probability level of less than 25 percent.

TABLE VII  
 COOPERATING TEACHER ATTITUDE STATEMENTS  
 RANKED ACCORDING TO ANALYSIS OF  
 VARIANCE SIGNIFICANCE

Rank Number	Attitude Statement Number	Attitude Statement Subject	F	Probability
1	22	FFA Boys Losing Money on Show Steers	5.9247	.005 < p < .01 *
2	10	Using FFA Boys to Clean Up School Grounds	5.1993	.01 < p < .025 **
3	8	Advisor's Role in Oklahoma FFA Leadership	3.733	.025 < p < .05 ***
4	17	Training Potential Winning FFA Judging Teams	3.5570	.025 < p < .05 ***
5	16	Selling Farm Shop Projects to Raise Money	2.2556	.10 < p < .25
6	11	Academic Grades Influenced by FFA Participation	2.1541	.10 < p < .25
7	3	Selected Purposes of FFA Summer Trips	2.1384	.10 < p < .25
8	4	Requirement for State Farmer Degrees	1.8976	.10 < p < .25
9	15	Changing Production Agriculture Teaching Units	1.8147	.10 < p < .25
10	18	Taking FFA Boys out of Class	1.6670	.10 < p < .25
11	24	Use of School Farms for FFA Projects	1.4476	.25 < p < .50
12	13	Marriage of FFA Members and Future Participation	.8166	.25 < p < .50
13	12	Parents Caring for FFA Livestock at County Fairs	.7820	.25 < p < .50
14	19	FFA Activities and Academic Grades	.6927	.50 < p < .75
15	6	Operating on a Modest FFA Budget	.6722	.50 < p < .75
16	7	All FFA Members Should be on Judging Teams	.6562	.50 < p < .75
17	2	Attending the National FFA Convention	.5012	.50 < p < .75
18	25	Girls Joining the Future Farmers of America	.4802	.50 < p < .75
19	23	Image of the FFA in Oklahoma	.4401	.50 < p < .75
20	1	Coordinating FFA Television Programs	.4150	.50 < p < .75
21	9	Quality of FFA Livestock at County Fairs	.3585	.50 < p < .75
22	14	New Ideas for FFA Banquets	.2808	.75 < p < .90
23	5	Title for the Vocational Agriculture Teacher	.2353	.75 < p < .90
24	20	Changing the Name of The Future Farmers of America	.2527	.75 < p < .90
25	21	Family Influence and FFA Achievement	.0438	.95 < p < .975

\* Significant at the .01 level  
 \*\* Significant at the .025 level  
 \*\*\* Significant at the .05 level

The four attitude statements that had significant differences at least at the .05 level were statements 22, 10, 8, and 17. These statements were concerned with FFA boys losing too much money on show steers, using class periods to clean up school grounds, feeling of the local advisor for responsibility of maintaining Oklahoma leadership, and training potential winning judging teams during class periods. The other statements had increasing lack of differences between treatment levels until the last statement which had practically no difference since the probability level was above 95 percent. This statement, number 21, was concerned with the role of family influence on the success of FFA members.

## CHAPTER V

### SUMMARY, CONCLUSIONS, IMPLICATIONS AND RECOMMENDATIONS

#### Summary

This study was concerned with attitude changes that occurred during student teaching in 75 student teachers in agricultural education. The area selected to measure attitude changes was participation in FFA activities because all student teaching centers were involved to some degree in these activities.

Some of the student teaching centers had only limited participation in FFA activities while others had extended participation. The district supervisors of vocational agriculture ranked each of the 32 student teaching centers on the amount of FFA participation into one of the following categories: low, medium, or high. This ranking formed a basis for treatment levels and all the student teachers were thus exposed to either low, medium, or high treatment in participation in FFA activities for the seven-week period of student teaching.

It was expected that student teachers in the high participating level would be more influenced to change their attitudes than student teachers in the low and medium participating levels. Another variable associated with attitude change is open- and closed-mindedness. Rokeach's Dogmatism Scale was used to obtain an inventory in this area for each student teacher for comparative purposes.

A 25 statement attitude scale was developed to measure attitude change in participation in FFA activities. This scale was given as a pretest and as a post-test and the difference on each statement was considered as a plus or minus change. The same attitude scale was given to the cooperating teachers, prior to the arrival of the student teachers. Cooperating teacher responses provided a set of reference points in determining direction of change in the student teachers, and they also furnished data in comparing attitudes on each statement between the cooperating teachers in the different treatment levels.

A "change" score was obtained by comparing the responses of the student teachers on both the pretest and post-test scales. When a difference occurred, the direction of change was determined by comparing the student teacher change to the response of his cooperating teacher. Both parametric and non-parametric tests were used to determine if differences were significant.

Significant differences were found between total attitude change in student teachers and levels of treatment. Also, total plus changes differed significantly from total minus changes in attitudes of student teachers. The relationship between degree of closed-mindedness of student teachers and attitude change was not significant. Cooperating teachers' responses to the attitude scale exhibited varying degrees of inclusiveness among treatments, but the differences between treatment levels were not significant. Significance for all tests was set at the .05 level.

## Conclusions and Implications

It is concluded that attitudes of student teachers do change during student teaching, and there are considerable differences among student teachers in both the number and direction of attitude change. The treatment levels influenced attitude change in varying degrees.

The medium treatment level had the greatest number of attitude changes.

