IDENTIFICATION OF SELECTED CHARACTERISTICS ASSOCIATED WITH CONTINUED STUDENT ENROLLMENT IN VOCATIONAL AGRICULTURE

by

Richard Hummel Bittner

AN ABSTRACT OF A THESIS

Submitted to
Michigan State University
in partial fulfillment of the requirements
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DOCTOR OF PHILOSOPHY

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1962

ABSTRACT

IDENTIFICATION OF SELECTED CHARACTERISTICS ASSOCIATED WITH CONTINUED STUDENT ENROLLMENT IN VOCATIONAL AGRICULTURE

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Purpose.--To determine whether selected personal characteristics of students and those of their family environments are associated with continued enrollment in vocational agriculture.

Method.--Selected characteristics of a sample of 444 students enrolled in vocational agriculture in grades nine, ten, and eleven in the school year 1960-61 who continued vocational agriculture in grades ten, eleven, and twelve in the 1961-62 school year were compared with the characteristics of 111 students enrolled in vocational agriculture in the same grades during 1960-61 but who transferred to other high school subjects the next school year. The 39 schools from which the sample was selected were located within two Michigan farming areas. Data were obtained from administrations of a questionnaire and the Wert-Myster Farming Attitude Scale, and from school records. Fisher's t-test and chi-square were used to treat the data.

Findings and Interpretations.--An analysis of the total student loss from the 39 departments revealed that: (1) 209 students, or 15.25 per cent of the total enrollment of 1370,

left vocational agriculture at the end of the 1960-61 school year; (2) of the total student loss, 43.06 per cent, 35.83 per cent, and 21.11 per cent were freshmen, sophomores, and juniors, respectively; and (3) of the total student loss, 75.60 per cent chose other high school subjects, 11.00 per cent moved away, 12.92 per cent left school, and .48 per cent died.

Students who continued vocational agriculture (re-enrollees) differed significantly at the one per cent level from students who transferred to other courses in that: (1) more re-enrollees lived on farms; (2) re-enrollees had more favorable attitudes toward farming as a vocation and as a way of life, planned to obtain less post-high school education, and named occupational choices in lower aspiration levels and in different occupational fields; (3) more re-enrollees stated occupational choices related to agriculture, and more named farming as their first or second occupational choice; and (4) the occupational choices of re-enrollees were more consistent within aspiration levels.

Re-enrollees differed significantly at the five per cent level from transfer students in that re-enrollees displayed less academic ability and that re-enrollees expressed reasons for re-enrolling in vocational agriculture which displayed less consideration of long-term educational and/or occupational objectives.

When the following characteristics of re-enrollees were compared with those of transfer students, no significant

differences were found with respect to: (1) sizes of the students' home farms; (2) extent of parental farm ownership; (3) the farm work status of the students' fathers; (4) the ages of the students' fathers; (5) the number of students who expressed at least one occupational choice; (6) the degrees of initiative displayed in seeking guidance assistance and the amounts of guidance assistance received when students selected high school subjects, formulated post-high school plans, and when they decided upon their occupational choices; (7) the consistency of occupational choices within occupational fields; and (8) the degrees of certainty expressed for following their present post-high school plans or engaging in first choice occupations.

Four of the more important interpretations of the findings were:

(1) The significant factors which apparently influence the decisions of farm boys to discontinue vocational agriculture are not the relative opportunities they have to enter farming; but, a less favorable attitude toward farming and a lesser desire to capitalize upon a farming background as an aid to becoming established in an agricultural occupation.

(2) Although the mean grade point average of transfer students was significantly higher statistically, it was not much higher in a practical sense; consequently, the academic caliber of transfer students does not differ markedly from that of re-enrollees.

(3) A significantly large number of both re-enrollees and transfer students are not receiving any guidance assistance with their problems of selecting high school subjects, formulating post-high school plans, or making occupational choices.

(4) Many re-enrollees do not relate their study of agriculture to long-term plans and objectives to the same extent as do many transfer students.

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ACKNOWLEDGMENTS

Many persons were involved in the completion of this investigation and the author wishes to express his sincere appreciation to all who gave encouragement, guidance, and assistance.

First, the author is indebted to the instructors who provided data for the study. It is the author's hope that they will benefit from the findings of the study.

Sincere appreciation is also extended to members of the author's guidance committee, Dr. Paul Sweany, Dr. Harold M. Byram, Dr. Merle L. Esmay, and Dr. Walter F. Johnson for their suggestions and guidance; to Dr. Raymond Clark in whose seminar the preliminary plans for the study were developed; and to Mr. John Patterson for help with the statistical analysis.

A special word of gratitude is expressed to Dr. Sweany who supervised the investigation and the writing of the dissertation. The many hours he spent with the author discussing the various facets of the study and the assistance he gave were appreciated.

The author is humbly grateful to his parents for the many hours they spent tabulating data, for their support, and for their sympathetic understanding of the problems the author encountered. A great disappointment it is to the author that his father, who passed away March 1, 1962, was unable to see this dissertation completed.

Finally, a word of appreciation is due Mrs. Doris L. Kollmeyer for typing an accurate and attractive manuscript.

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CHAPTER I

INTRODUCTION

The Problem

The research reported in this dissertation was an attempt to identify certain characteristics of vocational agriculture students which differentiate those who enroll continuously in the vocational agriculture program as they progress through the four years of high school from those students who leave the program at the end of grades nine, ten, and eleven in order to study other high school subjects.

A review of literature was undertaken before the objectives and the procedure for the study were developed; and, the student characteristics which this review of literature suggested might differentiate the students who continue to enroll each year in the vocational agriculture program from those who transfer to other high school subjects were selected for the study.

For ease in manipulation of the data, three general hypotheses were developed which stated that, with reference to the characteristics studied, the characteristics of students who enroll continuously in the vocational agriculture

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program do not differ from the same characteristics of the students who transfer from vocational agriculture in order to pursue other high school subjects.

After the characteristics had been selected and the hypotheses formulated, the study consisted of testing these hypotheses to determine which could be accepted and which could be rejected in terms of the data available from the sample of students studied.

Background and Importance of the Problem

It is recognized by persons who work in the field of education that students enrolled in any course of instruction should wish to be enrolled and should be able to profit from the instruction given. This holds true for the vocational agriculture program as it does for any other program of instruction offered to high school students.

Apparently, many of the students who once enroll in vocational agriculture in high school no longer wish to remain enrolled and leave the program in favor of other high school studies which promise to be of more benefit to them. Typically, the extent of total student loss from the vocational agriculture program is substantial as any one group of beginning grade nine students progresses through grades nine, ten, eleven, and twelve. In Michigan, for example, and as the data in Table 1 indicate, the surviving senior classes enrolled in the Michigan vocational agriculture

Table 1.-

Origina Freshmar Year	
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[a]Enrollme ent of 1961.

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Table 1.--Net Student Losses from the Michigan Vocational Agriculture Program, Freshmen Classes 1953-58[a]

Originating Freshman Class		Surviving Senior Class		Net Student Loss	
Year	Enrollment	Year	Enrollment	Number	Per Cent
1953-54	3,769	1956-57	2,174	1,595	42.32
1954-55	3,729	1957-58	2,159	1,570	42.10
1955-56	3,881	1958-59	2,305	1,576	40.60
1956-57	3,904	1959-60	2,455	1,449	37.12
1957-58	3,774	1960-61	2,528	1,246	33.01
1958-59	3,620	1961-62	2,364[b]	1,256	34.70

[a]Enrollment data obtained personally from the State Department of Public Instruction, Lansing, Michigan, April 14, 1961.

[b]Estimated final end-of-year enrollment by the State Department of Public Instruction, Lansing, Michigan, April 14, 1961.

program for the years 1956 to 1961, inclusive, ranged from 33.01 per cent to 42.32 per cent smaller than each of the freshman classes had enrolled four years previously. A large percentage of this loss was caused by students who remained in high school, but who selected other high school subjects to study in lieu of vocational agriculture.

The problem tackled in this research project, that of attempting to identify the characteristics of students who remain enrolled in vocational agriculture and those of students who transfer from the program to pursue other high

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school studies, seems a significant problem to approach because the student loss is quite substantial, and because very little research has been directed toward the identification of these characteristics. This lack of research so directed leaves educators in the field of agricultural education with little evidence with which to judge whether the present attrition rate is indicative of good or poor guidance, effective or ineffective enrollment procedures, and whether vocational agriculture is meeting a broad enough spectrum of student needs.

The contribution that this study will make is that it will provide information concerning which characteristics describe those who remain enrolled in vocational agriculture and whether these characteristics are significantly different from the characteristics of students who do not, but who transfer to other high school courses. With these characteristics so differentiated, information will be available which should help, at least to some extent, with the evaluation and improvement of student selection procedures, student guidance, and of instruction itself within the vocational agriculture program by educators in the field of agricultural education.

Development of the Hypotheses

The review of literature reported in the next chapter raised three general questions in the mind of the investigator

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concerning the characteristics of students enrolled in the vocational agriculture program and which of these might best describe the students who continue to enroll in the program and which might best describe the students who leave the program to pursue other high school subjects. These questions were:

A. Do the youth who leave the vocational agriculture program have less opportunity to enter farming, and do they have greater aspirations to engage in occupations which are not related to agriculture than do the students who enroll each year in vocational agriculture?

B. Are the youth who leave the vocational agriculture program academically superior to the students who enroll continuously in vocational agriculture each year, and do these transfer students aspire to enter occupations which require higher levels of training than do the students who enroll each year in vocational agriculture?

C. Do the youth who leave the vocational agriculture program display a greater concern about their future; have a greater self-understanding, and a wider orientation to the world of work; and, do they possess more maturity in that they consider long-term objectives to a greater extent when making present-day decisions than do the students who re-enroll in the vocational agriculture program?

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These questions became the major concerns of the investigator as he proceeded to outline the procedure for this study. As the procedure for the study was developed, each of these questions became the basis for each of the three general hypotheses formulated to be tested in the study. A statement of each of these three general hypotheses follows:

A. General Hypothesis Number One

Students who transfer from vocational agriculture do not differ from the students who re-enroll with respect to the characteristics of former students who have become farmers.

B. General Hypothesis Number Two

Transfer students and the students who re-enroll in vocational agriculture do not differ with respect to the levels of academic ability they display, the amounts of post-high school education they plan to obtain, and the aspiration levels and occupational fields of their occupational choices.

C. General Hypothesis Number Three

Transfer students and the students who re-enroll in vocational agriculture do not differ with respect to the degrees of initiative they display in seeking guidance assistance when formulating plans, the amounts of unsolicited guidance assistance they receive from others

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when formulating plans, the degrees of maturity they display when expressing reasons concerning continuance in vocational agriculture, the degrees of consistency of occupational choices they achieve, and the certainty of their future plans.

The student characteristics studied in relation with the general hypotheses were:

A. For the first general hypothesis of the study:
   1. The extent of farm residency
   2. The farm work status of the students' fathers
   3. The sizes of the students' home farms
   4. The extent of parental farm ownership
   5. The ages of the students' fathers
   6. The numbers of brothers of the students
   7. Attitudes toward farming
   8. Aspirations to enter farming and agriculturally-related occupations

B. For the second general hypothesis of the study:
   1. High school grade point averages
   2. Amount of post-high school education anticipated
   3. Aspiration levels of occupational choices
   4. Classification of occupational choices by fields

C. For the third general hypothesis of the study:
   1. Student initiative in seeking guidance assistance when making plans for the future

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2. The amounts of unsolicited guidance assistance received by students
3. The degrees of consideration given long-range educational and occupational plans when students decided for and against continuing their study of vocational agriculture
4. Consistency of occupational choices within aspiration levels
5. Consistency of occupational choices within fields
6. Certainty of future plans

Assumptions

When this study was developed, the following assumptions were made.

A. High school students will be able to answer the questions presented on the questionnaire and that they will do so truthfully.

B. High school students have developed an attitude toward farming and that they will reveal this attitude truthfully.

C. The academic ability of high school students can be appraised with an acceptable degree of validity by an evaluation of their grade point averages.

D. High school students who actively seek information and assistance to aid them in making educational and occupational

plans display more concern about their future than do those who do not.

E. Occupations can be classified as being or not being agriculturally-related using the criterion whether or not knowledge of agriculture or of farming is of value to those persons engaged in the respective occupations.

F. High school students can express with an acceptable degree of validity whether or not a knowledge of agriculture would be of value to them in occupations of their choice.

G. Reasons given by students for either re-enrolling in or transferring from vocational agriculture will be truthful, and that these reasons may be rightfully classified as mature reasons, neutral reasons, and immature reasons.

H. A higher degree of maturity is displayed by students who clearly establish a relationship between the choice of high school courses and long-term educational or occupational plans than is displayed by students who do not establish this relationship.

I. All sources of occupational and educational information which assist students with the formulation of future plans may be treated as of equal importance in this study because there is no method available to determine what relative impact each source of information or assistance

may have on the educational and occupational plans of each student.

Definitions of Terms Used

Certain terms are used in this dissertation, and the definitions of these terms are given in this section so that the meaning of the text may at all times be clear to the reader.

Vocational Agriculture.--This term applies to the high school program of instruction in agriculture, established by the Smith-Hughes Act,[1] which is conducted for youth who are preparing for the work of the farm.

Re-enrollees.--This term designates those students who were enrolled in vocational agriculture during the 1960-61 school year and continued their study of vocational agriculture during the 1961-62 school year.

When, in the text, a grade level is associated with the term "re-enrollee," it means that the student was enrolled in that grade level and that the student continued his study of vocational agriculture the next school year. For example, a grade nine re-enrollee is one who was enrolled

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[1]United States Congress, Public Laws of the United States of America Passed by the Sixty-Fourth Congress, 1915-1917, Vol. XXXIX, Part 1 (Washington: Government Printing Office, Washington, 1917), pp. 929-936.

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in vocational agriculture in grade nine in 1960-61 and continued his study of vocational agriculture in the 1961-62 school year in grade ten.

Re-enroll.--The term "re-enroll" is used to indicate that students already enrolled in the vocational agriculture program during the 1960-61 school year continued their study of vocational agriculture during the 1961-62 school year. This term was used because students late in the spring semester each year usually "sign-up" again for vocational agriculture for the next school year.

Transfer Students.--The term "transfer students" is used in the study to designate those students who were enrolled in the vocational agriculture program during the 1960-61 school year and substituted another high school course for vocational agriculture during the 1961-62 school year.

When a grade level is associated with the term "transfer student," it means that the student was enrolled in vocational agriculture in that grade level, but transferred to another high school subject the next school year in the next higher grade level. For example, a grade ten transfer student is one who was enrolled in vocational agriculture in grade ten, but one who substituted another course for vocational agriculture in grade eleven.

Agriculturally-Related Occupations.--This term is used to designate those occupations which individual students

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designated as those occupations in which workers would either find it necessary or helpful to have a knowledge of agriculture or of farming.

It should be noted that any one occupation may have been designated as being related to agriculture by some students, and as not being related to agriculture by others. The desire was not to penalize students for incorrect information concerning whether or not occupations were really related to agriculture as determined by some external criterion. The position was taken that if a student had an occupational choice, if he thought that a knowledge of agriculture or of farming would be of value to him in that occupation; then, <u>to him</u>, the occupation <u>was</u> related to agriculture.

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CHAPTER II

REVIEW OF LITERATURE

The review of literature was completed before the characteristics studied in this project were selected and before the hypotheses of the study were developed.

For presentation here, the review of literature has been organized around each of the three general hypotheses, and the literature related to the characteristics of former students who have entered farming is presented first; that related to the students' academic abilities, and their educational and occupational aspirations, next; and that related to the characteristics of students' plan making and their future plans, just before the summary of the entire review of literature is presented at the chapter's end.

It should be remembered that the purpose of conducting this review of literature was to select those characteristics which showed promise of differentiating the students who re-enroll in the vocational agriculture program from those who leave the program to pursue other high school studies; and, that now, the review of literature is presented after the characteristics so discovered had been organized into areas related as they were to the three general hypotheses formulated for the study.

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Characteristics of Former Students Who Have Entered Farming

"Students who transfer from vocational agriculture do not differ significantly from the students who re-enroll with respect to the characteristics of former students who have become farmers." This, the first general hypothesis of the study, was tested by examining the student characteristics described in the following sub-sections.

Extent of Farm Residency and Sizes of Students' Home Farms

All studies reviewed indicated that more of the former vocational agriculture students who later became established in farming had grown up on farms, and on farms larger in size, than did the students who had not become established in farming.

Only two studies,[1, 2] were located which definitely mentioned that "being the son of a farmer" was a significant

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[1]Floyd G. McCormick, "Status of Former Vocational Agriculture Graduates" (unpublished Master's report, The University of Minnesota, St. Paul, 1959), cited in U. S. Office of Education, Summaries of Studies in Agricultural Education, Vocational Division Bulletin No. 291 (Government Printing Office, Washington, 1961), p. 33.

[2]Harry W. Kitts, "A Resume of Studies on Occupational Status of Former Students of Vocational Agriculture" (unpublished non-thesis study, The University of Minnesota, St. Paul, 1957), cited in U. S. Office of Education, Summaries of Studies in Agricultural Education, Vocational Division Bulletin No. 272 (Government Printing Office, Washington, 1958), p. 42.

factor correlated with establishment in farming. However, many studies have found that farm size is significantly related to establishment in farming and this indicates that farm residency itself is a significant factor related to establishment in farming.

All studies reviewed indicated that more youth from larger farms have become farmers than have youth from the smaller farms. Typical statements from the concluding statements of some of the studies reviewed include: "Boys from small farms seldom became established in farming."[1] As the size of farm increased, the likelihood of the respondents' entrance into farming increased,"[2] and "From the data collected, it was concluded that: size of the home farm . . . exercised a positive influence on the graduates' entry into

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[1]Michael T. Cullen, "A Follow-up Study of Vocational Agriculture Graduates of Willmar High School for Period 1943-54" (unpublished Master's thesis, The University of Minnesota, St. Paul, 1955), cited in U. S. Office of Education, Summaries of Studies in Agricultural Education, Vocational Division Bulletin No. 265 (Government Printing Office, Washington, 1957), p. 24.

[2]Don Erickson, "Factors Affecting Establishment in Farming of Former High School Graduates" (unpublished Master's report, Colorado Agricultural and Mechanical College, Fort Collins, 1955), cited in U. S. Office of Education, Summaries of Studies in Agricultural Education, Vocational Division Bulletin No. 265 (Government Printing Office, Washington, 1957), p. 33.

the occupation of farming."[1]

Other studies reviewed, those of Patterson,[2] Kitts,[3] and Stephens[4] all indicated that the larger the home farm of the student, the more likely he is to engage in the occupation of farming.

In addition to these findings, a Wisconsin study conducted in 1952 by Bjoraker to identify factors associated with vocational agriculture students' levels of desire to remain on the farm found that there was a significant relationship between the sizes of the home farms of the students studied and their levels of desire to remain on the farm.[5]

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[1]Vernon W. Bachmann, "Factors Influencing Occupational Choices of Vocational Agriculture Graduates of Holdrege High School" (unpublished Master's thesis, The University of Nebraska, Lincoln, 1957), cited in U. S. Office of Education, Summaries of Studies in Agricultural Education, Vocational Division Bulletin No. 282 (Government Printing Office, Washington, 1960), p. 3.

[2]George M. Patterson, "An Occupational Study of Certain Former Vocational Agriculture Students Who Attended the Banks County High School, Homer, Georgia During the Years 1947-52" (unpublished Master's problem, The University of Georgia, Athens, 1955), cited in U. S. Office of Education, Summaries of Studies in Agricultural Education, Vocational Division Bulletin No. 265 (Government Printing Office, Washington, 1957), p. 67.

[3]Kitts, op. cit., p. 42.

[4]Tommie N. Stephens, "Factors Associated with the Choice of Occupations of Former Students of Vocational Agriculture" (unpublished Master's problem, North Carolina State College, Raleigh, 1957), p. 32.

[5]Walter T. Bjoraker, "A Study of Upper Classmen in Vocational Agriculture to Identify Certain Factors with Levels of Desire to Remain on the Farm" (unpublished Doctor's dissertation, University of Minnesota, St. Paul, 1952), p. 82.

In summary, it appears that living on a farm and living on a comparatively large farm are characteristics definitely associated with a boy's probable establishment in the occupation of farming.

Parental Farm Ownership and Farm Work Status of Fathers

That the extent of parental farm ownership is related to establishment in farming by the sons of farmers was shown in all of the studies reviewed. No studies, however, were located which related directly the farm work status of students' fathers to establishment in farming; but several did provide evidence in an indirect way that the farm work status of students' fathers is related to establishment in farming by their sons.

Kitts, in 1957, reviewed 66 studies conducted in 25 states to determine whether former students of vocational agriculture were engaged in farming in smaller numbers than in earlier periods. Among his findings was the fact that being the son of a farm owner was correlated with the son's establishment in farming, and that being the son of a tenant farmer was associated with the son's leaving the farm.[1]

The employment status of each former vocational agriculture student who had been graduated from the Sturgis

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[1]Kitts, op. cit., p. 42.

High School in Kentucky from 1943 until 1953 was studied by Alexander in 1955. He found that most of the graduates who were farming or who were working in related occupations came from farms which were owner-operated.[1]

Hinton[2] and Couch[3] were once interested in determining the farm and home conditions which affected the quality and success of supervised farming programs carried on by vocational agriculture students. Couch discovered that 55 per cent of the students who came from owner families were rated by their teachers as having a fair opportunity to become

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[1]Ralph Alexander, "Employment Status of Former Students in Vocational Agriculture Who Have Graduated from the Sturgis High School" (unpublished special problem, University of Kentucky, Lexington, 1955), cited in U. S. Office of Education, Summaries of Studies in Agricultural Education, Vocational Division Bulletin No. 265 (Government Printing Office, Washington, 1957), p. 4.

[2]Bruce M. Hinton, "Significant Factors Influencing the Quality and Success of Supervised Farming Programs of Vocational Agriculture in Seven Schools of East Tennessee" (unpublished Master's thesis, University of Tennessee, Knoxville, 1958), cited in U. S. Office of Education, Summaries of Studies in Agricultural Education, Vocational Division Bulletin No. 275 (Government Printing Office, Washington, 1959), p. 23.

[3]Kenneth O. Couch, "A Study of the Effect of Home and Farm Conditions upon the Supervised Farming Program of Third Year Vocational Agriculture Students in Spartanburg County, South Carolina, July 1, 1955 - June 30, 1956" (unpublished Master's thesis, Clemson College, Clemson, South Carolina, 1958), cited in U. S. Office of Education, Summaries of Studies in Agricultural Education, Vocational Division Bulletin No. 282 (Government Printing Office, Washington, 1960), p. 13.

established in farming and that only 45 per cent of those from tenant families received the same rating.[1] Hinton concluded that students whose parents were owner-operators had better opportunities to become established in farming than did students whose parents were not owner-operators.[2]

Not only do the studies show that the extent of parental farm ownership is related to establishment of the parents' sons in farming, it appears that the influence of the extent of parental farm ownership is felt by students while they are in high school deciding whether to continue to study vocational agriculture and whether to become farmers.

Alexander found in his study that there was a definite relationship between the extent of parental farm ownership and the number of years of vocational agriculture students had completed. Of the vocational agriculture students in his study who completed four years of vocational agriculture, over 50 per cent were sons of farm owners; and of the students who had completed only one year of vocational agriculture, he found that only four per cent were from owner-operated farms.[3]

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[1]Couch, loc. cit.

[2]Hinton, loc. cit.

[3]Alexander, op. cit., p. 4.

With reference to the occupational choice of becoming or not becoming a farmer, two studies were found; and the results of these studies conflicted. Bjoraker found in Wisconsin that there was no correlation between the extent of parental farm ownership and the sons' levels of desire to remain on the farm.[1] Burchinal's study, conducted in 1960, of 103 tenth and twelfth grade boys in Iowa indicated that their levels of desire to remain on the farm were related to parental farm ownership. He found that of the students who planned to farm, 68 per cent were the sons of owner-operators.[2]

No studies were located which definitely related the farm work status of fathers with establishment of sons in farming. Couch, however, found that the teachers in his study rated 86 per cent of students from full-time farms as having an average or better chance to have satisfactory supervised farming programs compared with 57 per cent of the students from part-time operated farms.[3] The importance of developing good supervised farming programs in getting young men established in farming is stressed by Byram:

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[1] Bjoraker, op. cit., p. 94.

[2] Lee G. Burchinal, "Who's Going to Farm?" Iowa Farm Science, Vol. 14, No. 10, April, 1960, p. 12.