The greatest single plus change in the attitudes of the student teachers in the medium treatment level was in the area of selling farm shop projects to raise chapter funds. The greatest change in the opposite direction from the cooperating teacher's attitude was in the area of improving quality of livestock at the county fairs. Student teachers were most unconcerned about changing the name of the Future Farmers of America organization.

The student teachers in the high treatment level were second in total attitude changes. This finding was unexpected because it was thought that the most changes would be found in this group. These student teachers were influenced the most in the area of changing teaching units in production agriculture to teaching units which tend to develop leadership. The student teachers in this group, like the ones in the medium treatment level, failed to go along with the attitude of their cooperating teacher on the amount of emphasis that is placed on quality of livestock that is exhibited at county fairs. This group was the least concerned about attending the National FFA Convention.

The student teachers in the low treatment group were influenced the most about changing the title of the vocational agriculture teacher

to the FFA teacher. They opposed their cooperating teachers' ideas regarding the selling of farm shop projects to raise money for chapter funds. This group was the least concerned about training potential winning judging teams during class time.

It is quite evident that attitude change takes place during student teaching. Some student teachers changed their attitudes to a greater degree than other student teachers. This may have been due to a natural preference, either consciously or unconsciously, shown by a student teacher when selecting his student teaching center for an FFA program which coincided with his own views. This selective factor probably inhibited the degree of change which occurred in this study.

The student teachers changed their attitudes about certain aspects of FFA participation and vocational agriculture in general. If changes are to be made in teaching vocational agriculture, then student teaching centers should be selected that exemplify the types of programs that need to be expanded in Oklahoma. Critical evaluation should be made on all the currently approved student teaching centers in order to determine if they have the types of programs that need to be maintained.

It would be worthy of consideration to curtail the use of student teaching centers that are either in the low or high participators in FFA activities because this study revealed that the medium participators were the most influential in changing the attitudes of student teachers.

The future programs of vocational agriculture will surely include an increased number of multiple teacher departments with specialists

in one or more of the technical areas. The existing multiple teacher departments should be utilized to a greater extent in order to give student teachers experience in these situations. It is evident that some of the student teaching centers are making little attempt to modernize their programs. For example: The attitude statement on teaching fewer units on production agriculture and more units that tend to develop leadership elicited disagreement by those exposed to the high treatment level. Consequently, all student teachers were highly influenced to change their attitude during the student teaching experience. This extraordinary amount of change may be explained by stating that student teachers were aware of changes in emphasis from production agriculture to emphasis in other areas. However, when the student teachers had an opportunity to thoroughly investigate an actual program of vocational agriculture, they may have found that the changes in emphasis away from production agriculture did not actually exist. Training student teachers in these situations tends to perpetuate conventional programs.

#### Recommendations

This study reveals that student teachers change their attitude toward participation in FFA activities during student teaching. Student teaching may be used to some extent as a means of controlling the future programs of vocational agriculture in the state.

It is the opinion of the investigator that the following four statements should be given consideration by those who are involved in the student teaching program in agricultural education.

1. In the selection of centers for student teaching in vocational agriculture, priority should be given to schools maintaining FFA programs falling in the medium and high treatment levels as established for this study. The fact that the least degree of change on the part of student teachers in comparison with cooperating teachers was found among programs in the low treatment category would appear to justify this recommendation. Assuming that moderate to extensive participation in FFA activities is desirable, one would conclude that priority should be given to placement of student teachers in programs where the potential for challenging student teachers to develop initiative and creative thinking with regard to FFA activities merits the careful consideration of teacher educators and supervisors.

2. Further priority may well be justified where preference is given to centers falling within the medium treatment levels. This recommendation is based upon recognition that cooperating teachers in the high treatment levels tended to place rather extreme emphasis upon the exhibition of livestock and training of judging teams. The question must, therefore, be considered as to the desirability of a narrow concept of items constituting "FFA participation" versus a more inclusive and broadened concept. Cooperating teachers acting as local advisors to programs in the medium treatment levels proved to have considerable influence upon the change of concept among student teachers. Assuming that it is highly desirable that the local program of vocational agriculture maintain a balanced program of activities, it would therefore seem desirable to encourage student teachers to develop a broader concept of the importance of time allocation to the several phases of Future Farmer organization

activity. The development of such a concept can well be enhanced by working under the direction of a teacher with a program falling in the medium treatment category.

3. More student teachers in schools with programs classified in the high participation level tended to move in the direction of agreement with their cooperating teacher than was true of student teachers comprising the other two levels. Since it was evident that cooperating teachers in this group were strongly oriented toward production agriculture with a less interest in off-farm agricultural occupations, this lends further support toward the placing of a somewhat lower priority on the high participation centers in the selecting of student teaching centers.

4. Future studies of this type need not be limited to agricultural education. It would perhaps be very useful if student teachers in agricultural education could be used in studies involving various services and areas of vocational education.

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## APPENDIX A

## OPINIONNAIRE

## NATURE AND SCOPE OF APPROPRIATE FFA ACTIVITIES

Name \_\_\_\_\_

Please respond to each of the following statements by circling the response that most nearly expresses your feelings on each individual statement.

SA-Strongly Agree

A-Agree

N-Neutral

D-Disagree

SD-Strongly Disagree

- SA,A,N,D,SD 1. FFA television programs should be coordinated at the state level in order to give all chapters an equal opportunity to participate.
- SA,A,N,D,SD 2. All chapters should be represented at the National FFA Convention at least once every three years.
- SA,A,N,D,SD 3. FFA summer trips should be used to help broaden the knowledge in such fields as art, music, literature, and theater.
- SA,A,N,D,SD 4. State Farmer awards should require more evidence of extensive leadership activities above the local level than presently is the case.
- SA,A,N,D,SD 5. The practice of referring to the vocational agriculture teacher as the "FFA teacher" is undesirable and should be discouraged.
- SA,A,N,D,SD 6. It is better to operate on a modest FFA budget than to be involved in many fund raising activities or to extensively engage in soliciting donations.
- SA,A,N,D,SD 7. Every FFA member should be strongly urged to become a member of some judging team.
- SA,A,N,D,SD 8. Every local advisor ought to feel a strong responsibility for contributing toward continuation of the recognition Oklahoma has gained for FFA leadership.
- SA,A,N,D,SD 9. There is too much emphasis on quality in FFA livestock exhibits at county fairs.
- SA,A,N,D,SD 10. We should discourage taking FFA boys out of the vocational agriculture classes to clean up school buildings or grounds.

- SA,A,N,D,SD 11. Grades awarded vocational agriculture students should be determined independently of the student's participation in FFA activities such as shows, fairs, and contests.
- SA,A,N,D,SD 12. Parents or other adults should care for livestock of FFA members at fairs and shows thus reducing the amount of time the student is away from school.
- SA,A,N,D,SD 13. In schools having rules that prohibit married students from participating in extra-curricular activities, when an FFA member marries, he should become a non-active member.
- SA,A,N,D,SD 14. Where local, state, and national FFA activities such as banquets and conventions tend to be basically the same year after year, new ideas should be strongly encouraged at all levels.
- SA,A,N,D,SD 15. Many teaching units on production agriculture should be changed to units that tend to "develop leadership" since the typical boy in vocational agriculture and FFA does not return to the farm.
- SA,A,N,D,SD 16. Farm shop projects built during regular scheduled vocational agriculture classes should not be sold to raise funds to sponsor FFA activities.
- SA,A,N,D,SD 17. Training potential winning FFA judging teams is a justifiable use of vocational agriculture class periods on a more or less regular basis.
- SA,A,N,D,SD 18. There is too much concern among school administrators and teachers about students being out of class and too little appreciation of the educational values to be gained from participating in FFA fairs, shows, and contests.
- SA,A,N,D,SD 19. The extent of participation in FFA activities should be limited in order to avoid an adverse affect upon grades in other courses.
- SA,A,N,D,SD 20. The FFA should change its name to one that would be more inclusive and would properly encompass new programs in areas other than agricultural production.
- SA,A,N,D,SD 21. Money, family-influence, and social position are most essential for succeeding and becoming recognized in the FFA organization.
- SA,A,N,D,SD 22. FFA boys lose too much money on show steers.

- SA,A,N,D,SD 23. FFA activities in Oklahoma are becoming so competitive that the organization is tending to present a "win at all costs" image.
- SA,A,N,D,SD 24. The school should provide a school farm to ensure all FFA members the opportunity to have a production project.
- SA,A,N,D,SD 25. Girls should continue to be denied membership in the FFA.

## OPINION POLL

Birth Date \_\_\_\_\_

The following is a study of what the general public thinks and feels about a number of important social and personal questions. The best answer to each statement below is your personal opinion. We have tried to cover many different and opposing points of view; you may find yourself agreeing strongly with some of the statements, disagreeing just as strongly with others, and perhaps uncertain about others: whether you agree or disagree with any statement, you can be sure that many people feel the same as you do.

Mark each statement in the left margin according to how much you agree or disagree with it.

Write +1, +2, +3, or -1, -2, -3, depending on how you feel in each case.

+1: I Agree A Little

-1: I Disagree A Little

+2: I Agree On The Whole

-2: I Disagree On The Whole

+3: I Agree Very Much

-3: I Disagree Very Much

- \_\_\_\_\_ 1. The United States and Russia have just about nothing in common.
- \_\_\_\_\_ 2. The highest form of government is a democracy and the highest form of democracy is a government run by those who are most intelligent.
- \_\_\_\_\_ 3. Even though freedom of speech for all groups is a worthwhile goal, it is unfortunately necessary to restrict the freedom of certain political groups.

- \_\_\_\_\_ 4. It is only natural that a person would have a much better acquaintance with ideas he believes in than with ideas he opposes.
- \_\_\_\_\_ 5. Man on his own is a helpless and miserable creature.
- \_\_\_\_\_ 6. Fundamentally, the world we live in is a pretty lonesome place.
- \_\_\_\_\_ 7. Most people just don't give a "damn" for others.
- \_\_\_\_\_ 8. I'd like it if I could find someone who would tell me how to solve my personal problems.
- \_\_\_\_\_ 9. It is only natural for a person to be rather fearful of the future.
- \_\_\_\_\_ 10. There is so much to be done and so little time to do it in.
- \_\_\_\_\_ 11. Once I get wound up in a heated discussion I just can't stop.
- \_\_\_\_\_ 12. In a discussion I often find it necessary to repeat myself several times to make sure I am being understood.
- \_\_\_\_\_ 13. In a heated discussion I generally become so absorbed in what I am going to say that I forget to listen to what the others are saying.
- \_\_\_\_\_ 14. It is better to be a dead hero than to be a live coward.
- \_\_\_\_\_ 15. While I don't like to admit this even to myself, my secret ambition is to become a great man, like Einstein, or Beethoven, or Shakespeare.
- \_\_\_\_\_ 16. The main thing in life is for a person to want to do something important.
- \_\_\_\_\_ 17. If given the chance I would do something of great benefit to the world.