[3] Couch, op. cit., p. 13.

> Of all the activities contributing to advancement in farming none yields greater dividends than that of assisting youth to develop good farming programs. All evidence points to the positive relationship of farming programs to eventual success in attaining the status of farm operator.[1]

From Couch's study and from Byram's statement, the evidence is that youth living on full-time operated farms have better chances to develop good farming programs than do youth living on part-time operated farms, and that the development of a good farming program aids materially in getting youth established in farming.

Another study reviewed, that of Knight's, reveals that students from other than full-time farms tend not to continue their study of vocational agriculture. Knight reported that 28.5 per cent of the freshmen students in his study were from full-time farms, but that the percentage of students from full-time farms enrolled in grade 12 was 41.0 per cent.[2] Knight's opinion was that this difference was the result of selection on the part of the teachers, and that teachers may have guided the student without a full-time farm situation out of vocational agriculture.[3]

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[1]Harold M. Byram, Guidance In Agricultural Education (Danville, Illinois: The Interstate Printers and Publishers, Inc., 1959), p. 167.

[2]William H. Knight, "Factors Associated with the Vocational Choices of High School Students of Vocational Agriculture" (unpublished Ph.D. dissertation, Michigan State University, East Lansing, 1958), p. 46.

[3]Knight, loc. cit.

In summary, the evidence obtained from the studies reviewed indicated: (1) that a greater extent of parental farm ownership is related to a greater rate of establishment of sons in farming and in related occupations, (2) that students who are the sons of full-farm owners are judged by others to have better chances for becoming established in farming than sons of non-owners, and (3) that a greater extent of parental farm ownership is related to more years of vocational agriculture studied by students in high school.

Conflicting evidence was found which related the extent of parental farm ownership to students' levels of desire to become farmers.

With reference to the farm work status of students' fathers, evidence from the review of literature indicated: (1) that students from full-time farms are rated to have better chances of becoming established in farming than are students from part-time farms, (2) that students from full-time farms develop better farming programs, and (3) that students from full-time farms continue their study of vocational agriculture more years than do students from part-time farms.

Ages of Students' Fathers

The ages of the fathers of former vocational agriculture students who have become established in farming were not mentioned specifically in the studies reviewed. Consequently,

the review of literature did not reveal that any particular range of fathers' ages was a characteristic of the students who later became established in farming.

One study did discuss the ages of a group of farmers in relation with the retirement plans of these farmers and the disposition of these men's farms. This study was conducted by Brake, McKee, and Bonnen in Central and Southern Michigan in 1960.[1]

These investigators found that a large proportion of farmers over 55 years of age did not have apparent successors to their farms. Of those who planned to transfer their farms to heirs, only half had apparent successor-operators within their immediate families. The other half apparently planned to pass the farm on to a wife, a non-farming child, or to a distant relative.[2]

The investigators pointed out that even though approximately half of the farmers interviewed had apparent successor-operators, even the farms of these men might not be passed on to sons who will farm on them. In the first place, in many instances the farms were too small for

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[1] J. R. Brake, D. E. McKee, and J. T. Bonnen, "The Ages and Future Plans of Michigan Farmers as Related to Agricultural Adjustment," Quarterly Bulletin of the Michigan Agricultural Experiment Station, Michigan State University, East Lansing, Vol. 43, No. 2, November, 1960, pp. 421-434.

[2] Ibid., p. 431.

economical operation and especially would they not permit a farmer to begin farming on the home farm before the parents retire. Secondly, the investigators pointed out that only a relatively small proportion of older farmers planned to actually retire. Of the 38 operators who were over 65 years of age, only 11 planned to retire. The remainder of the farmers planned to farm for an indefinite period. Of the 106 farmers in their study who were over 55 years old, only 17 were considering retirement. It was concluded that these older Michigan farmers evidently desired to continue farming as long as they were able to do so.[1]

Number of Student Brothers

All evidence found concerning the relationship between establishment of former vocational agriculture students in farming and the numbers of brothers of these students was that a small number of brothers was associated with establishment and a comparatively larger number of brothers, with non-establishment.

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[1] *Ibid.*, p. 432.

Kitts,[1] Allison,[2] Deyoe,[3] Hoopes,[4] and Bartley[5] were among the investigators who came to this conclusion from each of their independent studies.

Hinton, another investigator, found that students tended to decrease the sizes of productive projects as the number in the family increased. He found, however, that the ages of the brothers at home had little effect on the student's farming programs.[6]

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[1]Kitts, op. cit., p. 12.

[2]Howard D. Allison, "Relationship Between Occupational Status and Certain Environmental Factors Revealed by a Study of Former Vocational Agriculture Students in Illinois" (unpublished Master's thesis, Colorado State College of Agriculture and Mechanic Arts, Fort Collins, 1938), cited in American Vocational Association, Summaries of Studies in Agricultural Education, Supplement No. 1 (Interstate Printers and Publishers, Inc., Danville, Illinois, 1943), p. 24.

[3]George P. Deyoe, Young Men from Michigan Farms--A Study of Farm-reared Men Who Attended Certain Michigan High Schools Which Maintain Departments of Vocational Agriculture, Bulletin No. 256 (The State Board of Control for Vocational Education, Lansing, Michigan, 1939), p. 10.

[4]Lindley B. Hoopes, "Factors Affecting the Establishment of Farming of Former Students of Vocational Agriculture Department at Muscative, Iowa" (unpublished Master's thesis, Iowa State College, Ames, 1937), cited in Summaries of Studies in Agricultural Education, Supplement No. 1 (Interstate Printers and Publishers, Inc., Danville, Illinois, 1943), p. 81.

[5]Hugh J. Bartley. "A Follow-up Study of Pupils Enrolled in Vocational Agriculture in High School at Mason, Michigan" (unpublished Master's thesis, Michigan State College, East Lansing, 1942), p. 52.

[6]Hinton, op. cit., p. 23.

In the Bartley study, it was concluded that competition of brothers was more of a retarding influence for establishment in farming than was the total size of the family farm.[1]

Attitude Toward Farming

It was not surprising to find that all studies reviewed indicated that a favorable attitude toward farming, a general liking for farm work, the desire for country life, and the appeal of outdoor life were all factors associated not only with student desire to become a farmer, but also with actual establishment of young men in farming.

Burchinal found that farm-oriented boys strongly asserted the superiority of rural life and that none of the boys in his study who planned to farm felt that the farm life was inferior to city life.[2]

Bjoraker found a significant positive relationship between measured attitude toward farming and the level of desire to remain on the farm.[3]

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[1]Bartley, op. cit., p. 52.

[2]Lee G. Burchinal, "Who's Going To Farm?" Iowa Farm Science, Vol. 14, No. 10, April, 1960, p. 13.

[3]Bjoraker, op. cit., p. 81.

Lindenmuth, who surveyed 260 former vocational agriculture students in Ohio in 1956, found that one of the most important reasons expressed by students for wanting to farm was "a desire for country life."[1]

McCormick stated that one of the factors which had influenced farmers to become so established was a "high interest in farming."[2]

In a study conducted in six Pennsylvania high schools, Wilson discovered that one of the five factors which had contributed most to the establishment of young men in farming was "satisfaction with farming as a way of life."[3]

Ahalt and Murray listed the major reasons why established farmers in three counties in Maryland decided to farm. Among these, and that most frequently expressed by these

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[1]Ward A. Lindenmuth, "The Occupational Patterns and Plans of 160 Former Students of Vocational Agriculture" (unpublished Master's thesis, The Ohio State University, Columbus, 1956), cited in U. S. Office of Education, Summaries of Studies in Agricultural Education, Vocational Division Bulletin No. 272 (Government Printing Office, Washington, 1958), p. 46.

[2]McCormick, op. cit., p. 33.

[3]Eddie K. Wilson, "Student Selection for Classes of Vocational Agriculture in North Carolina" (unpublished problem option, North Carolina State College, Raleigh, 1957), cited in U. S. Office of Education, Summaries of Studies in Agricultural Education, Vocational Division Bulletin No. 275 (Government Printing Office, Washington, 1959), p. 50.

farmers, was that "they liked farming."[1]

Bachman found that "the appeal of outdoor life" and "the independence of farm life" exercised a positive influence on vocational agriculture graduates' entry into farming.[2]

Students' Academic Abilities, and Their Educational and Occupational Aspirations

This section deals with that part of the review of literature directly related to the second general hypothesis of the study: "Transfer students and the students who re-enroll in vocational agriculture do not differ with respect to the levels of academic ability they display, the amounts of post-high school education they plan to obtain, and the aspiration levels and occupational fields represented by their occupational choices."

Academic Ability

The studies reviewed indicated that more academic ability is displayed by high school students who do not take

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[1]Arthur M. Ahalt and Ray A. Murray, How Young Farmers Become Established, Agricultural Experiment Station Miscellaneous Publication No. 271 (College Park, Maryland: University of Maryland, 1956), p. 4.

[2]Bachman, op. cit., p. 3.

vocational agriculture in high school than is displayed by those who do, and that the students who choose farming as an occupation display less academic ability than do those who do not aspire to become farmers.

Christensen[1] conducted a study at the University of Minnesota in 1959 of 451 high school graduates to determine what differences existed between those who did and did not choose vocational agriculture as an elective when they were in high school, and to determine what differences existed between graduates who did and did not become farmers with respect to scholastic aptitude and academic achievement. Scholastic aptitude was measured by The Henmon-Nelson Test of Mental Abilities, The Kuhlman-Anderson Intelligence Test, and The American Council on Education Psychological Examination. Academic achievement was measured by high school class rank.

He reported the following results:

> The analysis of the data indicated the following: (1) No significant difference between rural farm and rural nonfarm students. (2) The male students taking vocational agriculture ranked significantly lower in mean intelligence on all three scholastic aptitude tests when compared with the boys not so enrolled.

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[1]Virgil E. Christensen, "A Study to Determine How Male Students Selecting Vocational Agriculture Compare in Scholastic Aptitude and High School Rank With Their Male Classmates (unpublished Master's problem, University of Minnesota, St. Paul, 1959), cited in U. S. Office of Education, Summaries of Studies in Agricultural Education, Vocational Division Bulletin No. 282 (Government Printing Office, Washington, 1960), p. 34.

(3) The IQ scores as well as high school ranks were significantly lower for rural farm boys who elected to take vocational agriculture than for rural farm boys who did not. (4) The graduates who became farmers ranked significantly lower in both IQ and high school rank than did their fellow graduates who entered vocations of a professional, business, or clerical nature. (5) The graduates who became farmers were not significantly different from graduates who became skilled, semi-skilled, or unskilled workers as to mean intelligence or high school rank. (6) No significant difference in mean intelligence or high school rank was found between graduates who became farm operators and those who became farmhands. Significance in all cases was figured at the 1 per cent level.[1]

The reading ability of 386 high school vocational agriculture graduates in six departments in Tennessee was studied by Cardozier. To determine reading ability, the Survey Section of the Diagnostic Reading Tests are given and it was found that vocational agriculture students read at levels considerably below the levels at which they were expected to read. Ninth grade vocational agriculture students read at the seventh grade level. Tenth grade vocational agriculture students read at the seventh grade level also, but slightly better than grade nine students. Grade eleven and twelve vocational agriculture students were found to be reading at the grade eight level.[2]

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[1] Ibid.

[2] V. R. Cardozier, "Reading Ability of High School Students of Vocational Agriculture" (unpublished staff study, University of Tennessee, Knoxville, 1958), cited in U. S. Office of Education, Summaries of Studies in Agricultural Education, Vocational Division Bulletin No. 282 (Government Printing Office, Washington, 1960), p. 32.

Bluemke's study of the guidance activities influencing vocational agriculture students in 113 Wisconsin departments found that over 40 per cent of the teachers felt that their departments were "a dumping ground" for low ability students, and that 30 per cent of the teachers estimated that college bound students were discouraged by guidance counselors from electing vocational agriculture.[1]

Burchinal reported that in Iowa of the 103 farm boys in his study, 27 per cent planned to farm. Those boys who planned to farm were found by him to have lower grades in high school than did the boys with definite non-farm plans. Of the boys who planned to farm, 18 per cent reported they generally received A's and B's, 64 per cent reported they generally received C's, and 18 per cent reported they generally received D's and F's. Of the boys with definite non-farm plans, 42 per cent reported they generally received A's and B's, 50 per cent reported they generally received C's, and eight per cent reported they generally received D's and F's.[2]

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[1]Arnold A. Bluemke, "A Study of High School Guidance Activities Influencing Vocational Agriculture Students" (unpublished Master's seminar report, University of Wisconsin, Madison, 1960), p. 52.

[2]Lee G. Burchinal, "Who's Going To Farm?" Iowa Farm Science, Vol. 14, No. 10, April, 1960, p. 13.

In 1960, Eldridge studied the relation of occupational plans of Iowa farm boys to agricultural adjustment. His purposes in so doing were, among others, to determine the patterns of occupational plans of Iowa farm youth about to enter the labor market, to develop an explanation of the occupational plan patterns exhibited, and to identify major factors influencing the formation of these plans. All farm boys in the senior classes in Iowa high schools which were located in communities of less than 25,000 were included in his study. He discovered that boys who did not plan to farm made significantly higher scores on the Iowa Educational Development Achievement Test than did the boys who did plan to farm.[1] Haller, a year earlier, also reported the same general type of finding in a study of his of farm boys in Wisconsin. Haller reported that boys who planned to farm had lower IQ scores on the average than did the boys who planned not to farm.[2]

The studies reported here indicated that more academic ability is displayed by high school students who do not take vocational agriculture than is displayed by those who do,

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[1]Eber Eldridge, "Relation of Occupational Plans of Iowa Farm Boys to Agricultural Adjustment" (unpublished Doctor's dissertation, Iowa State University of Science and Technology, Ames, 1960), p. 84.

[2]Archie O. Haller, "Planning to Farm: A Social Psychological Interpretation," Social Forces, Vol. 37, No. 3, March, 1959, p. 267.

and that the students who choose farming as an occupation display less academic ability than do those who do not aspire to become farmers.

Educational Aspirations

Five studies are reported here which were concerned with the educational aspirations of farm youth compared with non-farm youth, and with the aspirations of boys who did and did not plan to enter the occupation of farming. These studies indicated that farm youth, compared with non-farm youth; and that youth who plan to enter the occupation of farming, compared with those who do not aspire to be farmers, plan to obtain less post-high school education.

In 1960, Burchinal reported a study concerning the educational plans of 323 Iowa school boys enrolled in the tenth and twelfth grades.[1] One hundred and three boys lived on farms, 118 boys lived in small towns; and, the remainder, 102 boys, lived in a central Iowa metropolitan area. He found: (1) that farm parents provided less encouragement for their son's education beyond high school than did the urban and small town parents; and (2) that urban and small town parents were more likely to <u>definitely</u> encourage their sons to consider post-high school education; (3) that a full

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[1] Lee G. Burchinal, "What's Your Son Going To Do?" <u>Iowa Farm Science</u>, Vol. 14, No. 9, March, 1960), pp. 16-18.

30 per cent of the farm boys, compared with 12 per cent of the urban boys and 18 per cent of the small town boys, reported that they had no educational plans after high school; and (4) that only 47 per cent of the farm boys planned a college education, compared with 62 per cent of the small town boys and 81 per cent of the urban boys.[1] In another study, Burchinal found that 61 per cent of the boys who planned to become farmers had no plans for training beyond high school, and that only ten per cent of the boys who chose non-farm occupations had no plans for additional education.[2]

Haller and Sewell tested the hypothesis that "the farm youth aspires to relatively low occupations and is not ambitious for the further education he will need if he is to rise in urban society."[3] For their study, they selected 5,000 Wisconsin high school seniors well distributed throughout the economic areas of the state from both public and private schools. Their conclusion was that "farm boys are apparently less likely to have higher educational aspirations than are other boys. Independent of intelligence,

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[1] Ibid., p. 16.

[2] Lee G. Burchinal, "Who's Going To Farm?" Iowa Farm Science, Vol. 14, No. 10, April, 1960, p. 14.

[3] Archie O. Haller and William H. Sewell, "Farm Residence and Levels of Educational and Occupational Aspirations," American Journal of Sociology, Vol. 62, No. 4, January, 1957, p. 407.

farm residence may inhibit a boy's desire for higher education."[1]

Sledge was interested in the vocational and educational plans of the 1956-57 graduating seniors from Wisconsin high schools. His sample consisted of 764 seniors from 31 schools located in five selected Wisconsin counties. He found that a larger number of non-farm students planned to attend college than did students with farm residence.[2]

In Kentucky, Youmans discovered that 34 per cent of the non-farm boys in his study planned to attend college compared with 15 per cent of the farm boys.[3]

In Iowa, Eldridge found in his study that only 23.9 per cent of the youth who planned to farm planned to obtain any education after high school graduation; but, that 68 per cent of the youth who did not plan to farm planned to obtain post-high school education. Eldridge concluded his analysis of the educational aspirations of the youth who did

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[1] Ibid., p. 410.

[2] George W. Sledge, "Vocational and Educational Plans of High School Graduates of 1957 in Five Wisconsin Counties with Special Reference to Higher Education" (Madison, Wisconsin: University of Wisconsin, Department of Agricultural and Extension Education, College of Agriculture, October 1, 1957), p. 14. (Mimeographed.)

[3] Grant E. Youmans, The Educational Attainment and Future Plans of Kentucky Rural Youth, Kentucky Agricultural Experiment Station Bulletin, No. 664 (Frankfort, Kentucky: Kentucky State College, 1959), p. 38.

and did not plan to enter farming by saying:

> It seems clear that more of the boys planning non-farm jobs recognize the need for additional training. On the other hand, the boys planning to farm apparently feel that additional training is not necessary for success in their occupations. In Iowa the percentage of the non-farm plan group planning additional education is approximately three times the percentage of the farm plan group.[1]

Aspiration Levels of Occupational Choices

The decision to consider in this study the aspiration levels of the occupational choices of the students who re-enroll in and the students who transfer from vocational agriculture did not come from the wealth of information concerning the general classifications of the occupational choices of vocational agriculture students; but, it came from two specific studies which were found in the literature, those of Burchinal[2] and Salmela.[3]

Both of these studies utilized the North-Hatt Scale of Occupational Prestige. This scale had its origin in 1947 when the National Opinion Research Center interviewed a

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[1] Eldridge, op. cit., p. 94.

[2] Lee G. Burchinal, "What's Your Son Going To Do?" Iowa Farm Science, Vol. 14, No. 9, March, 1960, pp. 16-18.

[3] Melvin R. Salmela, "Relation Between Home Characteristics of Farm-Reared Senior Boys and Their Occupational Choices," Agricultural Education Magazine, Vol. 31, No. 10, April, 1959, pp. 233-235.

nation-wide cross section of the United States with a battery designed to explore some of the basic attitudes regarding occupations. Two thousand, nine hundred persons were asked to evaluate each of the occupations the scale contained as being excellent, good, average, somewhat below average, or poor.

Burchinal's study was concerned with the educational and occupational plans of 323 high school boys in the tenth and twelfth grades. Of the total sample, 103 were farm boys, 118 were small town boys, and 102 boys lived in a central Iowa metropolitan area.

Burchinal reported that farm boys, as a total group, planned to enter occupations with probable lower income and prestige North-Hatt ratings than did the small town and urban boys. He found that 43 per cent of the farm boys planned to enter occupations of low prestige compared with 39 per cent of the small town and 28 per cent of the urban boys. These occupations were ones which generally did not require much training. Plans to enter the high income and prestige occupations, on the other hand, were those of only 19 per cent of the farm boys, compared with 30 per cent of the small town boys and 46 per cent of the urban boys.[1]

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[1] Burchinal, op. cit., p. 17.

It was also reported by Burchinal that the farm boys who didn't plan to farm more frequently planned to enter low prestige occupations. Approximately 72 per cent of the farm boys didn't plan to farm or they were undecided about farming. Of these, 26 per cent planned to enter high income and prestige occupations, 28 per cent planned to enter middle range occupations, and 31 per cent planned to enter low prestige and income occupations. About 15 per cent of the boys who didn't plan to farm had not yet decided what other occupations they might enter.[1]

Salmela studied the relation between certain home characteristics of Iowa farm-reared senior high school boys and their occupational choices. One half of his sample of students, 108 students, had studied vocational agriclture for three or more years, and the other half of his sample had never been enrolled in vocational agriculture. The findings of his of interest here are that no significant differences were found in the occupational choices of farm-reared seniors with and without vocational agriculture training when these choices were given Nort-Hatt occupational prestige ratings.[2]

The findings of these two studies suggest that farm residency is a significant factor which affects the levels

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[1] Ibid.

[2] Salmela, op. cit., p. 233.

of the vocational aspirations of high school students in that Burchinal found that farm boys chose occupations with lower income and prestige ratings, but that the study of vocational agriculture in itself does not seem to affect the occupational aspiration levels of the occupational choices of farm boys.

Classification of Occupational Choices by Fields

After much consideration, the investigator decided not to report any studies which were concerned with general classifications of the occupational choices of vocational agriculture students. For several reasons, it was felt that no purpose would be served in so doing. First, no studies could be found which utilized Roe's Occupational Classification System which was used to classify the occupational choices of students in this study. Second, no studies could be found which compared the occupational choices of students who transferred from vocational agriculture and those who remained in the program. The one study[1] located which related occupational plans with student drop-out from the vocational agriculture program did not differentiate those students who transferred to another course from those who left the school. The results of this study could only be

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[1]Owen E. Kiser, "Holding Power of Vocational Agriculture" (unpublished non-thesis study, Rutgers University, New Brunswick, N. J., 1955), 10 pp. (Mimeographed.)

found in outlined, mimeographed form. The results of the study could not be interpreted clearly, and when efforts were made to contact the investigator for clarification of the findings it was discovered that the investigator died in 1958.

Characteristics of Students' Plan Making and Their Future Plans

This section deals with that part of the review of literature directly related to the third general hypothesis of the study: "Transfer students and the students who re-enroll in vocational agriculture do not differ with respect to the degrees of initiative they display in seeking guidance assistance when formulating plans, the amounts of unsolicited guidance assistance they receive from others when formulating plans, the degrees of maturity they display when expressing reasons concerning continuance in vocational agriculture, the degrees of consistency of occupational choices they achieve, and the certainty of their future plans."

Guidance Assistance Asked For and Received by Students

The amounts of guidance assistance which students asked for and received became an item of concern in this study because several studies in the literature suggested that boys who planned to farm had not considered carefully alternate vocational choices, and that the guidance given to students was not adequate to meet their needs.

Burchinal presented the situation in a precise manner when he stated:

> Farming By Default? A person may enter an occupational field after carefully considering his interests and abilities and the relative opportunities, rewards and training needed for one occupation in relation to others. Or, a person may enter an occupation because it's the only one with which he's reasonably familiar.
>
> Some of the findings indicate that the last situation may apply to some of the boys who planned to farm. The boys who definitely planned to seek nonfarm employment had considered jobs other than farming; boys who planned to farm may or may not have seriously considered other occupations. Our findings suggest that at least some of them hadn't.
>
> The boys planning to farm, for example, less frequently discussed occupation selection or job plans with teachers or counselors than did the other boys. They much more often indicated that their fathers, whose occupational knowledge may have been limited to farming, had the greatest influence on their decision. And the boys who planned to farm were much less interested than the other boys in having more information about nonfarm jobs.
>
> One interpretation of these findings is that many of the boys who planned to farm made up their minds without much consideration of other job alternatives. This is fine when a young man has the interest, knowledge, ability and resources for successful farming. But premature commitment to any occupation can have unfavorable consequences--if the boy later finds he's not equipped to successfully carry out his chosen occupation.
>
> The point here isn't a question of whether or not farming is a right or wrong choice for these boys. The question is whether they did in fact choose among other alternatives in line with their interests and abilities. Or did they more or less accept it without such considerations? If so, is this the best way to decide on any occupation? Both schools and parents have an important role in this respect, and, as some clubs are now showing, the 4-H vocational or career programs can be helpful in this area.[1]

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[1] Lee G. Burchinal, "Who's Going To Farm?" Iowa Farm Science, Vol. 14, No. 10, April, 1960, p. 15.