- \_\_\_18. In the history of mankind there have probably been just a handful of really great thinkers.
- \_\_\_19. There are a number of people I have come to hate because of the things they stand for.
- \_\_\_20. A man who does not believe in some great cause has not really lived.
- \_\_\_21. It is only when a person devotes himself to an idea or cause that life becomes meaningful.
- \_\_\_22. Of all the different philosophies which exist in this world there is probably only one which is correct.
- \_\_\_23. A person who gets enthusiastic about too many causes is likely to be a pretty "wishy-washy" sort of person.
- \_\_\_24. To compromise with our political opponents is dangerous because it usually leads to the betrayal of our own side.
- \_\_\_25. When it comes to differences of opinion in religion we must be careful not to compromise with those who believe differently from the way we do.
- \_\_\_26. In times like these, a person must be pretty selfish if he considers primarily his own happiness.
- \_\_\_27. The worst crime a person could commit is to attack publicly the people who believe in the same thing he does.
- \_\_\_28. In times like these, it is often necessary to be more on guard against ideas put out by people or groups in one's own camp than by those in the opposing camp.
- \_\_\_29. A group which tolerates too much differences of opinion among its own members cannot exist for long.

- \_\_\_30. There are two kinds of people in this world: those who care for the truth and those who are against the truth.
- \_\_\_31. My blood boils whenever a person stubbornly refuses to admit he's wrong.
- \_\_\_32. A person who thinks primarily of his own happiness is beneath contempt.
- \_\_\_33. Most of the ideas which get printed nowadays aren't worth the paper they are printed on.
- \_\_\_34. In this complicated world of ours the only way we can know what's going on is to rely on leaders or experts who can be trusted.
- \_\_\_35. It is often desirable to reserve judgment about what's going on until one has had a chance to hear the opinion of those one respects.
- \_\_\_36. In the long run the best way to live is to pick friends and associates whose tastes and beliefs are the same as one's own.
- \_\_\_37. The present is all too often full of unhappiness. It is only the future that counts.
- \_\_\_38. If a man is to accomplish his mission in life it is sometimes necessary to gamble "all or nothing at all."
- \_\_\_39. Unfortunately, a good many people with whom I have discussed important social and moral problems don't really understand what's going on.
- \_\_\_40. Most people just don't know what's good for them.

**APPENDIX B**

TABLE VIII

DOGMATISM SCORES, PLUS CHANGES, MINUS CHANGES, AND THE  
TOTAL ATTITUDE CHANGES FOR EACH INDIVIDUAL SUBJECT  
RANKED ACCORDING TO DOGMATISM SCORES

Dogmatism Score	Plus Changes	Minus Changes	Total Plus and Minus Changes	Dogmatism Score	Plus Changes	Minus Changes	Total Plus and Minus Changes
*	4	8	12	159	9	8	17
106	7	9	16	159	11	3	14
117	4	5	9	160	7	9	16
120	6	7	13	161	10	6	16
121	7	3	10	162	4	9	13
123	6	5	11	162	5	5	10
127	4	6	10	163	4	3	7
130	10	4	14	165	8	6	14
131	5	5	10	165	7	8	15
137	6	4	10	167	7	5	12
137	7	4	11	167	7	3	10
138	9	4	13	170	7	6	13
140	5	5	10	171	5	5	10
140	7	4	11	171	2	4	6
140	5	9	14	173	12	6	18
141	9	4	13	173	8	2	10
141	7	12	19	175	7	5	12
142	7	5	12	176	9	8	17
143	5	4	9	176	14	2	16
144	4	10	14	177	9	5	14
144	8	6	14	178	6	4	10
145	8	6	14	178	4	6	10
146	7	3	10	180	7	6	13
146	7	2	9	183	6	7	13
147	14	3	17	183	7	8	15
149	7	5	12	184	9	4	13
150	6	4	10	184	7	2	9
150	10	7	17	187	11	3	14
150	5	6	11	190	6	9	15
153	8	2	10	191	14	1	15
153	8	9	17	192	8	11	19
156	7	8	15	193	6	4	10
157	8	6	14	199	1	3	4
157	10	5	15	201	7	9	16
157	5	8	13	202	9	4	13
157	10	3	13	202	9	4	13
158	8	2	10	204	4	4	8
158	3	7	10				