Burchinal's study which he was discussing in the foregoing quotation found that boys who planned to farm less often consulted teachers or counselors about their vocational plans than did the boys who planned non-farm occupations. He found that 57 per cent of the students who planned to farm compared with 36 per cent of the boys who had planned to enter occupations other than farming reported that they had not talked with a (4-H) leader or counselor about their plans during the past year. He also found that only seven per cent of the boys who planned to farm had three or more discussions about farm plans, whereas 30 per cent of the boys who planned non-farm occupations had three or more discussions about their occupational plans.[1]

Strauss learned that 44 per cent of the youth in his study who planned to farm had never considered entering any job other than farming.[2]

Eldridge attempted to measure the amount of knowledge farm youth had concerning occupations other than farming. For several common occupations, he asked the students in his sample questions concerning the money needed for training and getting started in the job, the steadiness of income,

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[1] Ibid., p. 13.

[2] Murray A. Strauss, "Personal Characteristics and Functional Needs in the Choice of Farming As An Occupation," Rural Sociology, Vol. 21, 1956, p. 264.

the opportunity there was for self-direction, and the social standing of the job. In addition, the boys were asked to estimate the income per year the average American worker received. With the exception of one question, that concerning the opportunity to be your own boss, the boys who planned to farm gave significantly fewer accurate answers than did the boys who did not plan to farm.[1]

These studies by Burchinal, Strauss, and Eldridge leave doubt as to whether boys who plan to farm are carefully considering the various occupational alternatives which are in line with all of the interests and abilities they may have.

With reference to the guidance offered and available to students, many studies indicated that it is insufficient to meet the student's need for such guidance. Several studies will be mentioned to support this view.

Cantrell, in 1959, received questionnaires from 64 vocational agriculture teachers concerning their guidance practices. He concluded that students were not being provided with enough guidance in the areas of occupational choice, orientation of new students, follow-up of graduates, counseling with early school leavers, and helping students

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[1]Eldridge, op. cit., p. 131.

find ways of meeting financial needs in farming.[1]

In southwest Virginia, Clear interviewed 42 former students of eight high schools and received questionnaires from 28 agricultural instructors and principals. He found little evidence that proper assistance had been given to students in the selection of high school subjects and the selection of an occupation.[2]

Ball interpreted the data he obtained from his study of all of the drop-outs from the vocational agriculture program in ten North Colorado vocational agriculture departments from 1948 to 1952 by stating that if guidance had been more effective, the drop-out rate could probably have been reduced by 50 per cent.[3]

Bluemke studied the guidance practices affecting vocational agriculture students in 74 schools where there

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[1]Ronald E. Cantrell, "A Survey of the Guidance Practices of Vocational Agriculture Teachers in Alabama" (unpublished Master's thesis, Alabama Polytechnic Institute, Auburn, 1959), cited in U. S. Office of Education, Summaries of Studies in Agricultural Education, Vocational Division Bulletin No. 282 (Government Printing Office, Washington, 1960), p. 31.

[2]Charles C. Clear, "A Study of the Guidance Needs of Vocational Agriculture in Southwest Virginia" (unpublished Master's thesis, Virginia Polytechnic Institute, Blacksburg, Virginia, 1951), cited in U. S. Office of Education, Summaries of Studies in Agricultural Education, Vocational Division Bulletin No. 251 (Government Printing Office, Washington, 1953), p. 15.

[3]Wilbur P. Ball, "Student Drop-Outs in the High School Vocational Agriculture Program" (unpublished Master's report, Colorado Agricultural and Mechanical College, Fort Collins, 1952), p. 7.

were organized guidance programs. He found that 40 per cent of the teachers felt that guidance counselors were doing "a good job," but that more than one third of the teachers indicated that farm boys received little of the help needed from guidance counselors with the selection of elective subjects.[1]

Maturity of Reasons Expressed by Students Concerning Their Continuance in Vocational Agriculture

Maturity scores of the reasons expressed by students for either re-enrolling in or transferring from vocational agriculture were utilized in this study to estimate the amounts of consideration students gave long-term educational plans and/or occupational goals when students made these decisions. A search of the literature related to vocational agriculture students, or to farm boys, failed to bring to light any studies with findings of this type. Consequently no studies could be reviewed here.

Consistency of Occupational Choices

Students who express consistent occupational choices within occupational aspiration levels and occupational fields may either be displaying a well-understood self-concept with

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[1] Bluemke, op. cit., p. 5.

reference to their interests, abilities, and opportunities; or, they may be displaying a fixation upon an inappropriate occupational level or occupation field. Studies could not be located which studied the consistency of choices of farm boys or of boys studying vocational agriculture.

Certainty of Future Plans

Very little evidence could be found which related the certainty of future plans comparing vocational agriculture students with non-vocational agriculture students, or comparing farm youth with non-farm youth.

Sledge found when he compared the future vocational and educational plans of farm-reared and non-farm reared graduating high school seniors in Wisconsin that more of the farm boys were undecided about their future plans than were the non-farm boys. Thirteen per cent of the graduating seniors who lived on farms were undecided about their future plans and 8.9 per cent of the graduating seniors who did not live on farms were undecided about their future vocational and educational plans.[1]

Burchinal comparing the educational plans of farm, small town, and urban high school seniors in Iowa discovered that of those who planned to attend college, 60 per cent of

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[1]Sledge, op. cit., p. 7.

the farm boys, 63 per cent of the small town boys, and 80 per cent of the urban boys had already chosen the college or university they would attend.[1] Consequently, of the seniors who planned a college or university program, less farm boys had chosen the institution they would attend.

The findings of Eldridge in his Iowa study of farm-reared high school seniors were that the seniors who planned to farm, more, 79 per cent, were either certain or fairly certain of their occupational plans than were those who chose occupations other than farmings, 65.7 per cent.[2]

Analyzing his data, Eldridge found that the degrees of certainty expressed by the seniors regarding their future occupational plans were associated with the time decisions were made. He found that the greater certainty was correlated with earlier decisions, made before grade twelve, and the greater uncertainty correlated with later decision, made in grade twelve.[3]

The data from these studies suggest that farm boys, compared with boys with non-farm residence, may be more undecided about their future plans. But, of the farm boys, those who plan to farm may be more certain of their future plans than do the farm boys who do not plan to farm.

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[1]Lee G. Burchinal, "What's Your Son Going To Do?" Iowa Farm Science, Vol. 14, No. 9, March, 1960, p. 17.

[2]Eldridge, op. cit., p. 48.

[3]Ibid., pp. 49-51.

Summary of the Literature Reviewed

Characteristics of Former Students Who Have Entered Farming

All studies reviewed indicated that more of the former vocational agriculture students who later became established in farming had grown up on farms, and on farms larger in size, than had the students who did not become established in farming.

That the extent of parental farm ownership is related to establishment in farming by the sons of farmers was shown in all of the studies reviewed. Studies were not located, however, which related directly the farm work status of students' fathers to establishment in farming. However, several provided evidence in an indirect way that the farm work status of students' fathers is related to establishment in farming by their sons.

The ages of the fathers of former vocational agriculture students who have become established in farming were not mentioned specifically in the studies reviewed. Consequently, the review of literature did not reveal that any particular range of fathers' ages was a characteristic of high school students who later became established in farming.

All evidence found concerning the relationship between establishment of former vocational agriculture students in farming and the number of brothers of these students was

that a small number of brothers was associated with establishment and a comparatively larger number of brothers, with non-establishment.

Every study reviewed which dealt with attitudes and interests indicated that favorable student attitudes toward farming and student expressions of high interest in the occupation of farming were positively and significantly related with these same students' later establishment in the occupation of farming.

Students' Academic Abilities, and Their Educational and Occupational Aspirations

The studies reviewed indicated that more academic ability is displayed by high school students who do not take vocational agriculture than is displayed by those who do study vocational agriculture. The studies also indicated that the vocational agriculture students who choose farming as an occupation display less academic ability than do those students who choose other occupations.

Five studies were reviewed which were concerned with the amounts of education students planned to obtain after high school graduation. These studies indicated that farm youth, compared with non-farm youth, plan to obtain less post-high school education; and, that those who plan to enter the occupation of farming plan less education after high school than do those students who do not plan to become farmers.

The findings of one study reviewed suggested that farm residency is a significant factor which affects the levels of the vocational aspirations of high school students.

It was reported in the studies reviewed that farm boys choose occupations with lower income and prestige ratings than do non-farm boys. Another study indicated that the study of vocational agriculture itself does not appear to affect the occupational aspiration levels of the occupational choices of farm boys.

No studies were reported in the review of literature which were concerned with the classification of students' occupational choices by occupational fields because results of studies could not be located which could be compared directly with the results of this study.

Characteristics of Students' Plan Making and Their Future Plans

The studies reviewed left doubt in the investigator's mind whether or not boys who planned to engage in farming were considering the various occupational alternatives which they should be considering along with their choices of farming in order to arrive at their wisest choice of an occupation.

The studies reviewed indicated that the amounts of guidance offered and available to students were insufficient to meet the needs of the students for such guidance.

A search of the literature related to vocational agriculture students, or to farm boys, failed to bring to light any studies which were concerned with the relationship of the choice of high school subjects and the degrees of consideration students gave to long-term educational plans and/or occupational goals when students chose the subjects they would take in high school.

Research evidence could not be located which gave information concerning the consistency of occupational choices of farm boys or of boys studying vocational agriculture.

It appeared from the limited studies reported concerning the certainty of students' future plans, that farm boys may be more uncertain about their future plans than boys are who do not live on farms; but, of farm boys, those who do wish to farm are more certain of occupational plans than are the boys who do not wish to become farmers.

CHAPTER III

SOURCES OF DATA AND SCORING SYSTEMS USED IN THE STUDY

After the review of literature had been completed and the hypotheses for the study had been established, the attention of the investigator was directed toward the problem of how the data needed to test the hypotheses could be obtained.

An examination of the hypotheses after they had been established led the investigator to the conclusion that a questionnaire could be utilized to obtain most of the data, that the Wert-Myster Farming Attitude Scale could be used to determine the students' attitudes toward farming, and that high school records could be used to obtain evidence of the academic abilities of the students.

These sources of information were used; and this chapter describes the development of the questionnaire and the scoring systems developed and borrowed elsewhere for summarizing many of the questionnaire responses, the Wert-Myster Attitude Toward Farming Scale, and the use of high school records to obtain evidence of the academic abilities of the students.

The Questionnaire

The questionnaire (see Appendix A)[1] was developed by the investigator during the winter months of 1960. Suggestions for its improvement were received from staff members and fellow graduate students of the College of Education, Michigan State University. Further refinements resulted from improvements suggested by a trial administration of the questionnaire in two vocational agriculture departments not included in the sample of Michigan departments used in the study.

Various scoring systems were developed or borrowed from others in order to summarize many of the responses on the questionnaire into meaningful concepts in terms of the hypotheses that were to be tested. These scoring systems are discussed in the following sections.

Degrees of Initiative Displayed by Students in Obtaining Guidance Assistance

The score devised to measure the degrees of initiative students displayed in obtaining assistance or information when high school subjects were selected, when post-high school plans were formulated, and when vocational choices

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[1] *Infra*, p. 175.

were made consisted of the total number of different guidance resources students either checked or wrote on the questionnaire themselves for each period of decision as having been consulted by them without anyone asking or requesting them to do so. From the students' points of view, these were solicited guidance resources they had utilized.

No attempt was made to give weighted ratings to the various guidance resources in terms of what relative effects each guidance resource may have had on each student's plans.

Amounts of Guidance Assistance Received by Students

The score devised to measure the extent to which students were given assistance for each period of decision consisted of the total number of different guidance resources they listed or wrote themselves on the questionnaires as having given them assistance without their asking or looking for it. From the students' points of view, these were unsolicited guidance resources that they had utilized.

No attempt was made to give weighted ratings to the various guidance resources in terms of what relative effect each guidance resource may have had on each student's plans.

Agricultural Relatedness of Occupational Aspirations

The sole criterion used in this study to determine whether or not an occupation was related to agriculture was the opinion of each student. On the questionnaire, each

student was asked whether some knowledge of agriculture or of farming would be helpful or necessary for him to have if he pursued each of his occupational choices. The scores developed, therefore, were measures of student opinion as to which occupations were agriculturally related and not what the actual degree of agricultural relatedness might have been had external criteria been applied. It was felt that scores based upon each student's own frame of reference would serve better as measures of the meaningfulness of vocational agriculture to each student than scores would serve had external criteria for judging the agricultural relatedness of occupations been utilized.

The questionnaire provided for as many as three occupational choices and a scoring system was developed by following the procedure listed below:

A. A value of three points was assigned to the first occupational choice, a value of two points to the second choice, and a value of one point to the third choice for those choices which were agriculturally related. Any choice not related was given a value of zero.

B. The value assigned to the choices were added to obtain a total, and this total was divided by the sum of the values choices would have received if all choices had been agriculturally related.

C. Procedure "B" was followed for all possible combinations of first, second, and third choices being agriculturally related. Answers were converted to decimals and these constituted the agricultural relatedness scores.

If all occupations named by a certain student were agriculturally related, the agricultural-relatedness score of his choices equalled one; if none were related, the score was zero, and for combinations, the scores ranged from 0.1 to 0.9.

Aspiration Levels of Occupational Choices

The occupational choices of re-enrolling vocational agriculture students were classified by aspiration level using Roe's "Two-Way Classification of Occupations."[1] This system of classification provided a means for the classification of occupations on six levels dependent upon the level of responsibility assumed, or the capacity and skill needed by workers in each level.

A brief description of each level follows:

Level 1 (Professional and Managerial 1) contains the occupations of the creators, the innovators, and the top-ranking managers and administrators. Policy-making is an important

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[1] Ann Roe, The Psychology of Occupations (New York: John Wiley & Sons, Inc., 1956), pp. 143-152.

function at this level, and if formal education is required, it is at the doctoral level.

Level 2 (Professional and Managerial 2) contains the occupations which have narrow or less significant responsibilities than those in Level 1. Policy is interpreted at this level and if education is relevant, it is at the bachelor level or above, but below the doctoral level.

Level 3 (Semi-Professional and Small Business) contains occupations which involve either a low level of responsibility for others, the application of policy, or a determination for self only. If education is required, it is high school plus technical school training, or the equivalent.

Level 4 (Skilled) contains those occupations which require apprenticeship, special training or experience.

Level 5 (Semi-skilled) contains occupations which require some training but much less than is required in Level 4.

Level 6 (Unskilled) contains occupations which involve the ability to follow simple instructions or perform repetitive tasks.

No difficulty was encountered in classifying occupations chosen by the students in the study. In spite of the fact that only a limited number of occupations have been classified by Roe, the students chose, almost without exception,

only the most common occupations universally known to high school students. Most of these same occupations had been previously classified by Roe.

Consistency of Occupational Choices Within Aspiration Levels

The scoring system used to measure the consistency of occupational choices within aspiration levels was the same as Super and Overstreet utilized in their research titled The Vocational Maturity of Ninth Grade Boys.[1] The aspiration level of the highest-level vocational choice was subtracted from the level number of the lowest-level occupational choice in order to obtain a discrepancy score. If a student expressed only one occupational choice, his discrepancy score was zero.

Consistency of Occupational Choices Within Fields

To obtain a score indicative of the consistency of occupational choices within fields, Roe's "Two-Way Classification of Occupations"[2] was used to classify the students'

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[1] Donald E. Super and Phoebe L. Overstreet, The Vocational Maturity of Ninth Grade Boys (New York: Teachers College, Columbia University, 1960), p. 188.

[2] Roe, op. cit., pp. 143-152.

occupational choices according to the field they represented, and then, discrepancy scores were computed.

Roe's system classifies occupations into eight occupational fields according to the primary activities engaged in by workers in each field. Briefly:

Group 1 (Service Occupations) are concerned primarily with attending to the personal wishes, needs and welfare of other persons.

Group 2 (Business Contact Occupations) are concerned primarily with the face-to-face selling of goods and services where personal inter-action is important between buyer and seller.

Group 3 (Organization Occupations) contains the managerial jobs in business, government, and industry in which the major concern is with organization and efficient organization of work.

Group 4 (Technological Occupations) contains occupations concerned with the production, maintenance, and transportation of goods and services.

Group 5 (Outdoor Occupations) includes the occupations of farming, fishing, forestry, conservation, among others, Roe classifies.

Group 6 (Science Occupations) includes the occupations of workers concerned with the application of scientific theory to specific problems.

Group 7 (General Cultural) contains occupations concerned with preserving and transmitting the general cultural heritage. Teachers, journalists, and ministers belong in this group.

Group 8 (Arts and Entertainment) contains occupations concerned with the use of special skills found in the fields of the creative arts and entertainment.

The system of scoring used in this study to obtain a measure of the discrepancy of students' occupational choices was the same used by Super in his study titled The Vocational Maturity of Ninth Grade Boys.[1] The total number of different occupational fields for each student was determined and this total minus one was used to represent the amount of discrepancy that existed within occupational fields. A student with only one occupational choice received a discrepancy score of zero.

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[1] Super and Overstreet, op. cit., p. 187.

Maturity of Reasons Expressed by Students Concerning Their Continuance in Vocational Agriculture

Early in the planning stages of this study, a system of maturity scores was developed by which the reasons expressed by students for re-enrolling in and transferring from vocational agriculture could be evaluated in terms of the amount of consideration being given by students to future educational and occupational plans. The development of these maturity scores is described in the next several paragraphs.

Two lists of reasons were developed from a review of literature and from the investigator's past experience which were thought to be not only those commonly expressed by students when they gave reasons for re-enrolling in or transferring from vocational agriculture, but also those which were indicative of the amount of consideration given by students to future educational and occupational plans. The two lists of reasons were submitted for evaluation to six staff members in the Agricultural Education Service and to six staff members of the Guidance and Counseling Department in the College of Education at Michigan State University. These twelve staff members rated each reason according to the following directions:

> Listed below are statements a high school student could give as reasons for continuing his enrollment in vocational agriculture; or in the second list, reasons he could give for transferring from the vocational agriculture program to another high school course.

Please read the following statements and rate each on a three point maturity scale: 2 = a mature reason, 1 = a neutral reason, and 0 = an immature reason.

A mature reason is one which indicates the student himself has established a definite relationship between either his re-enrolling in or transferring from vocational agriculture and long-term educational or occupational objectives.

A neutral reason is one from which it is impossible to determine whether the student himself has established a definite relationship between his either re-enrolling in or transferring from vocational agriculture and his long-term educational or occupational objectives.

An immature reason is one which indicates the student has based either his decision concerning re-enrolling in or transferring from vocational agriculture without his own consideration of long-term educational or occupational objectives.

Reasons for Re-enrolling in Vocational Agriculture

A. Need knowledge of farming in my future job.
B. I like the agriculture instructor better than other teachers.
C. I'm interested in agriculture.
D. There are good jobs for people trained in agriculture.
E. My friends are taking vocational agriculture.
F. I've been advised to take agriculture.
G. Agriculture meets requirements for getting into college.
H. It's easy to get good grades in agriculture.
I. I want to make the most out of my farm background for getting a job.
J. I like practical subjects.
K. Activities like field trips are lots of fun.
L. I like farm shop work.

Reasons for Transferring from Vocational Agriculture

A. I don't need knowledge of farming in my future job.
B. I like other teachers better than the agriculture instructor.
C. Continuing in agriculture would limit my choice of future jobs.
D. I don't like farm shop work.
E. I'm not interested in agriculture.
F. My friends are transferring to other courses.
G. It's hard to get good grades in agriculture.
H. Need other courses for college entrance.

I. I've been advised to take other courses.
J. Want to explore other subjects to help me choose an occupation.
K. I like subjects more academic than agriculture.
L. Activities like field trips are a waste of school time.

A maturity score for each reason was obtained by averaging the numerical values assigned to each reason by each staff member. When students filled out the questionnaires, they checked the reasons they wanted to express for either transferring from or re-enrolling in vocational agriculture. Two blank spaces were left in each set of reasons for students to write in reasons not listed. In a few cases they did so, but in all instances they were found to be rewording of reasons checked previously.

Each student was given a composite score, called his "maturity score," for all the reasons he checked. This was obtained by adding up the values assigned to the reasons checked and dividing the sum of the values by the number of reasons checked. The closer the maturity score was to two, the more mature the reasons expressed. The closer the maturity score was to 0, the more immature were the reasons expressed. This method of deriving the maturity scores penalized students for stating reasons judged to be immature even though they checked the more mature reasons listed. It was intended that this be done.

The mean rating assigned to each reason is found in Appendix L.[1]

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[1]<u>Infra</u>, p. 197.

The Use of High School Records

The academic ability of the students was evaluated in terms of their accumulated high school grade point averages.

After students were selected for inclusion in the sample, a data sheet (See Appendix B) was forwarded to the schools requesting the grades of each student. School officials were asked to supply the number of A's, B's, C's, D's, and F's earned by each student for all courses completed by the end of the 1960-61 school year. To arrive at each student's grade average, Grades of A, B, C, D, and F were assigned a value of four, three, two, one, and zero, respectively. The summation of the values assigned each grade was divided by the number of grades given. This resulted in a numerical grade average for all high school courses completed. Schools were not to be requested to supply a list of grades for each student by subjects. They were requested only to supply the total number of A's, B's, C's, D's and F's earned by each student.

The Wert-Myster Attitude Toward Farming Scale

The Wert-Myster Attitude Toward Farming Scale was constructed and validated by Myster in 1943 at Iowa State

University.[1] The scale measures two aspects of farming attitudes: (1) attitude toward farming as a vocation, and (2) attitude toward farming as a way of life.

The instrument consists of 45 statements which represent attitudes both favorable and unfavorable toward farming. Twenty-two statements refer to farming as an occupation and comprise the Vocational scale, and the remaining 23 statements refer to farming as a way of life and comprise the Way of Life scale. After students read each of these statements, they are asked to indicate whether they strongly agree, agree, are undecided, disagree, or strongly disagree with each one. Each student response is evaluated by scoring it as highly favorable, favorable, neutral, unfavorable, or highly unfavorable to farming by assigning numerical values of 5, 4, 3, 2, or 1, respectively. Scores for the Vocational scale and the Way of Life scale are obtained by adding together the values assigned to each of the statements within each scale. The total score consists of the Vocational score plus the Way of Life score.

Myster demonstrated the validity of the instrument by demonstrating its ability to differentiate between six groups consisting of 2,970 persons with known different

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[1] Alonzo Myster, "Construction and Validation of a Scale for Measurement of Attitude Toward Farming" (unpublished Ph.D. dissertation, Iowa State College, Ames, Iowa, 1943), 126 pp.

farming attitudes.[1] The author reports reliability coefficients obtained by using the split-half method with these six groups as ranging from 0.833 to 0.942.[2]

Chapter Summary

This chapter has described the questionnaire and the Wert-Myster Attitude Toward Farming Scale which were the instruments utilized to gather data for the study. Several scoring systems were developed or borrowed from other sources for use in summarizing many of the questionnaire responses. These scoring systems, along with the scoring system used to measure the academic abilities of the students, were also described.

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[1] *Ibid.*, p. 123.

[2] *Ibid.*

CHAPTER IV

THE PROCEDURE FOLLOWED

This chapter outlines the procedure followed as the study was conducted. Organized on the basis of the chronology of events as they took place, the chapter describes, in the following order, the selection of the vocational agriculture departments, the administration of the questionnaires and farming attitude scale, the determination of student loss from the participating departments, the analysis of the student population preceeding the selection of the sample, the selection of the sample, the procurement of student grades, and the tabulation and treatment of the data.

Selection of the Vocational Agriculture Departments

During the months of February to April, 1961, the number and locations of the departments to be included in the study were determined. Three criteria were used to determine the locations of the departments:

1. The departments had to be within close driving distance from Lansing. This criterion was stipulated so that, if follow-up work had to be done in order to clarify data obtained from any school, driving to the school could be done fairly easily.

2. The departments had to be located within the same type of farming district so that all farm data utilized for comparing the farm characteristics of re-enrollees and transfer students would represent the same general types of farms.

3. The departments had to offer instruction in vocational agriculture to freshmen, sophomore, junior, and senior high school students.

When the selection of departments began in February, 1961, the most obvious group of departments with which to work were those located within the dairy and general farming area. Lansing was located in this farming area, 41 departments were offering four year high school programs of vocational agriculture, and the types of general farming conducted in the area seemed more conducive to the objectives of the study than the types of farming would have been in other farming areas where a high degree of crop specialization prevailed; for example, in the southwestern fruit, dairy and truck farming area; or in the dairy, potato, part-time, and forestry area in Michigan's Upper Peninsula. Therefore, it was decided to utilize the departments within the dairy and general farming area.

These departments were contacted by letter during April, 1961 (see Appendix C)[1] and were requested to

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[1] *Infra*, p. 181.

participate in the study. Six departments indicated that they could not do so.

It was considered at this time that at least 40 departments had to be the minimum number for the study in order to obtain a sufficient number of transfer students for making statistical analyses. Because the number of vocational agriculture departments needed was deficient by five, this number of departments was selected from the dairy and cash crop farming area, an area which joins the dairy and general farming area on the northeast. The five departments selected from the dairy and cash crop farming area to complete the sample of schools needed for the study were serving the same general types of farms as were the 35 departments within the general and dairy farming area.

The listing of the vocational agriculture departments which participated in the study is shown in Appendix M.[1]

Administration of the Questionnaires and Farming Attitude Scales

After the selection of the vocational agriculture departments had been made, materials were made ready to send to each department. These materials included:

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[1] *Infra*, p. 198.

A. "A Note to the Schools Participating in the Study," (See Appendix D).[1]

B. "Instructions for Administering the Questionnaires," (See Appendix E).[2]

C. One copy of "The Attitude Toward Farming Scale," (See Appendix F)[3] for each grade nine, ten, and eleven student enrolled in the department.

D. One copy of "The Attitude Toward Farming Scale Answer Sheet," (See Appendix G)[4] for each grade nine, ten, and eleven student enrolled in the department.

E. A "Supplementary Guide to the Questionnaire and Attitude Scale," (See Appendix H).[5]

F. One copy of the "Questionnaire" (See Appendix A)[6] for each grade nine, ten, and eleven student enrolled in the department.

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[1] *Infra*, p. 182.

[2] *Infra*, p. 183.

[3] *Infra*, p. 184.

[4] *Infra*, p. 185.

[5] *Infra*, p. 186.

[6] *Infra*, p. 175.

During the last week of April, 1961, these materials were mailed to the departments. Questionnaires and attitude answer sheets were returned by all departments except one, and this reduced the number of departments participating in the study to 39.

During the summer of 1961, all farming attitude answer sheets received from the departments participating in the study were scored and the maturity scores were computed for the reasons expressed by all students who re-enrolled in vocational agriculture for so doing.

Determination of Student Loss from the Departments Surveyed

During the month of September, 1961, duplicate copies of a dual-purpose report form (See Appendix I)[1] were sent to each of the participating schools. On this report form was listed each student's name and the farming attitude scores each student obtained on the farming attitude scale. This was one purpose of the report, that of reporting to the departments the attitude scores of each student. An explanatory report (See Appendix J)[2] which summarized briefly the findings of an analysis of these scores and which indicated how instructors could interpret individual

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[1] *Infra*, p. 192.

[2] *Infra*, p. 193.

student attitude scores was also sent to the departments at this time.

The other purpose of the report sent to the participating departments was to obtain the names of the students who had re-enrolled in vocational agriculture that fall in the next highest grade level, and the names of those who had not. Instructors indicated on the duplicate copy of the report this information, and returned the duplicate report sheets to the investigator.

Analysis of the Student Population Preceeding Selection of the Sample

Certain analyses were made before the sample utilized in this study was selected. These analyses consisted of (1) a determination of the extent of student loss from vocational agriculture in the 39 departments surveyed, (2) a determination of the disposition of the students who left the vocational agriculture program, and (3) a determination of the upper 25 per cent, the middle 50 per cent, and the lower 25 per cent of the re-enrollees based upon the maturity scores of the reasons these students expressed for re-enrolling in vocational agriculture. The results of these analyses were the bases for the selection of the sample, and discussions of these are presented next so that the procedure followed when the sample was selected can be understood readily.

These analyses are based upon the total number of students who returned scorable farming attitude answer sheets.

The numbers of these students from each grade level are shown in Table 2. Because 28 answer sheets were discarded as unscorable, and because undoubtedly some students were absent from school when the attitude scale was administered, the analyses, percentagewise, probably exaggerate slightly the extent of the student loss.

Table 2.--Number of Students Who Returned Scorable Farming Attitude Answer Sheets from the 39 Departments Surveyed*

Grade Level	Numbers of Students
Grade 9	516
Grade 10	431
Grade 11	423
Total	1,370

*Twenty-eight students returned answer sheets incompletely filled out and are not included in this table.

Extent of Student Loss in the 39 Departments Surveyed

The numbers of students who re-enrolled in vocational agriculture and who left the program are shown in Table 3. From this table, it can be seen that 209 students left the program and reduced the number of students who continued the program during the 1961-1962 school year by 15.25 per cent. The percentage of grade nine students who did not continue vocational agriculture was 17.44; the percentage of grade ten

Table 3.--Students Re-enrollment and Loss by Grades from Vocational Agriculture in the 39 Departments Surveyed*

	From Grade 9	From Grade 10	From Grade 11	Total
Left program, Spring 1962				
Number	90	74	45	209
Per Cent	17.44	17.16	10.63	15.25
	In Grade 10	**In Grade 11**	**In Grade 12**	
Continued Program, Fall, 1962				
Number	426	357	378	1,161
Per Cent	82.56	82.84	89.37	84.75
Total				
Number	516	431	423	1,370
Per Cent	100.00	100.00	100.00	100.00

*Includes only those students who supplied scorable attitude scale answer sheets.

students, 17.16; and the percentage of grade eleven students, 10.63. Of the 209 students who left the program, 43.06 per cent were freshmen, 35.83 per cent were sophomores, and 21.11 per cent were juniors.

Disposition of Students Lost from the 39 Participating Departments

Most of the student loss that occurred in the 39 departments surveyed was accounted for by students who transferred to other courses. This is shown clearly in Table 4.

Table 4.--Reasons for Student Loss from the 39 Michigan Departments at End of School Year, 1960-61

Reason	Loss from Grade 9	10	11	Total
Changed Courses				
Number	64	57	37	158
Per Cent	71.12	77.03	82.23	75.60
Moved				
Number	12	11	0	23
Per Cent	13.34	14.87	0.00	11.00
Left School				
Number	13	6	8	27
Per Cent	14.45	8.11	17.78	12.92
Deceased				
Number	1	0	0	1
Per Cent	1.11	0.00	0.00	.48
Total Loss				
Number	90	74	45	209
Per Cent	100.00	100.00	100.00	100.00

From grades nine, ten, and eleven, 71.12 per cent, 77.03 per cent, and 82.23 per cent, respectively, of those who left vocational agriculture did so to pursue another course in high school. It is interesting to note that although 13.34 per cent of the grade nine class and 14.87 per cent of the grade 10 class moved away, none of the juniors did so. The table reveals that of all students who left vocational agriculture from all three grade levels, 75.60 per cent transferred to other courses, 11.00 per cent moved away from the school district, 12.92 per cent left school, and .48 per cent

had died. (This .48 per cent represents the life of one boy who drowned while swimming during the summer of 1961.)

Maturity of Reasons Expressed by Re-Enrolling Students

The purpose of analyzing the maturity scores prior to the selection of the sample from the student population in the 39 departments surveyed was to determine the scores which would separate the most mature students from the least mature. In order to do this, the 25th and the 75th percentiles were determined for each grade level. After this had been done, the re-enrollees in each grade level were classified into three groups: the upper 25 per cent, the middle 50 per cent, and the lower 25 per cent. The sample of re-enrollees was selected from the population so stratified.

The scores within each grade level which separated the upper 25 per cent, the middle 50 per cent, and the lower 25 per cent are shown in Table 5. A comparison of the ranges of scores found among grades nine, ten, and eleven reveals that the limits of these ranges were almost identical. Apparently, as re-enrollees continue to re-enroll in vocational agriculture each year, the extent of consideration given to future educational and occupational plans which these maturity scores purport to measures does not change.

Selection of the Sample

All students who remained in school but transferred from vocational agriculture at the end of the 1960-61 school

Table 5.--Maturity Scores for Reasons Expressed by 1,161 Students in the 39 Departments Surveyed for Re-enrolling in Vocational Agriculture the Next School Year

Class Grouping	Range of Maturity Scores		
	Grade 9	Grade 10	Grade 11
Upper 25%	1.43-2.00	1.41-2.00	1.41-2.00
Middle 50%	1.03-1.42	1.05-1.40	1.05-1.40
Lower 25%	0-1.02	0-1.04	0-1.04

year in order to pursue another high school course were selected as the transfer students to be included in the sample. There were 64 students from grade nine, 57 from grade ten, and 37 from grade eleven. Because incomplete data had been obtained from some of these students (questionnaires not completed, or not accurately filled out, etc.), the final number of transfer students included in the sample was 54 grade nine students, 37 grade ten students, and 20 grade eleven students.

To obtain the sample of re-enrollees, the stratified random sampling technique was used. At the grade nine level, all re-enrollees from whom complete data had been obtained were numbered consecutively within each maturity score group: the upper 25 per cent, the middle 50 per cent, and the lower 25 per cent. With the use of a table of random numbers, the investigator chose from the upper 25 per cent of

re-enrollees a number equal to the number of grade nine transfer students (54); from the middle 50 per cent of re-enrollees, he chose twice the number of grade nine transfer students (108); and, from the lower 25 per cent, a number equal to the number of grade nine transfer students (54). Thus, from grade nine, 216 re-enrollees were selected, and the resulting number of re-enrollees was four times the number of grade nine transfer students.

The same procedure was used for selecting the re-enrollees from grades ten and eleven. The number of grade ten re-enrollees which resulted from the selection process was 148; the number of grade eleven re-enrollees, 80. The sample selected is shown in Table 6.

Table 6.--The Sample Selected for the Study from the 39 Departments Surveyed

Grade Level	Students Who Re-enrolled	Students Who Transferred
From grade 9	216	54
From grade 10	148	37
From grade 11	80	20
Total	444	111

Obtaining Students' Grade Point Averages

After the sample had been selected, a letter requesting

student grades (See Appendix K),[1] and a report form for the listing of student grades (See Appendix B)[2] were mailed to the participating departments. Three schools were unable to provide the grades of students by the time the analysis of the data had to be started. Consequently, information was obtained from only 394 re-enrollees and 78 transfer students.

Tabulation and Treatment of the Data

The tabulation of the data began with the scoring of the farming attitude answer sheets and the computation of the maturity scores for the students who re-enrolled in vocational agriculture in the 39 participating departments. The scoring of the farming attitude answer sheets and the computation of the maturity scores were done by the investigator's father.[3]

The next step in the tabulation of the data was the summarization of many of the questionnaire responses according to the scoring systems described in Chapter III.[4] In reference to this, when each of the students' occupational choices were classified by maturity level and occupational

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[1]*Infra*, p. 196.

[2]*Infra*, p. 180.

[3]The late Dr. Christopher John Bittner.

[4]*Supra*, pp. 54-66.

field, the investigator's father, an economist and sociologist whose speciality was employment and labor problems, and the investigator's brother,[1] who has had wide experience in the training and supervising of skilled workers and technicians, gave assistance.

After the various summarization scores had been obtained for each student in the sample, all data were transferred to IBM cards and frequency counts were made.

Chi square[2] and the t-test[3] were used to treat the data statistically. The lowest level of significance of differences accepted in the study was at the five per cent level, and those differences found to be significant at the one per cent level were so designated.

Chapter Summary

This chapter has discussed the procedure followed as the study was undertaken. In addition to the description of the selection of the departments surveyed and the methods utilized to select the sample studies, information was presented concerning the extent of student loss from the 39 departments included in the study and the nature of these

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[1]Dr. John William Bittner

[2]James E. Wert and others, Statistical Methods in Educational and Psychological Research (New York: Appleton-Century-Crofts, Inc., 1954), pp. 146-157.

[3]Ibid., pp. 135-137.

losses. Also presented were the ranges of the upper 25 per cent, the middle 50 per cent, and the lower 25 per cent of the maturity scores of the vocational agriculture re-enrollees' reasons for re-enrolling in the vocational agriculture program. These scores purport to measure the extent to which the re-enrollees considered long-range educational and/or occupational plans when they expressed reasons for re-enrolling in vocational agriculture the next school year.

CHAPTER V

FINDINGS RELATED TO THE CHARACTERISTICS OF FORMER STUDENTS WHO HAVE ENTERED FARMING

In this chapter are presented the analyses which were required to test the specific hypotheses needed to either accept or reject the first general hypothesis of the study: "Students who transfer from vocational agriculture do not differ from the students who re-enroll with respect to the characteristics of former students who have become farmers." Chi-squares and t-tests were used to either accept or reject the following specific hypotheses which were related to the first general hypothesis:

A. The extent of farm residency among students who transfer from vocational agriculture does not differ from that among students who re-enroll. The data from the total sample of 444 re-enrollees and 111 transfer students were used for the statistical treatment.

B. The farm work status of the fathers of transfer students does not differ from that of the fathers of the re-enrollees. The data from the number of students who lived on farms were used for the statistical treatment; but, excluded from the data of the re-enrollees were four

deceased fathers and four hired men; and from the data of the transfer students, one deceased father.

C. The average size of the home farms of transfer students does not differ from that of the home farms of students who re-enroll in vocational agriculture. The data from the 364 re-enrollees and the 73 transfer students who lived on farms were used for the statistical treatment.

D. The extent of parental farm ownership of the transfer students does not differ from that of the students who re-enroll in vocational agriculture. The data from the 364 re-enrollees and the 73 transfer students who lived on farms were used for the statistical treatment.

E. The ages of the fathers of students who transfer from vocational agriculture do not differ from the ages of the fathers of students who re-enroll. The data from the 364 re-enrollees and the 73 transfer students who lived on farms were used for the statistical treatment.

F. The number of brothers of the students who transfer from vocational agriculture does not differ from the number of brothers of the students who continue to re-enroll. The data from the 364 re-enrollees and the 73 transfer students who lived on farms were used for the statistical treatment.

G. Transfer students' attitudes toward farming as a way of life do not differ from those of the students who re-enroll in vocational agriculture. The data from the total sample of 444 re-enrollees and 111 transfer students were used for the statistical treatment.

H. Transfer students' attitudes toward farming as a vocation do not differ from those of students who re-enroll in vocational agriculture. The data from the total sample of 444 re-enrollees and the 111 transfer students were used for the statistical treatment.

I. Transfer students' aspirations to enter farming and agriculturally-related occupations do not differ from those of the students who re-enroll in vocational agriculture. The data from the total sample of 444 re-enrollees and the 111 transfer students were used for the statistical treatment.

A discussion of the findings after the data were analyzed follows in the remaining sections of this chapter.

Classification of Students' Residences: Farm and Non-farm

As shown in Table 7, it can be seen that approximately three quarters of the students enrolled in vocational agriculture during the 1960-61 school year in the 39 departments surveyed lived on farms. It is evident, then, that

Table 7.--Classification of Students' Residences: Farm and Non-farm

Farm Residence	Re-enrollees		Transfer Students		Total	
	No.	Per Cent	No.	Per Cent	No.	Per Cent
Yes	364*	81.98	73	65.76	437	78.74
No	80	18.02	38	34.24	118	21.26
Total	444	100.00	111	100.00	555	100.00

*Includes the sons of four hired men.

Chi-square = 15.65, significant at the .01 level)

the large majority of boys enrolled in vocational agriculture were farm boys.

Of those who re-enrolled in vocational agriculture, 81.98 per cent lived on farms and 18.02 per cent did not. Of those who transferred from vocational agriculture to pursue other high school courses, 65.76 per cent lived on farms and 34.24 per cent did not live on farms. Chi-square was significant at the .01 level. Evidence was found, therefore, to refute the null hypothesis that the extent of farm residency found among students who transfer from vocational agriculture does not differ from that found among students who re-enroll. Significantly more farm boys re-enrolled in vocational agriculture than did non-farm boys.

Farm Work Status of the Fathers of Students Living on Farms

The relative percentages of the fathers of both re-enrollees and transfer students who fell into each of the "Farm Work Status" classifications shown in Table 8 were relatively the same. Of the fathers of the re-enrollees, 34.83 per cent were full-time farmers, 12.08 per cent were part-time farmers who devoted less than 100 days per year to off-farm work, 35.96 per cent were part-time farmers who devoted more than 100 days per year to off-farm work, and 17.13 per cent devoted none of their working time to farming. Respective percentages for the fathers of the transfer students were found to be 37.50 per cent, 15.28 per cent, 37.50 per cent, and 9.72 per cent. The difference between the distributions of these percentages for re-enrollees and transfer students was non-significant at the .05 level as determined by chi-square.

Evidence was not found, therefore, from the analysis of the data which would justify the rejection of the null hypothesis: "The farm work status of the fathers of transfer students does not differ from that of the fathers of the students who re-enroll in vocational agricuture."

Table 8.--Farm Work Status of the Fathers of Students Living on Farms

Farm Work Status	Fathers of Re-enrollees		Fathers of Transfer Students		Total	
	No.	Per Cent	No.	Per Cent	No.	Per Cent
None	61[a]	17.13	7[b]	9.72	68	15.79
Part-time more than 100 days off-farm work	128	35.96	27	37.50	155	36.21
Part-time less than 100 days off-farm work	43	12.08	11	15.28	54	12.62
Full-time	124	34.83	27	37.50	151	35.28
Total	356	100.00	72	100.00	428	100.00

[a]Does not include four deceased fathers and four hired men.

[b]Does not include 1 father deceased.

(Chi-square = 2.71, non-significant)

Sizes of the Home Farms of Students Living on Farms

In Table 9 are shown the sizes of the home farms of the students living on farms. Inspection of the table reveals that the three largest groups of both transfer students and re-enrollees lived on farms which fell within the ranges of 70 to 139 acres, 140 to 219 acres, and 220 to

Table 9.--Sizes of Home Farms of Students Living on Farms

Total Acres in Farm	Re-Enrollees		Transfer Students		Total	
	No.	Per Cent	No.	Per Cent	No.	Per Cent
9 or less	7	1.92	2	2.73	9	2.05
10-69	65	17.86	12	16.44	77	17.62
70-139	108	29.68	20	27.40	128	29.30
140-219	80	21.98	22	30.14	102	23.34
220-499	94	25.82	16	21.92	110	25.17
500 or more	10	2.74	1	1.37	11	2.52
Total	364	100.00	73	100.00	437	100.00

(t = .82, non-significant)

499 acres. The percentages of transfer students who lived on farms which fell which these ranges were 27.40 per cent, 30.14 per cent, and 21.92 per cent, respectively; and the percentages of re-enrollees who lived on farms which fell within these ranges were 29.68 per cent, 21.98 per cent, and 25.82 per cent, respectively. Included within the 10 to 69 acre range were 17.86 per cent of the re-enrollees and 16.44 per cent of the transfer students; and, within the nine or less range, 1.92 per cent of the re-enrollees and 2.73 per cent of the transfer students.

The mean farm size for the transfer students was

164.2 acres, and the mean farm size for the re-enrollees was 170.54 acres. A t-value of .82 was obtained which was non-significant. For this reason, from the sample of students included in this study, it was impossible to provide evidence to show that the average farm size of the re-enrollees differed significantly from the average farm size of the transfer students.

Extent of Parental Farm Ownership

Two tests for significant differences were made to determine if the extent of parental farm ownership differed between the two groups of students. First, the attempt was made to show that the extent of farm ownership differed by classifying the parents of the transfer students and the re-enrollees as being full-owners, part-owners, and non-owners of farm land. Secondly, the attempt was made to show that the extent of farm ownership differed between the two groups of students by classifying parents according to the number of acres of farm land they owned.

The classification of the parents according to whether they were full-owners, part-owners, or non-owners is shown in Table 10. This table reveals that very little difference existed in the proportions of the transfer students' parents and the parents of the re-enrollees which were included within the various classifications. In the full-owner classification were the parents of 62.09 per cent of

Table 10.--Farm Ownership Classification of Students Who Lived on Farms

Ownership Classification	Re-enrollees		Transfer Students		Total	
	No.	Per Cent	No.	Per Cent	No.	Per Cent
Full-owner	226	62.09	46	63.14	272	62.24
Part-owner	106	29.12	25	34.25	131	29.98
Non-Owner	32	8.79	2	2.61	34	7.78
Total	364	100.00	73	100.00	437	100.00

(Chi-square = 3.62, non-significant)

the re-enrollees and 63.14 per cent of the transfer students. In the part-owner classification were the parents of 29.12 per cent of the re-enrollees and 34.25 per cent of the transfer students. In the non-owner classification, were the parents of 8.79 per cent of the re-enrollees and only 2.61 per cent of the transfer students. The chi-square value of 3.62 was non-significant at the .05 level. Evidence was insufficient, therefore, to justify the rejection of the hypothesis that the extent of farm ownership of the parents of transfer students does not differ from that of the parents of the re-enrollees when the parents were classified as being full-owners, part-owners, and non-owners of farm land.

The number of acres owned by the parents in both student groups are shown in Table 11. The three largest groups of both the parents of the transfer students and the re-enrollees appeared in the acreage ranges of 10 to 69 acres, 70 to 139 acres, and 140 to 214 acres. The percentages of the parents of the transfer students which were included within each of these ranges were 21.92 per cent, 41.09 per cent, and 21.92 per cent, respectively. The percentages of the re-enrollees' parents included within each of these acreages ranges were 21.43 per cent, 34.08 per cent, and 19.51 per cent, respectively. These percentages were very similar. It is interesting to note that there was an approximate six per cent difference in the number of students who came from farms entirely non-owned: 8.79 per cent of the re-enrollees reported no parental farm ownership, and 2.74 per cent of the transfer students reported no parental farm ownership.

The mean number of acres owned by re-enrollees' parents was 122.64 acres, and the mean number of acres owned by parents of transfer students was 120.96 acres. The t-value of 1.04 indicated, however, that this difference in the mean number of acres owned was non-significant at the .05 level. Therefore, it was concluded that the comparison of the mean number of acres owned by the parents of the transfer students and of the re-enrollees failed to provide evidence that the extent of farm ownership was significantly different for these two groups.

Table 11.--Number of Acres Owned by Parents of Students Who Lived on Farms

Number of Acres Owned	Parents of Re-enrollees		Parents of Transfer Students		Total	
	No.	Per Cent	No.	Per Cent	No.	Per Cent
None	32	8.79	2	2.74	34	7.78
1-9	7	1.92	2	2.74	9	2.05
10-69	78	21.43	16	21.92	94	21.51
70-139	124	34.08	30	41.09	154	35.25
140-219	71	19.51	16	21.92	87	19.92
220-499	48	13.18	7	9.59	55	12.58
500 or more	4	1.09	0	.00	4	.91
Total	364	100.00	73	100.00	437	100.00

(t = 1.04, non-significant)

Ages of Fathers of the Students Living on Farms

Most of the fathers of the students who lived on farms fell within the age ranges of from 35 to 44 years and from 45 to 54 years. This can be seen from an examination of Table 12 which shows that 40.04 per cent of the fathers of both groups of students were classified as being 35 to 44 years of age, and that 45.09 per cent of all fathers were classified as being 45 to 54 years of age. The other fathers of both groups of students were classified as follows: 2.29 per cent being from 25 to 34 years old, 10.75 per cent being

Table 12.--Ages of Fathers of Students Living on Farms

Ages of Fathers	Fathers of Re-enrollees		Fathers of Transfer Students		Total	
	No.	Per Cent	No.	Per Cent	No.	Per Cent
25-34	10	2.75	0	0.00	10	2.29
35-44	142	39.01	33	45.20	175	40.04
45-54	164	45.05	33	45.20	197	45.09
55-64	41	11.26	6	8.22	47	10.75
65 or over, or not living	7	1.93	1	1.38	8	1.82
Total	364	100.00	73	100.00	437	100.00

(t = .43, non-significant at the five per cent level)

from 55 to 64 years old, and 1.83 per cent being over 65 years old or deceased.

The mean age of the fathers of the re-enrollees was 41.6 years, and that of the transfer students, 41.1 years. Thus, the re-enrollees' fathers were slightly older on the average. This difference between the mean ages of the fathers of the transfer students and the fathers of the re-enrollees was non-significant at the .05 level (t = .43). From the sample studied, evidence was not found with which to reject the null hypothesis that the ages of the fathers of the two groups of students do not differ.

The Total Numbers of Brothers of Students Who Live on Farms

Table 13 shows the numbers of the brothers transfer students and re-enrollees had at the time the data were collected. The model numbers of brothers for both the re-enrollees and the transfer students fell within the same range of from one to two brothers. Of the transfer students, 59.27 fell within the classification as did 53.31 per cent of the re-enrollees.