\* No Score

TABLE IX

SUMMARY OF ATTITUDE CHANGES EXPRESSED IN  
PERCENTAGES BY TREATMENT LEVELS

Statement Number	LOW			MEDIUM			HIGH		
	No Change	Plus	Minus	No Change	Plus	Minus	No Change	Plus	Minus
1	33.33	<u>41.67</u>	25.00	44.11**	32.35	17.65	55.17	27.58	17.25
2	50.00	33.33	16.67	44.12	35.30	20.58	<u>68.97</u>	24.14	6.89
3	41.67	25.00	<u>33.33</u>	41.17	35.30	23.53	51.72	20.69	27.59
4	41.67	33.33	25.00	52.95*	26.47	17.65	44.82	27.59	27.59
5	16.67	<u>66.66</u>	16.67	23.53	<u>44.12</u>	32.35	51.73	34.48	13.79
6	75.00	8.33	16.67	41.17	26.47*	29.40	48.27	27.58	24.15
7	66.66	16.67	16.67	50.00	32.35	17.65	55.17	27.58	17.25
8	75.00	8.33	16.67	55.88	8.82	<u>35.30</u>	51.72	20.69	27.59
9	66.67	00.00	<u>33.33</u>	29.41	26.47	<u>44.12</u>	27.59	24.14	<u>48.27</u>
10	58.34	<u>41.66</u>	00.00	47.05*	29.40	20.58	48.27	<u>37.94</u>	13.79
11	50.00	25.00	25.00	47.05	32.30	20.59	51.72	34.49	13.79
12	<u>83.34</u>	16.66	00.00	55.89	23.52	20.59	55.18	31.03	13.79
13	58.34	25.00	16.66	52.95	14.71	20.59	58.64	20.68	20.68
14	58.34	16.66	25.00	<u>64.71</u>	14.71	20.58	<u>65.52</u>	27.59	6.89
15	33.33	33.34	<u>33.33</u>	38.23	<u>47.06</u>	14.71	31.03	<u>48.28</u>	20.69
16	66.66	16.67	16.67	26.47	<u>52.95</u>	20.58	<u>62.07</u>	17.25	20.68
17	<u>91.67</u>	00.00	8.33	29.40	35.30	<u>35.30</u>	48.28	24.13	27.59
18	41.67	25.00	<u>33.33</u>	52.95	26.47	20.58	48.28	24.13	27.59
19	75.00	8.33	16.67	41.17	32.35	26.48	41.38	<u>37.93</u>	20.69
20	41.67	16.66	<u>41.67</u>	<u>70.58</u>	14.71	14.71	<u>62.06</u>	27.59	10.35
21	75.00	8.33	16.67	55.88	29.41	14.71	51.72*	34.38	10.34
22	41.67	33.33	25.00	35.30	32.35	32.35	37.93	27.59	<u>34.48</u>
23	66.67	25.00	8.33	50.00	26.48	23.52	31.03*	24.13	<u>41.37</u>
24	<u>83.33</u>	16.67	00.00	38.24	<u>44.11</u>	17.65	48.27	34.48	17.25
25	50.00	25.00	16.66*	52.95	29.40	17.65	<u>65.52</u>	27.59	6.89

\*\* Data incomplete for two statements

\* Data incomplete for one statement

TABLE X  
 SUMMARY OF ATTITUDE CHANGES EXPRESSED IN  
 FREQUENCIES BY TREATMENT LEVELS

Statement Number	<u>Low</u>			<u>Medium</u>			<u>High</u>		
	No Change	+	-	No Change	+	-	No Change	+	-
1	4	5	3	15**	11	6	16	8	5
2	6	4	2	15	12	7	20	7	2
3	5	3	4	14	12	8	15	6	8
4	5	4	3	18*	9	6	13	8	8
5	2	8	2	8	15	11	15	10	4
6	9	1	2	14*	9	10	14	8	7
7	8	2	2	17	11	6	16	8	5
8	9	1	2	19	3	12	15	6	8
9	8	0	4	10	9	15	8	7	14
10	7	5	0	16*	10	7	14	11	4
11	6	3	3	16	11	7	15	10	4
12	10	2	0	19	8	7	16	9	4
13	7	3	2	18	11	5	17	6	6
14	7	2	3	22	5	7	19	8	2
15	4	4	4	13	16	5	9	14	6
16	8	2	2	9	18	7	18	5	6
17	11	0	1	10	12	12	14	7	8
18	5	3	4	18	9	7	14	7	8
19	9	1	2	14	11	9	12	11	6
20	5	2	5	24	5	5	18	8	3
21	9	1	2	19	10	5	15*	10	3
22	5	4	3	12	11	11	11	8	10
23	8	3	1	17	9	8	9*	7	12
24	10	2	0	13	15	6	14	10	5
25	6*	3	2	18	10	6	17	8	2

\*\* Data incomplete on two statements

\* Data incomplete on one statement

APPENDIX C

TABLE XI  
 RESPONSES AND MEAN SCORES OF THE COOPERATING TEACHERS,  
 BY TREATMENT LEVELS, FOR EACH  
 ATTITUDE STATEMENT

SA-Strongly Agree  
 A-Agree  
 N-Neutral  
 D-Disagree  
 SD-Strongly Disagree

The first line of responses - Low Treatment Level.  
 The second line of responses - Medium Treatment Level.  
 The third line of responses - High Treatment Level.