Table 13.--Number of Brothers of Students Living on Farms

Number of Brothers	Re-enrollees		Transfer Students		Total	
	No.	Per Cent	No.	Per Cent	No.	Per Cent
None	69	18.96	14	19.18	83	19.00
1-2	194	53.31	44	59.27	238	54.48
3-4	75	20.34	13	17.81	88	20.14
5-6	21	6.03	2	2.74	24	5.48
7-8	4	1.36	0	0.00	4	.90
Total	364	100.00	73	100.00	437	100.00

(t = .94, non-significant)

The mean number of brothers of the re-enrollees was 1.86, and the mean number of brothers of the transfer students was 1.55. A t-value of .94 was obtained which was

non-significant at the .05 level. Therefore, it was concluded that the number of brothers re-enrollees had was not significantly different from the number of brothers of the transfer students.

Students' Attitudes Toward Farming As a Vocation

The classification of students' attitudes toward farming as a vocation is shown in Table 14. An examination of the table reveals that transfer students and re-enrollees held quite different attitudes toward the occupation of farming. In the highly favorable classification were 6.08 per cent of the re-enrollees, but only .90 per cent of the transfer students. In the favorable classification were 55.63 per cent of the re-enrollees, but only 29.74 per cent of the transfer students. More of the transfer students were classified in the neutral range than were re-enrollees. These percentages were 62.16 and 36.94 per cent, respecitvely. Classified in the unfavorable range were 7.20 per cent of the transfer students compared with 1.13 per cent of the re-enrollees. Only one re-enrollee had an attitude highly unfavorable toward farming. None of the transfer students had highly unfavorable attitudes toward farming as a vocation.

The proportions of the re-enrollees classified within the different attitude classifications were significantly different from the proportions of the transfer students

Table 14.--Students' Attitudes Toward Farming as a Vocation

Classification of Attitude	Re-enrollees		Transfer Students		Total	
	No.	Per Cent	No.	Per Cent	No.	Per Cent
Highly Favorable	27	6.08	1	.90	28	5.04
Favorable	247	55.63	33	29.74	280	50.45
Neutral	164	36.94	69	62.16	233	42.00
Unfavorable	5	1.13	8	7.20	13	2.33
Highly Unfavorable	1	.22	0	0.00	1	.18
Total	444	100.00	111	100.00	555	100.00

(Chi-square = 44.31, significant at the one per cent level)

so classified. Chi-square equalled 44.31 which was significant at the .01 level. Thus, the hypothesis that the attitudes of re-enrollees toward farming as a vocation do not differ from those of the transfer students could not be substantiated from the evidence obtained in this study. Re-enrollees had significantly more favorable attitudes toward farming as a vocation than did the transfer students.

Students' Attitudes Toward Farming As a Way of Life

The classification of students' attitudes toward farming as a way of life is shown in Table 15. An examination

Table 15.--Students' Attitudes Toward Farming as a Way of Life

Classification of Attitude	Re-enrollees		Transfer Students		Total	
	No.	Per Cent	No.	Per Cent	No.	Per Cent
Highly Favorable	55	13.38	3	2.70	58	10.45
Favorable	297	66.92	61	54.97	358	64.50
Neutral	88	19.81	42	37.83	130	23.43
Unfavorable	3	.67	4	3.60	7	1.26
Highly Unfavorable	1	.22	1	.90	2	.36
Total	444	100.00	111	100.00	555	100.00

(Chi-square = 27.15, significant at the one per cent level)

of the table reveals that transfer students and re-enrollees held quite different attitudes toward the occupation of farming. In the highly favorable classification were 13.38 per cent of the re-enrollees, but only 2.70 per cent of the transfer students. In the favorable classification were 66.92 per cent of the re-enrollees, but only 54.97 per cent of the transfer students. More of the transfer students were classified in the neutral range than were re-enrollees. These percentages were 37.83 per cent and 19.81 per cent, respectively. In the unfavorable range, 3.60 per cent of the transfer students were classified compared with .67 per cent

of the re-enrollees. In the highly unfavorable range, there were .22 per cent of the re-enrollees and .90 per cent of the transfer students.

The proportions of the re-enrollees classified within the different attitude groups were significantly different from the proportions of the transfer students so classified. Chi-square equalled 27.15 which was significant at the .01 level. Thus, the hypothesis that the attitudes of the re-enrollees toward farming as a way of life do not differ from those of the transfer students could not be substantiated from the evidence obtained in this study. Re-enrollees had significantly more favorable attitudes toward farming as a way of life than did the transfer students.

Students' Occupational Preferences for Agriculturally-Related Occupations

It was found when the data were analyzed, that 332 re-enrollees, or 74.77 per cent, had expressed at least one occupational choice; and, that 112 re-enrollees, or 25.23 per cent, did not have any occupational choices. Likewise, the number of transfer students who expressed at least one occupational choice was found to be 90, or 81.08 per cent; and, that 21 transfer students, or 18.92 per cent, did not have any occupational choices. These differences were not significant at the .05 level ($t = 1.93$).

The degrees of relatedness to agriculture of the occupational choices of students are shown in Table 16 for

Table 16.--Agricultural Relatedness Scores of Students' Occupational Choices for Those Who Expressed at Least One Choice

Relatedness Score	Re-enrollees		Transfer Students		Total	
	No.	Per Cent	No.	Per Cent	No.	Per Cent
.90-1.00	191	57.53	22	24.45	213	50.51
.70-.80	27	8.13	14	15.55	41	9.72
.50-.60	57	17.18	16	17.76	73	17.29
.30-.40	35	10.54	8	8.89	43	10.18
.10-.20	12	3.61	20	22.23	32	7.58
.00	10	3.01	10	11.12	20	4.73
Total	332	100.00	90	100.00	422	100.00

(t = 6.13, significant at the one per cent level)

those students who had at least one occupational choice. In Table 16, students' occupational choices were classified according to the scoring system devised to measure the agricultural-relatedness of students' occupational choices. This scoring system was described in Chapter III;[1] and, as indicated there, a score of ".00" indicates that none of any particular student's choices were related to agriculture and

[1] Supra, pp. 54-56.

a score of 1.00 indicates that all of any particular student's occupational choices were related to agriculture.

It should be recalled that the definition of an agriculturally-related occupation as used in this study was based upon each student's opinion as to whether or not knowledge of agriculture or of farming would be helpful to him if he pursued the occupation in question.

When Table 16 is examined, it can be seen that the agricultural relatedness scores of the re-enrollees differed widely from those of the transfer students. The most obvious differences between the two groups of students occurred within the ranges of .90 and 1.00; .10 to .20; and, in the ".00" score classification. The number of students classified in the .90 to 1.00 range were 57.53 per cent of the re-enrollees and only 24.45 per cent of the transfer students. In the .10 to .20 range, 22.23 per cent of the transfer students were classified, but only 3.61 per cent of the re-enrollees. In the ".00" classification, where none of the students' occupational choices were related to farming, 3.01 per cent of the re-enrollees and 11.12 per cent of the transfer students were classified.

The mean agricultural relatedness score for the re-enrollees' occupational choices was .59, and that for the transfer students was .38. The t-value obtained was 6.13 which was significant at the .01 level. Thus evidence was found with which to reject the hypothesis that transfer

students' aspirations to enter agriculturally-related occupations do not differ significantly from those of students who re-enroll in vocational agriculture. Re-enrollees aspired to enter agriculturally-related occupations to a significantly greater extent than did the transfer students.

Students' Occupational Preferences for Farming

The desire to become farmers found among the re-enrollees differed quite widely from that found among the transfer students. Table 17 shows the numbers of re-enrollees and transfer students who chose farming as their first, second, and third occupational choices. Included in the "Was Not Chosen" category were those students who either had no occupational choices, or who had occupational choices other than farming.

Expressing farming as their first occupational choice were 38.53 per cent of the re-enrollees and 11.72 per cent of the transfer students. Expressing farming as their second occupational choice were 13.06 per cent of the re-enrollees and 9.90 per cent of the transfer students. Expressing farming as their third occupational choice were 6.08 per cent of the re-enrollees and 17.12 per cent of the transfer students. Those students who either did not choose farming as any of their occupational choices or had no occupational choices accounted for 42.33 per cent of the re-enrollees and 61.26 per cent of the transfer students.

Table 17.--Students' Occupational Preferences for Farming

Preference	Re-enrollees		Transfer Students		Total	
	No.	Per Cent	No.	Per Cent	No.	Per Cent
First choice	171	38.53	13	11.72	184	33.15
Second choice	58	13.06	11	9.90	69	12.43
Third choice	27	6.08	19	17.12	46	8.28
Was not chosen*	188	42.33	68	61.26	256	46.14
Total	444	100.00	111	100.00	555	100.00

*Includes those students who did not have any occupational choices plus those who had occupational choices other than farming.

(Chi-square = 60.17, significant at the one per cent level)

These data indicated that the students' preferences of farming differed. Chi-square which equalled 60.17 was significant at the .01 level. Thus, evidence was found from the sample studied that the preferences for farming expressed by the students who re-enrolled in vocational agriculture differed significantly from similar preferences expressed by the transfer students. Re-enrollees expressed preferences for farming to a significantly greater extent than did the transfer students.

Chapter Summary

From the findings presented in this chapter, the first general hypothesis of the study could neither be entirely accepted nor rejected. The home farm and family characteristics of the re-enrollees did not differ significantly from those of the transfer students. These findings, therefore, supported the general hypothesis of "no differences" between re-enrollees and transfer students. However, the re-enrollees' attitudes toward farming as a vocation and as a way of life, and the agricultural relatedness of their occupational choices differed significantly from those of the transfer students. Re-enrollees had more favorable attitudes toward farming and as a group had a higher degree of agricultural relatedness displayed in their occupaional choices than did the transfer students.

As a result, the conclusion concerning the first general hypothesis was this: Home farm and family characteristics do not differentiate the students who re-enroll in vocational agriculture from those who do not; but, the attitudes toward farming students do have, and the extent of the agricultural relatedness of their occupational choices do differentiate those who re-enroll in vocational agriculture from those who transfer to other subjects.

CHAPTER VI

FINDINGS RELATED TO THE STUDENTS' ACADEMIC ABILITIES, AND THEIR EDUCATIONAL AND OCCUPATIONAL PLANS

This chapter deals with the findings directly related to the second general hypothesis of the study: "Transfer students and the students who re-enroll in vocational agriculture do not differ with respect to the levels of academic ability they display, the amounts of post-high school education they plan to obtain, and the aspiration levels and occupational fields represented by their occupational choices.

The specific hypotheses which were used to test the second general hypothesis of the study were as follows:

A. The high school grade point averages of the transfer students do not differ from the grade point averages of the students who re-enroll in vocational agriculture.

B. The number of years transfer students plan to attend another school after high school graduation does not differ from that of the students who re-enroll in vocational agriculture.

C. The aspiration levels and the occupational fields of the transfer students' first occupational choices do not

differ from those of the re-enrollees' first occupational choices.

With two exceptions, the data from the total number of the 444 re-enrollees and the 111 transfer students were used for statistical treatment. First, when the students' occupational choices were analyzed, only those students who had expressed at least one occupational choice could be used. Second, high school grade point averages were obtained for only 394 re-enrollees and 98 transfer students.

The remaining sections of this chapter present the findings which relate to the specific hypotheses just described.

Academic Ability Displayed by Students

Student grade point averages were computed for students according to the method described in Chapter III.[1] It will be recalled that a grade of A was given four points, B was given three points, C was given two points, D was given one point, and the grade of F was given zero points when the grade point averages were determined. The grade point averages of the transfer students and re-enrollees are shown in Table 18. An examination of this table reveals that all except 8.3 per cent of the students in the sample enrolled

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[1] *Supra*, p. 64.

Table 18.--Students' High School Grade Point Averages

Grade Point Average	Re-enrollees		Transfer Students		Total	
	No.	Per Cent	No.	Per Cent	No.	Per Cent
3.01-4.00	28	7.11	13	13.26	41	8.34
2.01-3.00	153	38.83	39	39.80	192	39.02
1.01-2.00	187	47.46	42	42.86	229	46.54
0-1.00	26	6.60	4	4.08	30	6.10
Total	394	100.00	98	100.00	492	100.00

(t = 1.98, significant at the five per cent level)

in vocational agriculture during the 1960-61 year had grade point averages of 3.00 or less. Of the total number enrolled, 39.02 received a grade point average which ranged from 2.01 to 3.00, 46.54 per cent received a grade point average which ranged from 1.01 to 2.00, and 6.10 per cent received a grade point average which ranged from 0 to 1.00. Thus, over half of the students in the sample who were enrolled in vocational agriculture during the 1961-1962 school year had grade point averages of 2.00 or less.

As shown in Table 18, more of the transfer students had higher grade point averages than did the re-enrollees and fewer of the transfer students had lower grade point averages than did the re-enrollees. Within the 3.01 to 4.00

range were 13.26 per cent of the transfer students and 7.11 per cent of the re-enrollees, within the 2.01 to 3.00 range were 39.80 per cent of the transfer students and 38.83 of the re-enrollees, within the 1.01 and 2.00 range were 42.86 per cent of the transfer students and 47.46 per cent of the re-enrollees, and within the 0 to 1.00 range were 4.08 per cent of the transfer students and 6.60 per cent of the re-enrollees. The mean grade point of the transfer students was 1.90, and the mean grade point of the re-enrollees was 1.74. These two mean grade point averages differed significantly. A t-value of 1.98 was obtained which was significant at the .05 level. Evidence was found, therefore, to reject the hypothesis that the academic ability displayed by students who re-enroll in vocational agriculture does not differ from that displayed by those who transfer from the program. The transfer students had a significantly higher mean grade point average. It should be noted that, although the mean grade point averages of the transfer students and the re-enrollees did differ significantly, the mean grade point averages for both groups of students was below 2.00.

Extent of Post-High School Education Planned for by Students

Nearly three quarters of the re-enrollees and slightly over one half of the transfer students did not plan any further education after high school. These facts are revealed in Table 19. Of all students in the sample 4.27 per cent

Table 19.--Years of Post-High School Education Planned by Students

Years of Education	Re-enrollees		Transfer Students		Total	
	No.	Per Cent	No.	Per Cent	No.	Per Cent
None	328	74.12	62	55.88	390	70.27
Less than 1	20	4.27	1	.90	21	3.78
1-2	41	9.23	9	8.10	50	9.00
3-4	43	9.68	31	27.92	74	13.35
More than 4	12	2.70	8	7.20	20	3.60
Total	444	100.00	111	100.00	555	100.00

(Chi-square = 50.55, significant at the one per cent level)

of the re-enrollees and .90 per cent of the transfer students planned to obtain additional training requiring less than a year, 9.23 per cent of the re-enrollees and 8.10 per cent of the transfer students planned to obtain one to two years additional school, 9.68 per cent of the re-enrollees and 27.92 per cent of the transfer students planned to attend school for another three or four years, and 2.70 per cent of the re-enrollees and 7.20 per cent of the transfer students planned to obtain more than four years of additional education.

Chi-square equalled 50.55 which was significant at the .01 level. Thus evidence was obtained to justify rejection of

The hypothesis that the amounts of post-high school education planned for by re-enrollees and transfer students do not differ. Transfer students planned to obtain significantly more education after high school than did the re-enrollees.

Aspiration Levels and Occupational Fields Represented by Students' First Occupational Choices

This section is divided into three sub-sections; and, in order, the following are discussed: the number of students who did and did not express an occupational choice, the aspiration levels of students' first occupational choices, and the occupational fields represented by the first occupational choices of students who expressed at least one occupation choice.

The Numbers of Students Who Did and Did Not Express an Occupational Choice

The numbers of students who did and did not express one occupational choice are shown in Table 20. As revealed there, 81.08 per cent of the transfer students and 74.77 per cent of the re-enrollees indicated occupational choices on the questionnaires when they filled them out. Statistical treatment of Table 20 yielded a chi-square value of 1.94 which was non-significant at the .05 level. Thus, it could not be shown from the data obtained in this study that the numbers of transfer students who did and did not have at least one occupational choice differed from the

Table 20.--Numbers of Students Who Did and Did Not Express an Occupational Choice

Expression	Re-enrollees		Transfer Students		Total	
	No.	Per Cent	No.	Per Cent	No.	Per Cent
Yes	332	74.77	90	81.08	432	76.03
No	112	25.23	21	18.92	133	23.97
Total	444	100.00	111	100.00	555	100.00

(Chi-square = 1.94, non-significant)

numbers of re-enrollees who did and did not have at least one occupational choice.

Aspiration Levels of Students' First Occupational Choices

The aspiration levels of students' first occupational choices are shown in Table 21. The largest percentages of both re-enrollees, 64.16 per cent, and of transfer students, 38.87 per cent, chose occupations within Level Three, the Semi-Professional and Small Business occupational group. It can be seen, therefore, that the percentages of transfer students who aspired to enter Level Three occupations was substantially less than the percentage of re-enrollees who did so.

Above the Semi-Professional and Small Business level, were found more of the transfer students' and fewer

Table 21.--Aspiration Levels of Students' First Occupational Choices

Aspiration Level		Re-Enrollees	Transfer Students	Total
1. Professional and Managerial I				
	Number	0	6	6
	Per Cent	0.00	6.67	1.42
2. Professional and Managerial II				
	Number	41	27	68
	Per Cent	12.34	30.00	16.11
3. Semi-professional and Small Business				
	Number	213	35	248
	Per Cent	64.16	38.87	58.78
4. Skilled	Number	49	19	68
	Per Cent	14.76	21.12	16.11
5. Semi-skilled				
	Number	23	3	26
	Per Cent	6.93	3.34	6.16
6. Unskilled	Number	6	0	6
	Per Cent	1.81	0.00	1.42
Total	Number	332	90	422
	Per Cent	100.00	100.00	100.00

(t = 2.65, significant at the one per cent level)

of the re-enrollees' first occupational choices. Thirty per cent of the transfer students' first occupational choices were classified in the Professional and Managerial II group compared with 12.34 per cent of the re-enrollees first

occupational choices. The Professional and Managerial I group contained 6.67 per cent of the transfer students' first occupational choices; but, none of the re-enrollees' first occupational choices were classified in this group.

More transfer students chose occupations which fell within the Skilled group than did the re-enrollees. The percentages were 21.12 per cent and 14.76 per cent, respectively. The Semi-Skilled group and the Unskilled group contained fewer of the transfer students' first occupational choices than the first occupational choices of the re-enrollees. The Semi-Skilled level contained 3.34 per cent of the transfer students' first occupational choices and 6.93 per cent of the re-enrollees'. The Unskilled level contained none of the transfer students' first occupational choices, but 1.81 per cent of the re-enrollees' first occupational choices, but 1.81 per cent of the re-enrollees' first occupational choices.

A t-value of 2.65 was obtained when the data were submitted to statistical treatment, and this t-value was found to be significant at the .01 level. Thus, the hypothesis that the aspiration levels of the occupational choices of the re-enrollees do not differ from the aspiration levels of the transfer students was disproved from the data analyzed. The transfer students aspired to higher level occupations than did the re-enrollees. The mean aspiration level of the transfer students' choices was found to be 2.85,

and the mean aspiration level of the re-enrollees' choices was found to be 3.22 (the higher mean denotes a level of lower skill and responsibility).

Occupational Fields Represented by the Students' First Occupational Choices

The occupational fields represented by the first occupational choices of the students who expressed at least one occupational choice is shown in Table 22. Examination of the table reveals that the first occupational choices of the transfer students differed most from those of the re-enrollees in the fields of Technology and Outdoor occupations. Of the transfer students' first occupational choices, 40.00 per cent were classified in Technology and 20.00 per cent in Outdoor occupations. Of the re-enrollees' first occupational choices, 17.18 per cent were classified in Technology and 57.87 per cent in Outdoor occupations. Within each of the other occupational fields, the transfer students did not differ from the re-enrollees to any great extent.

The data yielded a chi-square value of 50.26 which was significant at the .01 level. Evidence was found, therefore, that the first occupational choices of the transfer students classified by occupational fields did differ from those of the re-enrollees.

Table 22.--Fields Represented by the First Occupational Choices of Students Who Expressed at Least one Choice

Occupational Field	Re-enrollees		Transfer Students		Total	
	No.	Per Cent	No.	Per Cent	No.	Per Cent
Service	40	12.04	15	16.68	55	13.04
Business Contact	4	1.20	4	4.44	8	1.89
Organization	8	2.40	3	3.33	11	2.60
Technology	57	17.18	36	40.00	93	22.04
Outdoor	197	57.87	18	20.00	210	49.78
Science	7	2.10	5	5.55	12	2.84
General Cultural	16	4.81	6	6.66	22	5.21
Arts and Entertainment	8	2.40	3	3.34	11	2.60
Total	332	100.00	90	100.00	422	100.00

(Chi-square = 50.26, significant at the one per cent level)

Chapter Summary

From the findings presented in this chapter, the second general hypothesis of the study was rejected. It was found that transfer students do display a higher level of academic ability, do plan to obtain more post-high school education, do aspire to enter occupations in higher aspiration

levels, and do aspire to enter occupational fields unlike those of the re-enrollees' aspirations.

CHAPTER VII

FINDINGS RELATED TO THE CHARACTERISTICS OF THE STUDENTS' PLAN MAKING AND THEIR FUTURE PLANS

This chapter presents the findings of the study which were related to the third general hypothesis of the study: "Transfer students and the students who re-enroll in vocational agriculture do not differ with respect to the degrees of initiative they display in seeking guidance assistance when formulating plans, the amounts of unsolicited guidance assistance they receive from others when formulating plans, the degrees of maturity they display when expressing reasons concerning continuance in vocational agriculture, the degrees of consistency of occupational choices they achieve, and the certainty of their future plans.

The specific hypotheses tested were as follows:

A. Transfer students and students who re-enroll in vocational agriculture do not differ with respect to the number of solicited guidance resources they utilize when selecting high school subjects, when formulating post-high school plans, and when making occupational choices.

B. The numbers of unsolicited guidance resources which assist transfer students when selecting high school subjects, when formulating post high school plans and when making

occupational choices do not differ from the numbers of unsolicited guidance resources which assist the re-enrollees.

C. The degree of consideration given to long-range educational and/or occupational objectives by transfer students and re-enrollees do not differ when these students express reasons for transferring from or re-enrolling in vocational agriculture.

D. The consistency of the occupational choices within aspiration levels and occupational fields of the transfer students does not differ from the consistency of the occupational choices of the re-enrollees.

E. Transfer students and students who re-enroll in vocational agriculture do not differ with respect to the certainty of their post-high school plans, nor do they differ with respect to th certainty of entering the occupations of their first choice.

F. Of those students who chose farming as one of their occupational choices, transfer students are no more certain of entering farming than are the re-enrollees.

Student Initiative in Obtaining Guidance Assistance

As described in Chapter III,[1] the degrees of initiative

[1]Supra, p. 53-54.

displayed by students when formulating plans for the future were measured by a determination of the number of solicited guidance resources which gave students assistance; that is, the number of resources they turned to for help without anyone asking or telling them to do so.

To facilitate reporting of the data, the investigator classified the degrees of initiative displayed by the students, as determined by the number of solicited guidance resources used, as "no initiative," "a low degree" of initiative, "a medium degree" of initiative, and a "high degree" of initiative. Those students who reported no utilization of solicited guidance resources were classified as having "no initiative," those who reported having used from one to three solicited guidance resources were classified as having a "low degree" of ihitiative, those reported having used from four to six solicited guidance resources were classified as having a "medium degree" of initiative, and those who reported having used from seven to nine solicited guidance resources were classified as having a "high degree" of initiative.

The initiative displayed by the students was analyzed for each of three periods of student decision: (1) the selection of high school subjects, (2) the formulation of post-high school plans, and (3) the making of occupational choices. The analyses of the data related to each of these periods of students decision are presented in the following sections.

Student Initiative Displayed in Obtaining Assistance with Selection of High School Subjects

The initiative displayed by students in obtaining assistance with the selection of high school subjects is shown in Table 23. As shown there, 35.13 per cent of the transfer students and 30.85 per cent of the re-enrollees took "no initiative" in seeking assistance. Of the re-enrollees, 49.57 per cent displayed as "low degree" of initiative compared with 42.37 per cent of the transfer students who did likewise. More of the transfer students displayed a "medium degree" of initiative than did the re-enrollees. The percentages were 20.70 per cent and 16.21 per cent, respectively. Those students who displayed a "high degree" of initiative were 3.37 per cent of the re-enrollees and 1.80 per cent of the transfer students.

The mean number of guidance resources solicited by transfer students for assistance with the selection of high school subjects was 2.04, and that for the re-enrollees was 2.02. A t-value of .95 was obtained which was non-significant at the .05 level. Thus, it was found that the numbers of solicited guidance resources which assisted transfer students in the selection of high school subjects did not differ from the numbers that assisted the re-enrollees. Consequently, it was concluded that transfer students do not display significantly different degrees of initiative in seeking

Table 23.--Degrees of Initiative Displayed by Students in Obtaining Assistance with the Selection of High School Subjects

Degree of Initiative	Re-enrollees		Transfer Students		Total	
	No.	Per Cent	No.	Per Cent	No.	Per Cent
No initiative	137	30.85	39	35.13	176	31.71
Low	220	49.59	47	42.37	267	48.11
Medium	72	16.21	23	20.70	95	17.12
High	15	3.37	2	1.80	17	3.06
Total	444	100.00	111	100.00	555	100.00

(t = .95, non-significant)

assistance when selecting high school subjects than do the re-enrollees.

Initiative Displayed by Students in Obtaining Assistance with the Formulation of Post-High School Plans

Table 24 shows that the largest percentage of re-enrollees, 45.49 per cent, and that the largest percentage of transfer students, 41.44 per cent, did not consult any guidance resources on their own initiative. Many did, however, and 40.56 per cent of the transfer students and 36.53 per cent of the re-enrollees displayed low degrees of initiative in seeking assistance with the formulation of

Table 24.--Degrees of Initiative Displayed by Students in Obtaining Assistance with the Formulation of Post-High School Plans

Degree of Initiative	Re-enrollees		Transfer Students		Total	
	No.	Per Cent	No.	Per Cent	No.	Per Cent
No initiative	202	45.49	46	41.44	248	44.69
Low	162	36.53	45	40.56	207	37.30
Medium	70	15.75	18	16.20	88	15.85
High	10	2.23	2	1.80	12	3.16
Total	444	100.00	111	100.00	555	100.00

(t = .63 non-significant)

their post-high school plans. Percentagewise, 16.20 per cent of the transfer students and 15.75 per cent of the re-enrollees displayed medium degrees of initiative. A larger percentage of re-enrollees, 2.23 per cent, displayed a high degree of initiative than did the transfer students, 1.80 per cent.

The mean number of guidance resources which the transfer students consulted when formulating their post-high school plans was 1.72, and for the re-enrollees, it was 1.59. A t-value of .63 was obtained which was non-significant. Evidence was obtained, therefore, to support the hypothesis that transfer students do not differ from the re-enrollees

with respect to the initiative displayed in seeking guidance assistance when formulating their post-high school plans.

Initiative Displayed by Students in Obtaining Assistance with the Choice of An Occupation

Reference to Table 25 reveals that more of the students who re-enrolled in vocational agriculture displayed no initiative when making decisions concerning occupational choice than did the transfer students. Of the re-enrollees, 45.26 per cent did not utilize any solicited guidance resources, and of the transfer students, 43.23 per cent. Those students who displayed "some" initiative included 37.20 per cent of the re-enrollees and 36.06 per cent of the transfer students.

More of the transfer students utilized more guidance resources on their own initiative than did the re-enrollees. The transfer students who fell within the "medium" classification included 15.31 per cent of these students and the transfer students who fell within the "high" classification included 5.40 per cent of the transfer students. The re-enrollees who fell within the "medium" classification included 14.40 per cent of the re-enrollees and those who fell within the "high" classification included 3.14 per cent of the re-enrollees.

The mean number of solicited guidance resources utilized by the transfer students when making occupational choices was 1.79, and the mean number for re-enrollees was

Table 25.--Degrees of Initiative Displayed by Students in Obtaining Assistance with the Choice of an Occupation

Degree of Initiative	Re-enrollees		Transfer Students		Total	
	No.	Per Cent	No.	Per Cent	No.	Per Cent
No initiative	201	45.26	48	43.23	249	44.86
Low	165	37.20	40	36.06	205	36.94
Medium	64	14.40	17	15.31	81	14.60
High	14	3.14	6	5.40	20	3.60
Total	444	100.00	111	100.00	555	100.00

(t = .82, non-significant)

1.61. A t-value of .82 was obtained which was non-significant at the .05 level. It was concluded, therefore, that the transfer students did not differ significantly from the re-enrollees with respect to the degrees of initiative they displayed in soliciting assistance when making occupational choices.

Unsolicited Guidance Assistance Given to Students

The amounts of unsolicited guidance assistance given to students when formulating plans for the future were ascertained by determinations of the total number of guidance resources which assisted students with plan making at each

of the periods of student decision without the students having asked for help.

The amounts of unsolicited guidance assistance given to the students, to facilitate the reporting of the data, were classified as "none," "some," "much," and "very much." If students had not been assisted at all, they were classified in the "none" category, if students had been assisted by from one to three resources, they were classified in the "some" category; if students had been assisted by from four to six resources, they were classified in the "much" category; and if they had been assisted by from seven to nine resources, they were classified in the "very much" category.

The next three sections report the amounts of unsolicited guidance given to students during each of the periods of student decision: (1) the selection of high school subjects, (2) the formulation of post-high school plans, and (3) the choice of an occupation.

Unsolicited Guidance Assistance Given to Students When They Selected High School Subjects

Over one-third of both groups of students indicated that they had received no unsolicited assistance when they selected high school subjects. Reference to Table 26 indicates that the percentage of transfer students who fell within this classification was 36.93 per cent, and the percentage of re-enrollees, 38.78 per cent. Over half of both

Table 26.--Amounts of Unsolicited Guidance Assistance Given to Students When They Selected High School Subjects

Amount of Assistance	Re-enrollees		Transfer Students		Total	
	No.	Per Cent	No.	Per Cent	No.	Per Cent
None	172	38.78	41	36.93	213	38.38
Some	224	50.44	57	51.37	281	50.63
Much	41	9.22	12	10.80	53	9.55
Very Much	7	1.56	1	.90	8	1.44
Total	444	100.00	111	100.00	555	100.00

(t = .68, non-significant at the five per cent level)

groups, and slightly more of the transfer students, reported having had "some" assistance. The percentage of the re-enrollees classified as having had "some" assistance was 50.44, and the percentage of the transfer students was 51.37. More of the transfer students, 10.80 per cent, than the re-enrollees, 9.22 per cent, reported "much" assistance. A very small number of students reported "very much" assistance. Of the re-enrollees, 1.56 per cent did so, and of the transfer students, .90 per cent so reported.

A t-value of .68 was obtained from the statistical treatment of the data which was non-significant at the .05 level. This indicated that the amounts of assistance given

the re-enrollees when they selected high school subjects were not significantly different from the amounts given to the transfer students. The mean number of resources which gave assistance to the re-enrollees was 1.43 and to the transfer students, 1.55.

Unsolicited Guidance Assistance Given to Students When They Formulated Post-High School Plans

Over one half of both groups of the students, and more of the re-enrollees, reported that they were given no unsolicited assistance when formulating post-high school plans. The percentage of the re-enrollees who received no assistance was 55.62, and of the transfer students, 52.26, as shown in Table 27. More of the transfer students received "some" assistance, but fewer of the transfer students received "much" and "very much" assistance than did the re-enrollees. The "some" classification contained 38.74 per cent of the transfer students compared with 33.82 per cent of the re-enrollees. In the "much" classification were found 8.77 per cent of the re-enrollees and 8.10 per cent of the transfer students; and, in the "very much" classification were found .90 per cent of the transfer students and 1.79 per cent of the re-enrollees.

The mean number of unsolicited guidance resources which gave assistance to the re-enrollees was 1.14, and the mean number for the transfer students was 1.19. A t-value

Table 27.--Amounts of Unsolicited Guidance Assistance Given to Students When They Formulated Post-High School Plans

Amount of Assistance	Re-enrollees		Transfer Students		Total	
	No.	Per Cent	No.	Per Cent	No.	Per Cent
None	247	55.62	58	52.26	305	54.95
Some	150	33.82	43	38.74	193	34.78
Much	39	8.77	9	8.10	48	8.65
Very Much	8	1.79	1	.90	9	1.62
Total	444	100.00	111	100.00	555	100.00

(t = .31, non-significant at the five per cent level)

of .31 was obtained which was non-significant at the .05 level. Because the number of unsolicited guidance resources utilized by both groups were not found to be significantly different from each other in the data analyzed, evidence was found with which to support the null hypothesis that the amounts of guidance assistance given to re-enrollees and transfer students without student request for such assistance are not significantly different.

Unsolicited Guidance Assistance Given to Students When They Made Occupational Choices

Over half of the re-enrollees and transfer students in the sample studied had not received any unsolicited

guidance assistance when they made occupational choices. Table 28 shows that the percentages were 60.82 per cent of the re-enrollees and that 58.56 per cent of the transfer students. More re-enrollees, 32.01 per cent, had obtained "some" assistance than had the transfer students, 29.74 per cent. However, more of the transfer students had received more assistance which they had not asked or looked for than had the re-enrollees. The percentages of the transfer students which fell within the "much" and "very much" categories were 10.80 and .90, respectively. The percentages of the re-enrollees which fell within the "much" and "very much" categories were 6.29 and .88, respectively.

The mean number of resources from which re-enrollees had obtained unsolicited assistance was .93, and the mean number for transfer students was 1.05. A t-value of .74 was obtained which was non-significant at the .05 level. Therefore, evidence was not obtained from the data analyzed to reject the null hypothesis that the amounts of unsolicited assistance received by transfer students when they made occupational choices do not differ from the amounts of assistance received by the re-enrollees. The transfer students did not receive significantly more unsolicited guidance assistance than did the re-enrollees.

Table 28.--Amounts of Unsolicited Guidance Assistance Given to Students When They Made Occupational Choices

Amount of Assistance	Re-enrollees		Transfer Students		Total	
	No.	Per Cent	No.	Per Cent	No.	Per Cent
None	270	60.82	65	58.56	335	60.36
Some	142	32.01	33	29.74	175	31.53
Much	28	6.29	12	10.80	40	7.21
Very Much	4	.88	1	.90	5	.90
Total	444	100.00	111	100.00	555	100.00

(t = .74, non-significant at the five per cent level)

Maturity of Reasons Expressed by Students Concerning Their Continuance in Vocational Agriculture

The reasons which students indicated on the questionnaire as their reasons for either re-enrolling in or transferring from vocational agriculture were assigned maturity scores as described in Chapter III.[1] These scores reflected the degrees of consideration students gave to long-term educational and/or occupational objectives when they expressed reasons concerning their continuance in vocational agriculture.

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[1] Supra, p. 61-62.

The results of an analysis of these scores are given in this section. To facilitate the reporting of these results, maturity scores ranging from 1.61 to 2.00 were designated as "very mature," scores ranging from 1.21 to 1.60 were designated as "fairly mature," scores ranging from .81 to 1.20 were designated "neither mature or immature," scores ranging from .41 to .80 were designated "fairly immature," and scores ranging from 0 to .40 were designated as "very immature."

Table 29 shows the maturity ratings assigned to the reasons expressed by the transfer students and re-enrollees. An examination of this table reveals that, with respect to the maturity scores, the transfer students differed markedly from the re-enrollees. In the "very mature" classification were classified 45.93 per cent of the transfer students compared with 10.80 per cent of the re-enrollees. In the "fairly mature" classification, 43.92 per cent of the re-enrollees were classified, compared with 32.42 per cent of the transfer students. Although more of the re-enrollees were classified in the "fairly mature" classification than were transfer students, more re-enrollees than transfer students were classified in the "neither mature nor immature," "fairly immature," and "very immature" classifications. The percentages of the re-enrollees classified in these categories were 37.64 per cent, 7.20 per cent, and .44 per cent, respectively. The percentages of the transfer students classified in these

Table 29.--Maturity Ratings of the Reasons Expressed by Students for Re-enrolling In and Transferring From Vocational Agriculture

Maturity Rating	Re-enrollees		Transfer Students		Total	
	No.	Per Cent	No.	Per Cent	No.	Per Cent
Very Mature	48	10.80	51	45.93	99	17.83
Fairly Mature	195	43.92	36	32.42	231	41.62
Neither Mature or Immature	167	37.64	18	16.25	185	33.34
Fairly Immature	32	7.20	3	2.70	35	6.31
Very Immature	2	.44	3	2.70	5	.90
Total	444	100.00	111	100.00	555	100.00

(t = 2.05, significant at the five per cent level)

same categories were 16.25 per cent, 2.70 per cent, and 2.70 per cent, respectively.

The mean maturity rating of the re-enrollees' reasons was 1.02 and that for the transfer students was 1.34. A t-value of 2.05 was obtained which was significant at the .05 level. The analysis of the data indicated, therefore, that the maturity scores for the transfer students' reasons were significantly higher than were the re-enrollees' scores. Evidence was obtained which indicated, then, that transfer

students expressed reasons which indicated more consideration of long-term educational and/or occupational objectives than were the reasons expressed by students who re-enrolled in vocational agriculture.

Consistency of the Students' Occupational Choices

Discrepancy scores were computed for all of the occupational choices of each student in the sample, and these discrepancy scores were utilized to measure the consistency of the students' occupational choices within aspiration levels and within occupational fields. The methods used to classify occupations by aspiration level and occupational fields, and to compute the discrepancy scores were described in Chapter III.[1]

Consistency of Occupational Choices Within Aspiration Levels for Students Who Expressed at Least One Choice

An examination of Table 30 reveals that fewer transfer students had consistent occupational choices than had the re-enrollees. Those students who were entirely consistent within aspiration levels included 30.42 per cent of the re-enrollees, but only 18.88 per cent of the transfer students. Those students with a discrepancy of one level among their occupational choices included 35.85 per cent of the re-enrollees and 37.77 per cent of the transfer students. These latter percentages were fairly equal, as were

[1]*Supra*, p. 57-60.

Table 30.--Consistency of Occupational Choices Within Aspiration Levels for Students Who Expressed at Least One Choice

Discrepancy Score	Re-enrollees		Transfer Students		Total	
	No.	Per Cent	No.	Per Cent	No.	Per Cent
0	101	30.42	17	18.88	118	27.96
1	119	35.85	34	37.77	153	36.25
2	90	27.11	23	25.56	113	26.79
3	20	6.02	12	13.34	32	7.58
4	2	.60	4	4.45	6	1.42
Total	332	100.00	90	100.00	422	100.00

(t = 3.14, significant at the one per cent level)

those of the students who had a discrepancy of two levels among their occupational choices; and, among those who had a discrepancy of two levels were 27.11 per cent for the re-enrollees and 25.56 per cent of the transfer students. The number of students who had higher discrepancy scores than two includes many more transfer students than re-enrollees. Classified as having occupational choices with a discrepancy of three levels were 13.34 per cent of the transfer students compared with only 6.02 per cent of the re-enrollees. Those with discrepancy scores of four accounted for 4.45 per cent of the transfer students compared with only .60 per cent of the re-enrollees.

The mean discrepancy score for the re-enrollees was found to be 1.10, and that for the transfer students was 1.46. Thus, the average transfer student chose occupations from a wider range of levels than did the average re-enrollee. A t-value of 3.14 was obtained which was significant at the .01 level. Consequently, evidence was obtained from the sample studied which rejects the hypothesis that the consistency of the occupational choices within levels for the re-enrollees and the transfer students do not differ. In the sample studied, the occupational choices of the transfer students were more inconsistent and the re-enrollees' choices were more consistent within aspiration levels.

Consistency of Occupational Choices Within Fields for Students Who Expressed at Least One Choice

The discrepancy scores which reflect the consistency of the students' occupational choices within fields for those students who expressed at least one choice are shown in Table 31. Examining this table, one can see that 25.00 per cent of the re-enrollees were absolutely consistent with their occupational choices compared with 18.89 per cent of the transfer students. A smaller percentage of the re-enrollees, 47.29 per cent, had a discrepancy score of one compared with 51.12 per cent of the transfer students. However, slightly more transfer students had discrepancy scores of two than did the re-enrollees. The transfer students and

Table 31.--Consistency of Occupational Choices Within Fields for Students Who Expressed at Least One Choice

Discrepancy Score	Re-enrollees		Transfer Students		Total	
	No.	Per Cent	No.	Per Cent	No.	Per Cent
0	83	25.00	17	18.89	100	23.70
1	157	47.29	46	51.12	203	48.10
2	91	27.41	26	28.87	117	27.72
3	1	.30	1	1.12	2	.48
Total	332	100.00	90	100.00	422	100.00

(t = 1.15, non-significant at the five per cent level)

the re-enrollees who had discrepancy scores of two included 28.87 per cent and 27.41 per cent of these students, respectively.

The mean discrepancy score for the transfer students was 1.13, and that for the re-enrollees, 1.03. A t-value of 1.15 was obtained which was non-significant at the .05 level. This indicated that the consistency of the occupational choices of the transfer students within occupational fields was not significantly different from the consistency of the occupational choices of the re-enrollees. The re-enrollees did not display significantly higher degrees of consistency when their occupational choices were classified by occupational fields than did the transfer students.

Certainty of the Students' Future Plans

The degrees of certainty expressed by the students concerning the plans which they had for the future were classified by them as "very certain," "fairly certain," "somewhat uncertain," and "very uncertain." The following sections reports the findings concerning the students' immediate post-high school plans and the degrees of certainty expressed concerning these plans, the degrees of certainty expressed by students concerning their entry into occupations of their first choice; and, for those who chose farming as one of their choices, the degrees of certainty expressed concerning the likelihood of entering into this occupation.

Immediate Post-High School Plans of Students

The immediate post-high school plans of the transfer students differed markedly from those of the re-enrollees. This is evident when Table 32 is examined. This table shows that more transfer students, for example, have no plans for what they would like to do after leaving high school. Of the transfer students, 13.52 per cent had made no plans and 10.36 per cent of the re-enrollees had no plans either. More of the re-enrollees, 35.82 per cent, planned to start working after high school than did the transfer students, 17.12 per cent. More transfer students, 44.14 per cent,

Table 32.--Immediate Post-High School Plans of Students

Post-High School Plans	Re-enrollees		Transfer Students		Total	
	No.	Per Cent	No.	Per Cent	No.	Per Cent
None	46	10.36	15	13.52	61	10.99
Start working	159	35.82	19	17.12	178	32.07
More education	116	26.12	49	44.14	165	29.73
Enter armed forces	123	27.70	28	25.22	151	27.21
Total	444	100.00	111	100.00	555	100.00

(Chi-square = 20.38, significant at the one per cent level)

planned to obtain more education compared with 26.12 per cent of the re-enrollees. Approximately the same percentages of both groups of students planned to enter the Armed Forces. Classified as having the plan of doing this were 25.22 per cent of the transfer students and 17.70 per cent of the re-enrollees.

The data were submitted to statistical measurement by chi-square. The chi-square value obtained, 20.38, was significant at the .01 level. Therefore, the evidence obtained from the sample studied failed to support the hypothesis that the post-high school plans of the re-enrollees do not differ from those of the transfer students.

Degrees of Certainty Expressed by Students Concerning Their Post-High School Plans

Table 33 shows the degrees of certainty expressed by the students concerning their post-high school plans. An examination of the percentage columns for the transfer students and the re-enrollees reveals that the percentages of both groups of students who expressed the various degrees of certainty are very similar. Those who were "very certain" of their post-high school plans included 17.11 per cent of the transfer students and 16.21 per cent of the re-enrollees. In the "fairly certain" classification were placed 45.04 per cent of the transfer students and 49.11 per cent of the re-enrollees. "Somewhat uncertain" about their post-high school plans were 18.93 per cent of the transfer students and 17.79 per cent of the re-enrollees. Those who were "very uncertain" included 5.40 per cent and 6.53 of the transfer students and re-enrollees, respectively. "No plans" were expressed by 13.52 per cent of the transfer students and 10.36 per cent of the re-enrollees.

The proportions of the transfer students compared with the proportions of the re-enrollees who expressed the same degrees of certainty were not significantly different from each other. Chi-square, 1.39, was found, after computation, to be non-significant. This indicated that if significant differences existed in the degrees of certainty expressed by the two groups of students with reference to

Table 33.--Degrees of Certainty Expressed by Graduates Concering Their Post-High School Plans

Degree of Certainty	Re-enrollees		Transfer Students		Total	
	No.	Per Cent	No.	Per Cent	No.	Per Cent
Very Certain	72	16.21	19	17.11	91	16.39
Fairly Certain	218	49.11	50	45.04	268	48.28
Somewhat Uncertain	79	17.79	21	18.93	100	18.02
Very Uncertain	29	6.53	6	5.40	35	6.32
No Plans	46	10.36	15	13.52	61	10.99
Total	444	100.00	111	100.00	555	100.00

(Chi-square = 1.39, non-significant)

their post-high school plans, it could not be proved by the data.

Degrees of Certainty Expressed by Students Concerning Their First Occupational Choices

As shown in Table 34 those students who were "very certain" about pursuing their first occupational choices included 32.22 per cent of the transfer students and 40.65 per cent of the re-enrollees. Fifty per cent of the transfer students were "fairly certain" of their first choice occupations compared with 43.40 per cent of the re-enrollees. A

Table 34.--Degrees of Certainty Expressed by Students Concerning Engagement in the Work of Their First Occupational Choices

Degree of Certainty	Re-enrollees		Transfer Students		Total	
	No.	Per Cent	No.	Per Cent	No.	Per Cent
Very Certain	135	40.65	29	32.22	164	38.86
Fairly Certain	144	43.40	45	50.00	189	44.78
Somewhat Uncertain	45	13.55	15	16.67	60	14.21
Very Uncertain	8	2.40	1	1.11	9	2.15
Total	332	100.00	90	100.00	422	100.00

(Chi-square = 3.03, non-significant)

higher percentage of the transfer students, 16.67 per cent, compared with 13.55 per cent of the re-enrollees, were "somewhat uncertain" about pursuing their first occupational choices. Those who were "very uncertain" of their first choices included 1.11 per cent and 2.40 per cent, respectively, of the transfer students and of the re-enrollees.

A chi-square value of 3.03 was obtained which was non-significant at the .05 level. Evidence was not obtained, therefore, to reject the hypothesis that the degrees of certainty expressed by transfer students for entering their first occupational choices do not differ from those expressed

by the students who re-enroll in vocational agriculture.

Certainty of Entering Farming Expressed by Students Who Chose Farming as One Occupational Choice

Two hundred-fifty-six re-enrollees and 43 transfer students expressed farming as one of their occupational choices. The degrees of certainty expressed by these students concerning the probability of their entering this occupation are shown in Table 35. It can be seen from Table 35 that, as a group, the transfer students who chose farming as one of their occupational choices were far less certain of becoming farmers than were the re-enrollees.

Of the re-enrollees who chose farming as one of their occupational choices, 39.84 per cent and 41.01 per cent were either "very certain" or "fairly certain," respectively, of engaging in farming. Of the transfer students, 11.63 per cent and 32.56 per cent were either "very certain" or "fairly certain," respectively, of engaging in farming. In the "somewhat uncertain" category fell 15.23 per cent of the re-enrollees and 44.18 per cent of the transfer students. Those students who were "very uncertain" of becoming farmers included 3.92 per cent of the re-enrollees and 11.63 per cent of the transfer students.

The chi-square test for a significant difference between the two groups of students equalled 18.82 and was significant at the .01 level. This indicated that the

Table 35.--Degrees of Certainty of Entering Farming Expressed by Students Who Chose Farming as One Occupational Choice

Degree of Certainty	Re-enrollees		Transfer Students		Total	
	No.	Per Cent	No.	Per Cent	No.	Per Cent
Very Certain	102	39.84	5	11.63	107	35.78
Fairly Certain	105	41.01	14	32.56	119	39.80
Somewhat Uncertain	39	15.23	19	44.18	58	19.39
Very Uncertain	10	3.92	5	11.63	15	5.03
Total	256	100.00	43	100.00	299	100.00

(Chi-square = 18.82, significant at the one per cent level)

proportions of re-enrollees who expressed the various degrees of certainty of becoming farmers differed significantly from the same degrees of certainty expressed by the transfer students. The re-enrollees who chose farming as one of their occupational choices were significantly more certain of engaging in farming as an occupation than were the transfer students.

Chapter Summary

From the findings presented in this chapter, the third general hypothesis could neither be entirely accepted

nor rejected. It was found that transfer students and the students who re-enroll in vocational agriculture do not display significantly different degrees of initiative in obtaining guidance assistance when selecting high school subjects, formulating post-high school plans, and when making occupational choices; that the amounts of unsolicited guidance assistance given to the transfer students are not significantly greater than the amounts given to re-enrollees when selecting high school subjects, formulating post-high school plans, and when making occupational choices; that transfer students display significantly more maturity when they expres reasons for transferring from vocational agriculture than do the re-enrollees for re-enrolling; that the occupational choices of the re-enrollees are significantly more consistent than those of the transfer students within aspiration levels, but not significantly more consistent within occupational fields; that transfer students are no more certain of their post-high school plans and first occupational choices than are the re-enrollees, but, of those who choose farming as one of their occupational choices, the re-enrollees are significantly more certain of becoming farmers than are the transfer students.