	SA	A	N	D	SD	Mean Scores
1. FFA television programs should be coordinated at the state level in order to give all chapters an equal opportunity to participate.	2	2	1	0	0	1.80
	5	5	2	3	0*	2.19
	2	4	5	0	0	2.27
						$\bar{X} = 2.16$
2. All chapters should be represented at the National FFA Convention at least once every three years.	1	3	0	0	1	2.40
	3	6	4	1	2	2.56
	3	5	2	1	0	2.09
						$\bar{X} = 2.37$
3. FFA summer trips should be used to help broaden the knowledge in such fields as art, music, literature, and theater.	1	1	2	0	1	2.80
	0	2	4	9	1	3.56
	0	1	1	8	1	3.81
						$\bar{X} = 3.53$
4. State Farmer awards should require more evidence of extensive leadership activities above the local level than presently is the case.	0	0	0	4	1	4.20
	0	3	1	11	1	3.62
	1	3	1	5	1	3.18
						$\bar{X} = 3.56$
5. The practice of referring to the vocational agriculture teacher as the "FFA teacher" is undesirable and should be discouraged.	1	1	0	1	2	3.40
	2	4	2	7	1	3.06
	2	2	2	5	0	2.90
						$\bar{X} = 3.06$
6. It is better to operate on a modest FFA budget than to be involved in many fund raising activities or to extensively engage in soliciting donations.	1	3	0	1	0	2.19
	8	4	3	1	0	1.81
	2	5	1	3	0	2.27
						$\bar{X} = 2.03$
7. Every FFA member should be strongly urged to become a member of some judging team.	2	2	0	0	1	2.20
	6	4	1	4	1	2.38
	2	8	0	0	1	2.09
						$\bar{X} = 2.25$

	SA	A	N	D	SD	Mean Scores
8. Every local advisor ought to feel a strong responsibility for contributing toward continuation of the recognition Oklahoma has gained for FFA leadership.	1	4	0	0	0	1.80
	12	4	0	0	0	1.18
	6	5	0	0	0	1.46
						$\bar{X} = 1.37$
9. There is too much emphasis on quality in FFA livestock exhibits at county fairs.	0	0	1	2	2	4.20
	0	1	0	11	4	4.13
	0	0	1	5	5	4.36
						$\bar{X} = 4.21$
10. We should discourage taking FFA boys out of the vocational agriculture classes to clean up school buildings or grounds.	1	3	0	1	0	2.20
	7	7	1	0	0*	1.59
	2	3	1	4	1	2.90
						$\bar{X} = 2.16$
11. Grades awarded vocational agriculture students should be determined independently of the student's participation in FFA activities such as shows, fairs, and contests.	0	2	0	2	1	3.40
	1	1	3	8	3	3.75
	0	0	0	7	4	4.36
						$\bar{X} = 3.90$
12. Parents or other adults should care for livestock of FFA members at fairs and shows thus reducing the amount of time the student is away from school.	0	1	0	3	1	3.80
	0	1	1	6	8	4.31
	0	2	1	4	4	3.90
						$\bar{X} = 4.09$
13. In schools having rules that prohibit married students from participating in extra-curricular activities, when an FFA member marries, he should become a non-active member.	0	0	2	2	0*	3.50
	0	2	0	7	7	4.18
	0	2	1	4	4	3.90
						$\bar{X} = 4.09$
14. Where local, state, and national FFA activities such as banquets and conventions tend to be basically the same year after year, new ideas should be strongly encouraged at all levels.	2	3	0	0	0	1.60
	8	8	0	0	0	1.56
	3	8	0	0	0	1.73
						$\bar{X} = 1.62$
15. Many teaching units on production agriculture should be changed to units that tend to "develop leadership" since the typical boy in vocational agriculture and FFA does not return to the farm.	0	1	1	3	0	3.39
	1	6	2	5	2	3.06
	0	1	0	10	0	3.81
						$\bar{X} = 3.37$
16. Farm shop projects built during regular scheduled vocational agriculture classes should not be sold to raise funds to sponsor FFA activities.	0	1	0	2	2	4.00
	4	0	1	8	3	3.37
	0	0	0	7	4	4.37
						$\bar{X} = 3.81$

	SA	A	N	D	SD	Mean Scores
17. Training potential winning FFA judging teams is a justifiable use of vocational agriculture class periods on a more or less regular basis.	0	0	0	5	0	4.00
	3	6	1	6	0	2.63
	1	5	2	3	0	2.63
						$\bar{X} = 2.84$
18. There is too much concern among school administrators and teachers about students being out of class and too little appreciation of the educational values to be gained from participating in FFA fairs, shows, and contests.	0	2	1	2	0	3.00
	3	11	0	2	0	2.06
	3	5	0	3	0	2.27
						$\bar{X} = 2.28$
19. The extent of participation in FFA activities should be limited in order to avoid any adverse affect upon grades in other courses.	0	2	0	3	0	3.20
	3	7	2	2	2	2.56
	0	6	0	4	1	3.00
						$\bar{X} = 2.81$
20. The FFA should change its name to one that would be more inclusive and would properly encompass new programs, in areas other than agricultural production.	0	0	3	2	0	3.40
	1	3	1	5	6	2.75
	1	2	0	2	6	3.90
						$\bar{X} = 3.75$
21. Money, family-influence, and social position are most essential for succeeding and becoming recognized in the FFA organization.	0	0	0	2	3	4.60
	0	1	0	3	12	4.62
	0	0	0	5	6	4.54
						$\bar{X} = 4.59$
22. FFA boys lose too much money on show steers.	0	3	1	1	0	2.60
	1	6	3	5	1	2.93
	0	0	1	9	1	4.00
						$\bar{X} = 3.25$
23. FFA activities in Oklahoma are becoming so competitive that the organization is tending to present a "win at all costs" image.	1	1	0	3	0	3.60
	4	2	1	7	2	3.06
	1	2	1	5	2	3.45
						$\bar{X} = 3.28$
24. The school should provide a school farm to ensure all FFA members the opportunity to have a production project.	0	1	2	2	0	3.20
	3	5	5	3	0	2.50
	1	3	1	6	0	3.09
						$\bar{X} = 2.81$
25. Girls should continue to be denied membership in the FFA.	1	2	0	1	1	2.79
	3	9	2	1	1	2.25
	3	6	0	1	1	2.14
						$\bar{X} = 2.31$