CHAPTER VIII

SUMMARY, IMPLICATIONS AND RECOMMENDATIONS OF THE STUDY

The Purpose of the Study

The purpose of this investigation was to identify certain characteristics of vocational agriculture students which differentiate those who re-enroll in the vocational agriculture program as they progress through the four years of high school from those students who leave the program at the end of grades nine, ten, and eleven to study other high school subjects.

The characteristics studied were selected after a review of literature had been made to determine which characteristics might differentiate the two groups of students.

For ease in manipulation of the data, three general hypotheses were developed which stated that, with reference to the characteristics studied, the characteristics of students who re-enroll in the vocational agriculture program do not differ from the same characteristics of students who transfer from vocational agriculture to pursue other high school studies.

The three general hypotheses tested were:

A. Students who transfer from vocational agriculture do not differ from the students who re-enroll with respect to the characteristics of former students who have become farmers.

B. Transfer students and the students who re-enroll in vocational agriculture do not differ with respect to the levels of academic ability they display, the amounts of post-high school education they plan to obtain, and the aspiration levels and occupational fields of their occupational choices.

C. Transfer students and the students who re-enroll in vocational agriculture do not differ with respect to the degrees of initiative they display in seeking guidance assistance when formulating plans, the amounts of unsolicited guidance assistance they receive from others when formulating plans, the degrees of maturity they display when expressing reasons concerning continuance in vocational agriculture, the degrees of consistency of occupational choices they achieve, and the certainty of their future plans.

Procedure of the Study

The students studied were those enrolled in 39 vocational agriculture departments during the school year 1960-61 which were located within two farming areas of Central Michigan:

(1) the dairy and general farming area, and (2) the dairy and cash crop farming area.

From all of the students who had been enrolled in vocational agriculture in the 39 departments during the 1960-61 school year, a sample of students was selected for testing the hypotheses of the study. All students who remained in school, had supplied useable data, but had transferred from vocational agriculture in the fall of the 1961-62 school year to other high school courses were selected as the sample of transfer students to be studied. The final numbers of transfer students included in the sample were 54 grade nine students, 37 grade ten students, and 20 grade eleven students.

Re-enrollees were selected for the sample by utilizing the stratified random sampling technique. Re-enrollees within each grade level were divided into three groups based upon the degrees of consideration they gave long-term educational and/or occupational plans as reflected by maturity scores the students were assigned: the upper 25 per cent, the middle 50 per cent, and the lower 25 per cent. Using random numbers, the investigator chose, within each grade level, from the upper 25 per cent group, a number of re-enrollees equal to the number of transfer students there were from that grade; from the middle 50 per cent group, twice the number of re-enrollees as there were transfer students from that grade; and, from the lower 25 per cent, a

number of re-enrollees equal to the number of transfer students there were from that grade. Resulting from this procedure was a sample of re-enrollees composed of 216 grade nine students, 148 grade ten students, and 80 grade eleven students.

For statistical analysis, the re-enrollees from each grade level were grouped together to form one group designated in the study as the "re-enrollees." The transfer students from each grade level were likewise grouped together to form one group designated in the study as the "transfer students."

Chi-square and the t-test were used to treat the data statistically. The lowest level for significance of differences accepted in the study was at the five per cent level, and those differences found to be significant at the one per cent level were so designated.

The Findings of the Study

Analysis of Student Loss from the Departments Participating in the Study

The analysis of student loss from the departments which participated in the study was based upon a total of 1,370 students enrolled during the 1960-61 school year.

At the end of the 1960-61 school year, 209 students, or 15.25 per cent of the total enrollment, left the vocational agriculture program. The percentages of each class

which left the program were 17.44 per cent. 17.16 per cent, and 10.63 per cent of grades nine, ten, and eleven, respectively.

Of the total student loss, 43.06 per cent were freshmen, 35.83 per cent were sophomores, and 21.11 per cent were juniors.

Most students who left the program did so in order to study another high school subject. Of the total student loss, 75.60 per cent chose other high school subjects, 11.00 per cent moved away, 12.92 per cent left school, and .48 per cent died.

Findings Related to the Hypotheses Tested

From the data studied, the following characteristics of re-enrollees were found to differ significantly at the one per cent level from the characteristics of the transfer students:

A. More re-enrollees lived on farms.

B. Re-enrollees had more favorable attitudes toward farming as a vocation and as a way of life.

C. Re-enrollees had different types of post-high school plans.

D. Re-enrollees planned to obtain less post-high school education.

E. More re-enrollees stated occupational choices which were related to agriculture.

F. More re-enrollees stated farming as their first and second occupational choices.

G. Re-enrollees named occupational choices in lower aspiration levels.

I. Re-enrollees named occupational choices representing different occupational fields.

J. The occupational choices of re-enrollees were more consistent within aspiration levels.

The following characteristics of re-enrollees were found to differ significantly from the characteristics of the transfer students at the five per cent level:

A. Re-enrollees displayed less academic ability.

B. Re-enrollees expressed reasons for re-enrolling in vocational agriculture which displayed less consideration of long-term educational and/or occupational objectives than did the transfer students for transferring from the vocational agriculture program.

Re-enrollees and transfer students did not differ significantly from each other with respect to the following characteristics:

A. Sizes of the students' home farms

B. Extent of parental farm ownership

C. The farm work status of the students' fathers

D. The ages of the students' fathers

E. The number of students who expressed at least one occupation choice

F. Degrees of initiative displayed in seeking guidance assistance when students selected high school subjects, when they formulated post-high school plans, and when they decided upon their occupational choices

G. The amounts of unsolicited guidance assistance received by the students when they selected high school subjects, when they formulated post-high school plans, and when they decided upon their occupational choices

H. Consistency of occupational choices within occupational fields

I. Certainty of immediate post-high school plans

J. Certainty of first occupational choices

Implications of the Study

The findings obtained when the hypotheses were tested brought to light implications which may have value for the improvement of the vocational agriculture program. A brief presentation of some of these implications found as the findings were interpreted are presented in this section, and some recommendations based upon the findings and implications of the study are presented in the next section.

These implications and recommendations have been made from the following viewpoints held by the investigator as he developed the study:

A. Students who continue to enroll in vocational agriculture should wish to do so and they should be able to profit from the instruction given.

B. Students who continue to enroll in vocational agriculture should be able to profit relatively more from the study of vocational agriculture than they might profit from the study of another high school subject which could be substituted for vocational agriculture.

C. Students should choose the high school subjects they study on the basis of a careful consideration of whatever realistic occupational alternatives they may have.

D. Students should select the high school subjects they study on the basis of a consideration of long-term educational and/or occupational plans they may have.

E. Students should not only be encouraged to keep long-term educational and/or occupational plans flexible, but also as many avenues of opportunity should be left open as long as possible.

F. School personnel and others who are concerned with the educational and/or occupational plans of youth should offer and make readily available sources of educational-occupational information and counsel.

G. Vocational agriculture is a part of the total educational program of the local school in which it is offered and students should be allowed to enroll if they can meet satisfactorily the criteria necessary for a successful study of vocational agriculture as it is taught.

H. A high rate of student loss from the vocational agriculture program of one school compared with that of another is neither indicative of good or poor guidance or of good or poor instruction without the consideration of other factors.

From these points of view, then, the following appear to be important implications which arise from the findings of

this study and toward which the recommendations are pointed in the section which follows this one.

A. The findings indicated with respect to the home farm and family characteristics which govern to a large extent the opportunities there are for boys to become established in farming on their home farms that the transfer students did not differ significantly from the re-enrollees. The results of the study, on the other hand, indicated that the re-enrollees did differ significantly from the transfer students in that the re-enrollees had significantly more favorable attitudes toward farming and that the re-enrollees aspired to enter farming and agricultural occupations to a significantly greater extent. These findings imply that:

1. Vocational agriculture students are not basing their decisions concerning continuance in the vocational agriculture program upon a consideration of the opportunities they have to become established in farming.

2. Those persons who counsel with students are apparently not considering the opportunities boys have to become established in farming when they assist students with the selection of high school subjects.

3. The significant governing factors which apparently influence the decision of farm boys to continue or

discontinue the study of vocational agriculture are student opinions concerning the desirability of farming as a vocation and as a way of life; and student decisions for and against capitalizing upon a farming background as an aid in becoming established in an agricultural occupation.

4. Personnel in the high schools apparently are seeing in the vocational agriculture program more than the opportunities there are for the training and establishing of youth in farming. It is likely that they are observing in the vocational agriculture program the opportunities there are for boys to receive a broad agricultural education, the opportunities there are for occupational exploration of a variety of agricultural occupations, the values of the program there are in terms of general education, and the opportunities there are for the development of student leadership and citizenship abilities.

B. Re-enrollees were found to display significantly less academic ability than did the transfer students. The mean grade point of the re-enrollees was found to be 1.74, and that for the transfer students, 1.90. Furthermore, the findings indicated that fewer re-enrollees planned to obtain any additional education after leaving high school. Nearly 75 per cent of the re-enrollees and a few more

than 50 per cent of the transfer students did not plan to obtain any type of training after high school graduation. In view of these findings, the study implies that:

1. Many top quality students are apparently not being guided into the vocational agriculture program.

2. Vocational agriculture students are not being impressed with the importance of obtaining better school marks, nor are they being helped sufficiently to do so.

3. Although the difference was statistically significant; in a practical sense, the academic ability displayed by transfer students was not markedly higher than it was for re-enrollees.

4. Many vocational agriculture students do not realize the importance of obtaining post-high school education and that their occupational achievements may be limited because of this lack of further education.

C. Transfer students were found to aspire to higher aspiration levels than did the re-enrollees. To obtain the education needed for these higher level occupations, significantly more transfer students planned to attend another school rather than going to work after leaving high school. These findings suggest that:

1. Plans to obtain more education after leaving high school encourage students to transfer from vocational agriculture rather than re-enroll.

2. Higher level occupational aspirations tend to encourage students to transfer from vocational agriculture rather than to re-enroll.

3. Transfer students may not know that vocational agriculture graduates usually succeed as well as, or do better than, other high school graduates with college work, or in occupations which are not related to agriculture.

4. Both groups of students have a fairly accurate knowledge of the aspiration levels to which they should be striving in that a sufficient number of students in both groups were found with the appropriate levels of academic ability for the first occupational choices that students made. If anything, some re-enrollees tended to under-estimate their appropriate occupational level because seven per cent had grade points of 3.00 and above, but none aspired to enter occupations classified in the Professional and Managerial I level.

D. The results of the investigation indicated that the degrees of initiative displayed by re-enrollees and transfer students in seeking solicited guidance assistance; that is, the number of resources students utilized without being asked or told to do so, did not differ significantly when they selected high school subjects, when they formulated

post-high school plans, and when they made occupational choices. The results also indicated that a large number of both groups of students did not display <u>any</u> initiative in obtaining guidance assistance with these decisions: approximately a third of both student groups did not display any initiative in obtaining guidance assistance with the choice of high school subjects, and over 40 per cent of both student groups displayed no initiative in obtaining assistance with the formulation of post-high school plans and with the choice of an occupation. These findings imply that:

1. In general, there are large numbers of vocational agriculture students who are not sufficiently concerned with their future to actively seek information and assistance with the solution of their educational and vocational problems.

2. Students in both groups are relatively more concerned with their immediate problems; that is, with the selection of high school subjects than they are with problems to be solved in the more distant future.

3. Re-enrollees appear to be just as conscious of their need for information with which to make decisions as are the transfer students who transfer from the vocational agriculture program.

E. With respect to the amounts of guidance assistance given to both student groups without student request for such assistance, the study indicated that the amounts of unsolicited guidance assistance given the transfer students did not differ from that given the re-enrollees. Furthermore, the study indicated that many students in both groups were not given <u>any</u> unsolicited guidance assistance: over a third of the students in both groups were not given any assistance for which they did not ask when they selected high school subjects, and over half of the students in both groups were not assisted with unsolicited help with the formulation of post-high school plans and with the choice of an occupation. These findings suggest that:

1. Personnel in high schools, including vocational agriculture instructors, are not giving to all students equally the help and information they need in order to make educational and occupational decisions.

2. Many transfer students apparently are basing their decisions to transfer from vocational agriculture upon inadequate information, and this is also apparently true of many of the vocational agriculture re-enrollees.

F. The findings of the study indicated that transfer students gave significantly more consideration to long-term educational and/or occupational plans when they decided to transfer

from the program than did the re-enrollees when they decided to re-enroll. This implies that re-enrollees may be too much concerned with present satisfactions and not enough concerned with the long-range effects of present-day decisions.

Recommendations Based on the Findings of This Study

Based upon the results of this study and the experience gained as it was completed, the investigator would make the following recommendations to the instructors in the vocational agriculture departments surveyed in this investigation:

A. To estimate the probability that a vocational agriculture student may or may not continue to enroll in the vocational agriculture program, the study suggests that emphasis be placed upon the student's place of residence, his attitudes toward farming, and his aspirations to enter an agriculturally-related occupation rather than upon the characteristics of his home farm environment.

Approximately twice as many non-farm boys transferred from vocational agriculture than did farm boys, and significantly more boys transferred from vocational agriculture who did not want to become farmers or enter other agricultural occupations than did the students who re-enrolled. If

students lived on the farm, the home farm and family characteristics did not differentiate those who re-enrolled from those who did not. Consequently, for farm boys, the study indicates that a consideration of home farm and family characteristics themselves will not indicate the probability that a student will or will not continue his study of vocational agriculture.

B. It may be possible to reduce the rate of student loss from vocational agriculture by having students study and discuss the advantages and disadvantages of farming and of entering agriculturally-related occupations. Probably one of the most important criteria which a student should consider if he is thinking about an agricultural occupation for his life's work is his attitudes toward farming. The study indicated that less than ten per cent of the transfer students had unfavorable attitudes toward farming as a vocation and less than five per cent had unfavorable attitudes toward farming as a way of life. Because transfer students do not generally hold unfavorable attitudes toward farming, they may, with more discussion and study of agricultural occupations, see how they can capitalize upon their farming backgrounds and vocational agriculture training in the occupational world and then desire to remain enrolled in the vocational agriculture program.

C. It would appear wise to discuss occupational plans with those students who desire to transfer from the vocational agriculture program to determine if these students clearly see that the program of study in vocational agriculture can not be of value to them. The study indicated that nearly all of the occupational choices of approximately 25 per cent of the transfer students were considered by these students to be related to agriculture.

D. Vocational agriculture students should be encouraged to do their best with their high school studies. The mean grade point average of the re-enrollees was found to be only 1.74. Students should be impressed with the fact that, regardless of the aspiration levels of their occupational choices, the more they learn in school, the better the job and the pay check in the occupational world.

E. Vocational agriculture students should be encouraged to obtain more education after they leave high school. The study indicated that nearly 75 per cent of the re-enrollees and over one half of the transfer students did not plan to obtain more education after high school graduation. Students should be made aware of the need they have for all of the education they can obtain; and that once they are working, unless they have obtained more education, they will not be able to compete with those who have done so.

F. Approximately a third of all students in the sample studied who were enrolled during the 1960-61 school year had not displayed any initiative in obtaining guidance assistance with the selection of high school subjects. Nearly a half of the students had not displayed any initiative in obtaining guidance assistance with the formulation of post-high school plans and the choice of an occupation.

Over a third of all students indicated that they were not given any unsolicited guidance assistance when they selected the high school subjects they studied; and, over one half of all students in the sample indicated that no one gave them guidance assistance with the formulation of post-high school plans or with the choice of an occupation.

These findings indicate that all students are not being helped as they should. It is recommended that vocational agriculture instructors and that all persons charged with the responsibility of assisting students be very careful not to overlook helping any student, and they should encourage all students to "take an interest" and actively seek information upon which to base their plans for the future.

G. With the absence of norms which indicate how consistent the vocational choices of high school students should be within aspiration levels, it is impossible to judge whether the occupational choices of the students studied were relatively consistent or relatively inconsistent.

Nevertheless, the transfer students displayed significantly less consistency than did the re-enrollees. This may indicate that transfer students were less aware of their potentialities than were the re-enrollees; or it may reflect the fact that the higher degrees of consistency of the re-enrollees' choices merely resulted from the large number of choices expressed by these students which include farming. Two recommendations appear to be important here:

1. Because nearly 60 per cent of the re-enrollees chose farming as one of their occupational choices, re-enrollees should be encouraged to appraise the opportunities they have for entering this occupation in view of the reality factors which govern entrance into this occupation.

2. Because the occupational choices of transfer students were significantly less consistent within aspiration levels than were those of the re-enrollees, transfer students should be encouraged to determine at which aspiration level they should most appropriately aspire.

H. Vocational agriculture students should be encouraged to base their present-day decisions upon their long-term educational and/or occupational objectives. And, if these objectives have not yet become concrete, the various

alternatives and possibilities should still be identified and kept very much in mind when present-day decisions are executed.

The study indicated that significantly fewer re-enrollees than transfer students considered long-term educational and/or occupational objectives when they decided for and against re-enrolling in vocational agriculture. Furthermore, the findings indicated that as re-enrollees progressed through the four years of high school, they did not give increasingly greater consideration to their long-term educational and/or occupational plans as perhaps they should have been doing. Rather than attempting to satisfy present-day needs only, students should also be encouraged to look ahead and determine if present-day decisions are molding themselves into the types of educationally- and occupationally-trained adults they would like to become.

Suggestions For Further Study

The research reported in this dissertation surveyed a wide range of student characteristics. A project such as this one has been might well be expected to yield a large number of suggestions for other studies which should be completed. This has been found true with this study.

Although an almost endless list of suggestions for further studies could be given, the following seem to be the

most important in the opinion of this investigator in terms of providing results most applicable for the immediate improvement of the vocational agriculture program.

A. An analysis of the same student characteristics studied in this research project should be completed with other students in other schools to ascertain whether the findings reported in this study are generally representative of vocational agriculture students who re-enroll in vocational agriculture and those who transfer to other high school courses.

B. An analysis of the same student characteristics studied in this project should be completed which compares the characteristics of students who enroll and transfer from vocational agriculture at each grade level to determine how these characteristics change as students progress through high school.

C. This research project only compared the student characteristics of re-enrollees with those of transfer students. Not evaluated were each of the student characteristics in terms of what may constitute acceptable standards by which the wisdom of any particular student's desire to re-enroll in vocational agriculture or transfer from the program may be judged. A study designed to evaluate the wisdom of choice of vocational agriculture students who

do enroll and who transfer to other subjects in terms of their needs and in terms of what vocational agriculture can offer would be a very valuable contribution.

D. This study indicated that although the characteristics of re-enrollees and transfer students do differ significantly in some instances, there are still many boys who transfer from vocational agriculture who seemingly possess more of those characteristics usually considered to be those of the desirable students than do many of the boys who continue to enroll in the program. It is still not known why some boys with these seemingly desirable characteristics transfer from vocational agriculture and why those with seemingly less desirable characteristics continue to enroll. Perhaps, the results of case studies of those students who continue to enroll which were previously identified as continuing in vocational agriculture unwisely could be contrasted with the results of case studies of students who were previously identified as possessing the characteristics of more desirable enrollees but who have transferred to other high school subjects.

E. There is still a need in agricultural education for the evaluation of the guidance given to vocational agriculture students in terms of the amounts of assistance <u>actually received</u> by them. Could a group of vocational agriculture students and their problems be identified at one point

in time; and, then, at a later date, could these students be surveyed again to determine: (1) which problems had been partially or completely solved; and, (2) to determine in what ways they had been helped; who helped them the most, the least; and, in what manner?

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APPENDICES

APPENDIX A

QUESTIONNAIRE

1. Name_____ 2. High school_____

3. Your age_____ 4. Year in school_____

5. If you have brothers or sisters, indicate the number of each in the blanks below. Do not include yourself.

Classification	Number of Brothers	Number of Sisters
Older than you are	_____	_____
Younger than you are	_____	_____

6. Is your father or guardian living? Yes_____ No_____

   If yes, answer the following:

   a. What is his approximate age? _____years

   b. Read all of the following statements and then check the one which best describes your father's employment.

   _____ He is a full-time farmer and has no other job.
   _____ He farms and works less than 5 months off the home farm.
   _____ He farms and works more than 5 months off the home farm.
   _____ He is not a farmer but is a farm manager.
   _____ He is a farm employee working for wages.
   _____ He is retired.
   _____ He is not a farmer. His occupation is_____

7. Do you live on a farm? Yes_____ No_____

   If yes, answer the following:

   a. What is the size of your parents' farm? _____acres

   b. How many of these acres do your parents own? _____acres

   c. How many of these acres do your parents rent? _____acres

   d. How many of these acres are tillable? _____acres

8. Circle every year in which you enrolled in vocational agriculture. Include this year.

   Freshman Sophomore Junior

9. Indicate in the table below whether you plan to take vocational agriculture from now on by checking either Yes or No, or Not Sure. If you check No or Not Sure, write in the name of the course you may take in place of vocational agriculture. If you do not know this, check the Don't Know column.

Do you plan to enroll	Yes	No	Not Sure	Course to be Taken: Name	Course to be Taken: Don't Know
In grade 10 Vo. Agr.?	____	____	____	_____	____
In grade 11 Vo. Agr.?	____	____	____	_____	____
In grade 12 Vo. Agr.?	____	____	____	_____	____

10. Do you plan to finish four years of high school? Yes_____ No_____

11. Have you obtained information or advice about choosing your high school courses? Yes_____ No_____

If yes, check column 1 if you asked or looked for help on your own. Check column 2 if you were given help or advice you did not ask or look for.

Check only those sources of help you have used.

	(1) I asked or looked for help.	(2) Help was given me without asking.
Parents	_____	_____
Vocational Agriculture Instructor	_____	_____
Other teachers	_____	_____
Principal or Superintendent	_____	_____
Counselor	_____	_____
Other adults	_____	_____
Fellow students	_____	_____
Occupational books or pamphlets	_____	_____
College or other school you may attend	_____	_____
Other (Specify)_____	_____	_____
Other (Specify)_____	_____	_____

Note: If you are planning to enroll in vocational agriculture next year, answer question 12. If you are not planning to do this, go on to question 13. If you are not sure, answer both questions 12 and 13.

12. Check the reasons you have for planning to re-enroll in vocational agriculture.

_____ Need knowledge of farming in my future job.

_____ I'm interested in agriculture.

_____ I like the agriculture instructor better than other teachers.

_____ There are good jobs for people trained in agriculture.

_____ I like farm shop work.

_____ My friends are taking agriculture.

_____ Agriculture meets requirements for getting into college.

_____ I've been advised to take agriculture.

_____ It's easy to get good grades in agriculture.

_____ I want to make the most out of my farm background for getting a job.

_____ I like practical subjects.

_____ Activities like field trips are lots of fun.

_____ Other (Specify) _____

_____ Other (Specify) _____

13. Check the reasons you have for planning to transfer from vocational agriculture to another course.

_____Don't need knowledge of farming in my future job.

_____I'm not interested in agriculture.

_____I like other teachers better than the agriculture instructor.

_____Continuing in agriculture would limit my choice of future jobs.

_____I don't like farm shop work.

_____My friends are transferring to other courses.

_____Need other courses to get into college.

_____I've been advised to take other subjects.

_____It's hard to get good grades in agriculture.

_____Want to explore other subjects to help me choose an occupation.

_____Can't schedule agriculture with other courses I want.

_____I like subjects more academic than agriculture.

_____Activities like field trips are a waste of school time.

_____Other (Specify)_____

_____Other (Specify)_____

14. Have you obtained information or advice about what you should do after you leave high school? Yes_____ No_____

If yes, check column 1 if you asked or looked for help on your own. Check column 2 if you were given help or advice you did not ask or look for.

Check only those sources of help you have used.