\* Missing data

Table XII

CHI-SQUARE ANALYSIS OF INDIVIDUAL ATTITUDE  
STATEMENT FOR ATTITUDE CHANGE  
BY TREATMENT LEVELS

Statement	Level	Change		Result
		No	Yes	
1. FFA television programs should be coordinated at the state level in order to give all chapters equal opportunity to participate.	Low	4	8	$X^2 = 1.6466$ .40 < p < .50
	Medium	15	17	
	High	16	13	
2. All chapters should be represented at the National FFA Convention at least once every three years.	Low	6	6	$X^2 = 4.0255$ .10 < p < .20
	Medium	15	19	
	High	20	9	
3. FFA summer trips should be used to help broaden the knowledge in such fields as art, music, literature, and theater.	Low	5	8	$X^2 = .7772$ .60 < p < .70
	Medium	15	20	
	High	13	16	
4. State Farmer Awards should require more evidence of extensive leadership activities above the local level than presently is the case.	Low	5	7	$X^2 = .8643$ .50 < p < .70
	Medium	18	15	
	High	13	16	
5. The practice of referring to the vocational agriculture teacher as the "FFA teacher" is undesirable and should be discouraged.	Low	2	10	$X^2 = 7.3753$ .025 < p < .05
	Medium	8	26	
	High	15	14	
6. It is better to operate on a modest budget than to be involved in many fund raising activities or to extensively engage in soliciting donations.	Low	9	3	$X^2 = 3.7926$ .10 < p < .20
	Medium	14	19	
	High	14	15	
7. Every FFA member should be strongly urged to become a member of some judging team.	Low	8	4	$X^2 = .1640$ .60 < p < .70
	Medium	17	17	
	High	16	13	
8. Every local advisor ought to feel a strong responsibility for contributing toward continuation of the recognition Oklahoma has gained for FFA Leadership.	Low	9	3	$X^2 = 1.9324$ .30 < p < .40
	Medium	19	15	
	High	15	14	

Statement	Level	Change		Result
		No	Yes	
9. There is too much emphasis on quality in livestock exhibits at county fairs.	Low	8	4	$X^2 = 6.4814$
	Medium	10	24	
		8	21	
10. We should discourage taking FFA boys out of the vocational agriculture classes to clean up school buildings or grounds.	Low	7	5	$X^2 = .3981$
	Medium	16	17	
	High	14	15	
11. Grades awarded vocational agriculture students should be determined independently of the student's participation in FFA activities such as shows, fairs, and contests.	Low	6	6	$X^2 = .1375$
	Medium	16	18	
	High	15	14	
12. Parents or other adults should care for livestock of FFA members at fairs and shows thus reducing the amount of time the student is away from school.	Low	10	2	$X^2 = 3.2439$
	Medium	19	15	
	High	16	13	
13. In schools having rules that prohibit married students from participating in extra-curricular activities, when an FFA member marries, he should become a non-active member.	Low	7	5	$X^2 = .2364$
	Medium	18	16	
	High	17	12	
14. Where local, state, and national FFA activities such as banquets and conventions tend to be basically the same year after year, new ideas should be strongly encouraged at all levels.	Low	7	5	$X^2 = .2035$
	Medium	22	12	
	High	19	10	
15. Many teaching units on production agriculture should be changed to units that tend to "develop leadership" since the typical boy in vocational agriculture and FFA does not return to the farm.	Low	4	8	$X^2 = .3673$
	Medium	13	21	
	High	9	20	
16. Farm shop projects built during regular scheduled vocational agriculture classes should not be sold to raise funds to sponsor FFA activities.	Low	8	4	$X^2 = 10.2741$
	Medium	9	25	
	High	18	11	

Statement	Level	Change		Result
		No	Yes	
17. Training potential winning FFA judging teams is a justifiable use of vocational agriculture class periods on a more or less regular basis.	Low	11	1	$X^2 = 13.8657$ .0005 < p < .001
	Medium	10	24	
	High	14	15	
18. There is too much concern among school administrators and teachers about students being out of class and too little appreciation of the educational values to be gained from participating in FFA fairs, shows, and contests.	Low	5	7	$X^2 = .4716$ .70 < p < .80
	Medium	18	16	
	High	14	15	
19. The extent of participation in FFA activities should be limited in order to avoid an adverse effect upon grades in other courses.	Low	9	3	$X^2 = 4.6068$ .05 < p < .10
	Medium	14	20	
	High	12	17	
20. The FFA should change its name to one that would be more inclusive and would properly encompass new programs in areas other agricultural production.	Low	5	7	$X^2 = 3.1759$ .20 < p < .30
	Medium	24	10	
	High	18	11	
21. Money, family influence, and social position are most essential for succeeding and becoming recognized in the FFA organization.	Low	9	3	$X^2 = 1.7169$ .40 < p < .30
	Medium	19	15	
	High	15	13	
22. FFA boys lose too much money on show steers.	Low	5	7	$X^2 = .1604$ .90 < p < .95
	Medium	12	22	
	High	11	18	
23. FFA activities in Oklahoma are becoming so competitive that the organization is tending to present a "win at all costs" image.	Low	8	4	$X^2 = 4.4488$ .10 < p < .20
	Medium	19	17	
	High	9	19	
24. The school should provide a school farm to ensure all FFA members the opportunity to have a production project.	Low	10	2	$X^2 = 7.2354$ .025 < p < .05
	Medium	13	21	
	High	14	15	
25. Girls should continue to be denied membership in the FFA	Low	6	5	$X^2 = 1.0858$ .50 < p < .60
	Medium	18	16	
	High	19	10	

APPENDIX D

Graduate Room  
Agricultural Education Department  
Oklahoma State University  
Stillwater, Oklahoma  
February 16, 1967

Mr. Herb Mackey  
State Supervisor of Vocational Agriculture  
Stillwater, Oklahoma

Dear Mr. Mackey:

I met with you before Christmas vacation and explained my proposed doctoral study to you at that time. This study will involve attitude changes in student teachers that take place during their six weeks of student teaching.

In order to carry out this study it is necessary to obtain from you and your staff a rating of each of the schools involved with the student teacher programs. This rating will be concerned with participation in FFA activities.

Please rest assured that the schools will lose their identity in the study and that the information provided by you and your staff will be kept confidential and handled with discretion.

I have no special method to suggest that the ratings be made. You may wish to have each supervisor fill out a copy of the form for only the schools in his district or you may prefer to do it as a group. All I need is one copy of the ratings for all 22 schools.

Sincerely yours:

Lloyd Wiggins

Agricultural Education Department  
Oklahoma State University  
Stillwater, Oklahoma 74074

May 24, 1967

Mr. \_\_\_\_\_  
Vocational Agriculture Instructor  
\_\_\_\_\_, Oklahoma

Dear

I am enrolled as a graduate student at Oklahoma State University pursuing an advanced degree in agricultural education. One of the requirements is writing a dissertation in an area of interest to me. I have chosen FFA activities as the area, and I need your help in gathering data for this study.

Would you fill out the enclosed attitude scale and return it to me in the enclosed stamped envelope before the summer conference. You should know that this study has been discussed with Dr. Price and Mr. Killian and both of these men have given their concurrence and approval to this study.

Your help will be appreciated.

Sincerely yours,

Lloyd Wiggins

Encl: 1

March 2, 1967

Professor Milton Rokeach  
Department of Psychology  
Michigan State University  
East Lansing, Michigan

Dear Professor Rokeach:

I am a graduate student and I am making a study of attitudinal changes in student teachers that take place during student teaching. It has been suggested that the Dogmatism Scale described in your book, The Open and Closed Mind, be incorporated into my study.

May I have your permission to administer this scale to the 44 student teachers that will be participating in student teaching this semester? Any consideration given to this request will be appreciated.

Please respond at your earliest convenience.

Sincerely yours,

Lloyd Wiggins  
Room 212  
Agricultural Hall South

## MICHIGAN STATE UNIVERSITY EAST LANSING • MICHIGAN 48823

DEPARTMENT OF PSYCHOLOGY • OLDS HALL

March 20, 1967

Mr. Lloyd Wiggins  
Room 212  
Agricultural Hall South  
Oklahoma State University  
Stillwater, Oklahoma

Dear Mr. Wiggins:

You certainly have my permission to use the Dogmatism Scale for research purposes. All you have to do is mimeograph it yourself with the instructions from The Open and Closed Mind. May I suggest, however, that you mix up the items well and, if possible, pad them with a few items from any other scale that you care to choose. It doesn't matter how you mix them up and it doesn't matter what items you use to pad them with.

I certainly hope that you will furnish me with a copy of the results of your research.

Sincerely yours,

*Milton Rokeach*  
(jeh)

Milton Rokeach  
Professor

MR/jeh

VITA

Lloyd Lee Wiggins

Candidate for the Degree of

Doctor of Education

Thesis: A STUDY OF ATTITUDINAL CHANGES OF STUDENT TEACHERS IN  
AGRICULTURAL EDUCATION

Biographical:

Personal Data: Born near Ringwood, Oklahoma, March 26, 1929,  
the son of Isaac and Ruby Wiggins.

Education: Graduated from Fairview High School, Fairview,  
Oklahoma in 1957; received the Bachelor of Science degree  
in Agriculture from Oklahoma State University, Stillwater,  
Oklahoma, in 1951 with a major in Animal Science; received  
the Master of Science degree in Agriculture from Oklahoma  
State University, Stillwater, Oklahoma, in 1954 with a  
major in Agricultural Education; attended the University  
of Maryland during the school year of 1963-64; completed  
requirements for the Doctor of Education degree in July, 1968.

Professional experience: Taught vocational agriculture in the  
Fort Supply Public Schools, Fort Supply, Oklahoma, 1951-53;  
taught vocational agriculture in Buffalo Public Schools,  
Buffalo, Oklahoma, 1953-56; served as instructor of animal  
science, Oklahoma State University/AID Contract, Jimma  
Agricultural Technical School, Jimma, Ethiopia, 1956-61;  
taught science in the Yale Public Schools, Yale, Oklahoma,  
1961-63; served as the Contractor's Overseas Representative  
for the FFA Peace Corps Project, Lahore, West Pakistan,  
1963-66; employed at Oklahoma State University as graduate  
research assistant for the Vocational Research Coordinating  
Unit, 1967-68. Member of Phi Delta Kappa, Oklahoma Educa-  
tion Association, Oklahoma Vocational Association.