Source of Help	(1) I asked or looked for help.	(2) Help was given me without asking.
Parents	_____	_____
Vocational Agriculture Instructor	_____	_____
Other teachers	_____	_____
Principal or Superintendent	_____	_____
Counselor	_____	_____
Other adults	_____	_____
Fellow students	_____	_____
Occupational books or pamphlets	_____	_____
College or other school you may attend	_____	_____
Friend working in a job	_____	_____
Other (Specify)_____	_____	_____
Other (Specify)_____	_____	_____

15. Do you have any plans for what you might do after leaving high school?
Yes_____ No_____

If yes, answer the following:

a. After leaving high school, what do you plan to do? (Circle one)

Start working Attend college or another school Enter Armed Forces

If attending college or another school, how long will you stay in school? (Circle)

Less than 1 year 1 - 2 years 3 - 4 years More than 4 years

If entering the Armed Forces, answer the following:

1. How long do you plan to stay in the Armed Forces? Specify whether your answer is in months or years. _____

2. Do you know what you will do after discharge? Yes_____ No_____

If so, what will you do? (Specify) _____

b. As of now, how certain are your plans for what you will do after leaving high school? (Circle)

Very certain Fairly certain Somewhat uncertain Very uncertain

16. Have you obtained information or advice concerning the choice of an occupation?
Yes_____ No_____

If yes, check column 1 if you asked or looked for help on your own. Check column 2 if you were given help or advice you did not ask or look for.

Check only those sources of help you have used.

Source of Help	(1) I asked or looked for help.	(2) Help was given me without asking.
Parents	_____	_____
Vocational Agriculture Instructor	_____	_____
Other teachers	_____	_____
Principal or Superintendent	_____	_____
Counselor	_____	_____
Other adults	_____	_____
Fellow students	_____	_____
Occupational books or pamphlets	_____	_____
College or other school you may attend	_____	_____
Friend working in a job	_____	_____
Other (Specify)_____	_____	_____
Other (Specify) _____.	_____	_____

17. Have you made any occupational choices? Yes_____ No_____

If yes, answer the following:

a. What are the names of these occupations?

First choice: _____

Second choice: _____

Thrid choice: _____

b. Will some knowledge of agriculture or of farming be helpful or necessary in any of these occupations?

First choice: Yes_____ No_____

Second choice: Yes_____ No_____

Third choice: Yes_____ No_____

c. How certain are you that you will enter one of these occupations? Check one answer for each occupation.

	Very Certain	Fairly Certain	Somewhat Uncertain	Very Uncertain
First choice:	_____	_____	_____	_____
Second choice:	_____	_____	_____	_____
Third choice:	_____	_____	_____	_____

APPENDIX B

School____________________

Report of High School Student Grades

(From beginning of grade 9 to end of 1960-61 school year)

(Please fill in either I or II below.)

	I		II				
Name of Student	Grade Point Average	or	No. of Semester Grades Earned				
			A	B	C	D	F

Note: This information will be held confidential and used for research only.

Grade point averages should be computed on the basis of A = 4, B = 3, C = 2, D = 1, and F = 0.

143 Kensington Road
East Lansing, Michigan
April 2, 1961

(First letter sent to participating superintendents of schools)

Mr. John Frechette
Superintendent of Schools
Merrill, Michigan

Dear Mr. Frechette:

As part of my doctoral program at Michigan State University, I am conducting a study to determine if certain characteristics of vocational agriculture students are associated with their continued enrollment in the vocational agriculture program. I hope that this study, which is under the direction of Dr. H. P. Sweany of the College of Education will provide information that will characterize those students who remain in the program for four years and those who transfer to other courses.

Your school, along with 39 others, has been selected to participate in this project and I sincerely hope that your school will be able to do so.

From each of the participating schools the following information will be needed:

1. Responses from a questionnaire and an attitude toward farming scale by freshman, sophomore, and junior students of vocational agriculture. It requires about 30 minutes to complete both forms.
2. Names of students who transfer out of the vocational agriculture program at the end of this school year.
3. Grades of students who transfer from and an equal number who re-enroll in vocational agriculture.

The questionnaires, accompanied by an instruction sheet, will be mailed during the last week of April. They may be administered by either the vocational agriculture instructor or the school counselor. The names of the transfer students and the grades of both re-enrollees and transfer students will be requested next fall. After the data have been tabulated, the scores of your students on the farming attitude scale and a summary of the study will be forwarded to you.

Please indicate on the postcard enclosed whether your school will participate in the study and, if so, how many freshman, sophomore, and junior vocational agriculture students you have enrolled.

Thank you very much.

Sincerely yours,

Richard H. Bittner

APPENDIX D

A Note to the Schools Participating in the Study

I am very pleased that your school is both willing and able to participate in this study which, I hope, will provide information that will enable us to improve our enrollment procedures, our guidance practices, and our instruction in the vocational agriculture program.

Although this study is not comprehensive enough to provide all the answers to the questions which we have about the student who enrolls continuously in the vocational agriculture program and the student who transfers to other courses before graduation, the purpose of the study is to fill some of the gaps in our knowledge concerning these two types of students. Specifically, the study is designed to determine if outgoing transfer students from vocational agriculture differ from those who enroll continuously in the program with respect to the following characteristics:

1. Attitude toward farming
2. Possession of characteristics similar to those of other boys who have entered farming
3. Aspirations to enter agricultural occupations
4. Academic ability and extent of anticipated education after leaving high school
5. Occupational skill and responsibility aspiration levels of chosen occupations
6. Display of initiative, resourcefulness and maturity when formulating educational and occupational plans
7. Consistency of occupational aspirations within aspiration levels and within "fields of interest"
8. Certainty of entering an occupation chosen by the student

I hope that you will be anxious to receive the results of this study which will be based upon a survey of the students in 20 percent of the vocational agriculture departments in the state. A summary of the study and the scores of your students on the farming attitude scale will be sent to you when the work has been completed.

I want to thank you for your participation. I realize that your participation involves the expenditure of both time and effort on your part, and for this, I am most grateful.

A set of instructions is enclosed with the questionnaires for you to follow in obtaining the student responses and for returning the materials to me. Next fall, I will be contacting you again to obtain the names of the students who transfer to other courses, the grades of the transfer students, and the grades of a random sample of an equal number of students who re-enroll in the vocational agriculture program.

Sincerely yours,

Richard H. Bittner

APPENDIX E

INSTRUCTIONS

Administering the Questionnaires

1. The questionnaire and the attitude scale are to be completed by all vocational agriculture students except those classified as seniors by the school who will graduate this spring.
2. The questionnaire and the attitude scale may be administered to each class separately or to all students assembled together at one time.
3. Before administering the questionnaire and the attitude scale, please read through the Supplementary Guide as you follow the questions on one of the questionnaires. The Guide has been written so that it may be read to your students. It is not suggested, however, that you read the entire Guide to them as this would involve using more time in explanation than is necessary. If, however, a question arises concerning any item on the questionnaire, the Guide should be consulted, and parts of it may be read to students if desired.
4. To introduce the students to the task of filling out the questionnaire and reacting to the attitude scale, the "Introduction" printed in the Supplementary Guide for the questionnaire and for the attitude scale may be read or paraphrased in your own words. Do NOT discuss the specific purposes of the study with the students as this may inhibit their responses.
5. It is suggested that you hand out the questionnaire and the farming attitude scale at one time, discuss both briefly after giving your short introduction, instruct students to answer the questionnaire first, and then request that they react to the attitude scale.
6. Before giving your students the go-ahead in answering the questionnaire, explain how the following questions are to be answered: 6b, 8, 11, 14, and 16. Refer to the Supplementary Guide for these instructions. Note that questions 11, 14, and 16 are to be answered in the same manner - each question merely deals with a different time of decision.
7. Students who have already completed the questionnaire often have failed to answer questions 7d and 15b. Please ask students to answer all questions that apply to them and to read the questionnaire carefully.
8. If the questionnaire does not make provision for a student to make a proper response to a question, please instruct the student to write in a short answer.
9. Please be sure that students put their names on the attitude scale answer sheets.

Returning the Materials

1. Sufficient postage has been included to return the materials by first class mail.
2. Return ONLY the completed questionnaires and the farming attitude answer sheets. Retain or dispose of the other materials as you wish.
3. Please wrap up the original mailing carton securely with the paper provided. Attach postage, address label, and the first class postage sticker.
4. Please return the materials as soon as it is convenient for you to do so.

Thank you for your cooperation!

ATTITUDE TOWARD FARMING

Alonzo M. Myster-James E. Wert

Instructions

What are your opinions of the following statements? Your answer is correct if it expresses your true opinion. This is not a test and you are not to be graded. DO NOT OMIT ANY ITEM. In each case encircle the letter or letters which represent your own ideas about each statement.

SA-Strongly Agree; A-Agree; U-Undecided; D-Disagree; SD-Strongly Disagree

1. Farming is a pleasant vocation.
2. I can't say I'm wild about farming.
3. Farm work is drudgery.
4. I would enjoy working with plants and animals.
5. A farmer has more worries than do persons engaged in most other occupations.
6. As a life's work, farming would be terrible.
7. Work on the farm is really enjoyable.
8. The disadvantages of farming outweigh its advantages.
9. Farming requires less intelligence than most other occupations.
10. The vocation of farming has its drawbacks, but I like it.
11. Farming involves too many distasteful tasks.
12. I have never wanted to be a farmer.
13. Farming is fascinating work.
14. Farming requires less education than most other vocations.
15. I like farming well enough to make it my life's work.
16. Farming is a monotonous vocation.
17. I have always wanted to be a farmer.
18. Living on a farm is just too much hard work.
19. The advantages of farming far outweigh the disadvantages.
20. Farming is uninteresting work.
21. The average farmer enjoys farming more than I would.
22. Everything considered, I could be happier farming than engaging in any other occupation.
23. Farming tends to isolate a person from the rest of the world.
24. Farming yields less satisfaction than most other occupations.
25. The farm is the best place for young people.
26. About all that can be said for farming is that it furnishes a means of existing.
27. I could be satisfied to spend my life on the farm.
28. Social well-being is impossible of attainment on the farm.
29. Farming would give me a great deal of pleasure.
30. I feel that I would be doing my children an injustice by living on a farm.
31. I dislike the farm with its many inconveniences.
32. Farming yields more satisfaction than most other vocations.
33. Farming offers insufficient opportunity for contacts with people.
34. I feel that farm families as a whole are an interesting class of people.
35. Farming has more social disadvantages than most other occupations.
36. Farming deadens a person's ambitions.
37. I like farming as a way of life.
38. On the average, the standard of living of farmers is below that of other persons in the United States.
39. The farm is a wonderful place to live.
40. Farming tends to reduce one's social standing.
41. For me, life on a farm would be extremely dull.
42. The farmer enjoys many satisfactions which the average person never realizes.
43. I think I would have less fun living on a farm than in town.
44. Farming deprives one's children of an adequate education.
45. The independence of farm life appeals to me.

APPENDIX G

ATTITUDE TOWARD FARMING

Answer Sheet

Name_____ Age_____

School_____ Class (Circle one) Fr. Soph. Jun.

SA-Strongly Agree; A-Agree; U-Undecided; D-Disagree; SD-Strongly Disagree

1.	SA	A	U	D	SD	24.	SA	A	U	D	SD
2.	SA	A	U	D	SD	25.	SA	A	U	D	SD
3.	SA	A	U	D	SD	26.	SA	A	U	D	SD
4.	SA	A	U	D	SD	27.	SA	A	U	D	SD
5.	SA	A	U	D	SD	28.	SA	A	U	D	SD
6.	SA	A	U	D	SD	29.	SA	A	U	D	SD
7.	SA	A	U	D	SD	30.	SA	A	U	D	SD
8.	SA	A	U	D	SD	31.	SA	A	U	D	SD
9.	SA	A	U	D	SD	32.	SA	A	U	D	SD
10.	SA	A	U	D	SD	33.	SA	A	U	D	SD
11.	SA	A	U	D	SD	34.	SA	A	U	D	SD
12.	SA	A	U	D	SD	35.	SA	A	U	D	SD
13.	SA	A	U	D	SD	36.	SA	A	U	D	SD
14.	SA	A	U	D	SD	37.	SA	A	U	D	SD
15.	SA	A	U	D	SD	38.	SA	A	U	D	SD
16.	SA	A	U	D	SD	39.	SA	A	U	D	SD
17.	SA	A	U	D	SD	40.	SA	A	U	D	SD
18.	SA	A	U	D	SD	41.	SA	A	U	D	SD
19.	SA	A	U	D	SD	42.	SA	A	U	D	SD
20.	SA	A	U	D	SD	43.	SA	A	U	D	SD
21.	SA	A	U	D	SD	44.	SA	A	U	D	SD
22.	SA	A	U	D	SD	45.	SA	A	U	D	SD
23.	SA	A	U	D	SD						

APPENDIX H

SUPPLEMENTARY GUIDE
to the
QUESTIONNAIRE AND ATTITUDE SCALE

The Questionnaire

Introduction

Our school has been requested to supply some information which is needed for a study of the future plans of vocational agriculture students. To supply this information, we have been asked to fill out a short questionnaire which requests some information about your high school program and about what your plans may be after you leave high school. There is also a farming attitude scale which consists of 45 short statements about farming, and we have been asked if we would indicate on an answer sheet how strongly we agree or disagree with each of these statements.

The questionnaire and the attitude scale are not tests and you are not to be graded in any manner. All of your answers will be correct if the questions are answered truthfully as they apply to you.

The anaswers you provide on the questionnaire and the attitude scale will be combined with those of 1500 other agricultural students in order to obtain information that will enable your teachers and counselors to be better able to help you with your school problems and the problem of knowing what to do after leaving high school.

The questionnaire does not ask for any personal information which is not already known by many of your friends. However, the information must be written down so it can be combined with the information provided by other students. Let's discuss the questionnaire and the attitude scale briefly, and then you may answer them.

INSTRUCTOR NOTE:

A. Hand out the questionnaire, the farming attitude scale, and the answer sheets to the farming attitude scale.

B. Use the following explanations when discussing the questions.

Discussion of Questions

Question 1 Print your first and last names.

Question 2 Print the name of your high school.

Question 3 Indicate your age on your last birthday.

Question 4 Indicate whether you are a high school freshman, sophomore, or junior.

Question 5 Indicate the number of brothers and sisters you have. Write in the number of brothers and sisters you have who are older than you are, and the number of brothers and sisters you have who are younger than you are.

Do not include yourself.

If you have brothers or sisters the same age as you are, consider that they are younger than you are.

Question 6 Indicate whether your father or guardian is living by checking Yes or No.

The word "guardian" means the person who is considered your male parent.

If your father or guardian is not living, go on to question 7. But, if your father or guardian is living, answer questions 6a and 6b.

Question 6a Give your father's or guardian's approximate age. Estimate if necessary.

Question 6b Read all of the statements and check the one which best describes your father's or guardian's employment.

The statement "He is a full-time farmer and has no other job." means that your father or guardian spends all of his time farming.

The statement "He farms and works less than 5 months off the home farm." means that your father or guardian is a part-time farmer who will work less than 5 months off the home farm this year.

The statement "He farms and works more than 5 months off the home farm." means that your father or guardian is a part-time farmer who will work more than 5 months off the home farm this year.

The statement "He is not a farmer but is a farm manager." should be checked if your father or guardian manages the operation of a farm or farms for others and is paid a wage or salary for this service. If he is a caretaker or hired as a laborer, he is not a manager.

The statement "He is a farm employee working for wages." means that he is a farm worker who is working for wages on a farm operated by another farmer.

The statement "He is retired." means that your father or guardian is no longer engaged in any occupation and is not looking for work.

The last statement "He is not a farmer." means that your father or guardian does not farm for himself and does not fit into any of the other occupational categories.

If your father or guardian is usually employed off the home farm, but is temporarily out of work, check the statement which describes his usual employment status.

Question 7 Indicate whether you live on a farm by checking Yes or No. Check No eventhough you may be living on a farm if your parents are not farming.

If you check Yes, finish answering question 7, If not, go on to question 8.

Question 7a Indicate the size of your parents' farm in acres.

Question 7b Indicate the number of acres your parents own, if any.

Question 7c Indicate the number of acres your parents rent from others or farm on shares, if any.

Question 7d Indicate the number of acres on your parents' farm that could be put into cultivated crops this spring.

Question 8 Circle every year in which you enrolled in vocational agriculture. Include this year.

(Note: Students whould only circle those years of vocational agriculture they have completed or are now completing. A regularly classified junior enrolled in sophomore agriculture should not circle "Junior". Likewise, a regularly classified sophomore enrolled in freshman agriculture should not circle "Sophomore". When classes are combined, students should circle the year of vocational agriculture in which they are enrolled.)

Question 9 Indicate in the table whether you plan to take vocational agriculture from now on by checking either Yes or No, or Not Sure. If you check No or Not Sure, write in the name of the course you may take in place of vocational agriculture. If you do not know this, check the Don't Know column.

If you are in grade 9, answer for grades 10, 11, and 12.
If you are in grade 10, answer for grades 11 and 12.
If you are in grade 11, answer for grade 12.

Question 10 Indicate by checking Yes or No whether you plan to finish 4 years of high school.

Question 11 Indicate by checking Yes or No whether you have obtained or have been given any information or advice about choosing your high school courses.

If you check Yes, finish answering question 11, If not, read the note printed on the questionnaire between questions 11 and 12.

If you have been given any information or advice about choosing high school courses eventhough you may not have followed the advice or used the information received, read through the sources of help printed in question 11. If you went to any of these sources of help on your own free will and looked or asked for help, put a check in the first column after each source of help you consulted. If you were given help from any of the sources listed that you did not specifically ask or look for, place a check in the second column.

Check only those sources of help, however, that you have contacted of those which have contacted you.

If you received information or advice from a source not listed, write in the name of this source, and check either column 1 or 2 as previously instructed.

Note: If you are planning to enroll in vocational agriculture next year, answer question 12. If you are not planning to enroll in vocational agriculture next year, answer question 13. If you are not sure what you will do next year, answer both questions 12 and 13.

Question 12 Check the reasons you have for planning to enroll in vocational agriculture next year. Do not check reasons just because they are printed on the questionnaire and "sound good". If you have reasons not listed, write them in.

Question 13 Check the reasons you have for not planning to enroll in vocational agriculture next year. Do not check reasons just because they are printed on the questionnaire and "sound good". If you have reasons not listed, write them in.

Question 14 Indicate by checking Yes or No whether you have obtained or have been given information or advice about what you should do after you leave high school.

If you check Yes, finish answering question 14. If not, go on to question 15.

If you have been given information or advice about what you should do after you leave high school, read through the sources of help printed in question 14. If you went to any of these sources of help on your own free will and looked or asked for help, put a check in the first column after each source of help you consulted. If you were given help from any of the sources listed that you did not specifically ask or look for, place a check in the second column opposite the sources of help that gave you information or advice.

Check only those sources of help, however, that you have contacted or those which have contacted you.

If you received information or advice from a source not listed in question 14, write in the name of this source, and check either column 1 or 2 as previously instructed.

Question 15 Indicate by checking Yes or No whether you have made any plans about what you may be doing after you leave high school. In order to check Yes, you don't have to be very certain about these plans. However, if you have no idea whether you will start working, go on to another school, or enter the Armed Forces, check No.

If you check Yes, finish answering question 15.

Question 15a Circle the words in question 15a which describe what your plans are. Circle only one plan, the one you are most certain of.

If you are planning to attend college or another school, circle the length of time you plan to spend in school.

If you are planning to enter the Armed Forces, write in the length of time you plan to stay in the Armed Forces. Also, indicate by checking Yes or No whether you know what you will do after discharge. If you know this, write this in on the questionnaire.

Question 15b Indicate how certain your plans are for what you will be doing after you leave high school. Circle either "Very Certain", "Fairly Certain", "Somewhat Uncertain", or "Very Uncertain".

Question 16 Indicate by checking Yes or No whether you have obtained any help or have been given any information or advice about choosing an occupation.

If you check Yes, finish answering question 16. If not, go on to question 17.

If you have been given information or advice about choosing an occupation, read through the sources of help printed in question 16. If you went to any of these sources of help on your own free will and looked or asked for help, put a check in the first column after each source of help you consulted. If you were given help you did not specifically ask or look for, place a check in the second column opposite the sources of help that gave you information or advice.

Check only those sources of information or advice, however, that you have contacted or those which have contacted you.

If you received information or advice from a source not listed, write in the name of this source, and check either column 1 or 2 as previously instructed.

Question 17 Indicate by checking Yes or No whether you have made any occupational choices. An occupational choice is an occupation you would like to enter and feel that you may do so.

If you check Yes, finish answering question 17. If not, you have finished answering the questionnaire.

Question 17a Write in the names of the occupations you would like to enter if you feel that there is a possibility that you might do so.

Question 17b Indicate by checking Yes or No whether you believe that a knowledge of farming would be helpful to you in each of these occupations.

Question 17c Indicate how certain you are that you will enter each occupation you have chosen by checking after each choice either "Very Certain", "Fairly Certain", "Somewhat Uncertain", or "Very Uncertain".

The Farming Attitude Scale

Introduction and Instructions

The second questionnaire we have been asked to fill out is a scale which measures a person's attitude toward the occupation of farming. It is not a test and you are not to be graded. Your answers are correct if they express your true opinion. It is very important you do not skip any of the items.

The scale consists of 45 short statements and you are to decide whether you strongly agree, agree, are undecided, disagree, or strongly disagree with each statement.

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After you have decided how you feel about each statement, signify your feeling on the answer sheet by drawing an "X" through the letters "SA" if you strongly agree, through the letter "A" if you agree, through the letter "U" if you are undecided, through the letter "D" if you disagree, and through the letters "SD" if you strongly disagree. Please draw an "X" through each of your answers rather than placing circles around them as instructed on the farming attitude scale.

Do not forget to print your name, school and age on the farming attitude answer sheet.

You may now begin to answer the questionnaire. When this is completed, print your name, school and age on the attitude scale answer sheet and put down your responses to each of the statements on the farming attitude scale.

If you have any questions as you go along, please ask them.

APPENDIX I

School________________________

Report of Farming Attitude Scores

Student	Raw Scores			Subject Taken This Semester		
	Voc.	Life	Total	Please Check if Vo. Agr.	or,	Specify Substitution for Vo. Agr.

APPENDIX J

WERT-MYSTER FARMING ATTITUDE SCORES OF MICHIGAN VOCATIONAL AGRICULTURE STUDENTS

Report to Participating Schools

This report summarizes briefly the results obtained by administering the Wert-Myster Attitude Toward Farming Scales to 1370 students enrolled in grades nine, ten, and eleven in 39 vocational agriculture departments located within two types of farming areas in Michigan: (1) the dairy and cash crop farming area; and, (2) the general and dairy farming area. A total of 1398 students participated in the project. However, 28 answer sheets were discarded as incomplete or incorrectly filled out.

The Farming Attitude Scales were administered during the April and early May of 1961 by personnel in each of the participating schools. Classification of participating students by grade levels is shown in Table 1.

Table 1. Classification of Students by Grade Levels

Grade Level	Number of Students
Grade 9	516
Grade 10	431
Grade 11	423
Total	1370

Description of the Farming Attitude Scales

The Farming Attitude Scales were constructed and validated by Myster and Wert in 1943 at Iowa State University. The scales measure two aspects of farming: (1) attitude toward farming as a vocation; and, (2) attitude toward farming as a way of life. The scores for these two types of attitudes are listed on the report sheet of your students' scores under the heading "Voc." and "Life."

The validity of the instrument was determined by Myster and Wert by demonstrating its ability to differentiate between six groups consisting of 2970 persons with known different attitudes. Reliability coefficients obtained by utilizing the split-half method using these six groups ranged from .833 to .942.

The attitude scales consist of 45 statements which represent attitudes both favorable and unfavorable toward farming. Twenty-two statements refer to farming as an occupation and comprise the Vocational Scale, and the remaining

23 statements refer to farming as an occupation and comprise the Way of Life Scale. After students read each of these statements, they are asked to indicate whether they strongly agree, agree, are undecided, disagree, or strongly disagree with each one. Each student response is evaluated by scoring it as highly favorable, favorable, neutral, unfavorable, or highly unfavorable to farming by assigning numerical values of 5, 4, 3, 2, and 1 respectively. Scores for the Vocational Scale and the Way of Life Scale are obtained by adding together the values assigned to each of the statements within each scale. The total score consists of the Vocational score plus the Way of Life score.

Interpretation of Scores

To interpret student scores utilize Table 2. This table lists five classifications of farming attitude and gives the range of scores falling within each classification. To interpret a student's score, locate in which part of the appropriate range of scores the student's score falls and read the farming attitude classification assigned to that score in the left-hand column of the table. For example, Richard Sadler has a Vocational score of 75. This places him within the neutral classification with respect to his attitude toward farming as a vocation. Richard's Way of Life score is 83. This indicates that he holds a favorable attitude toward farming as a way of life. His total score, 158, places him at the bottom of the favorable group when both of his scores are combined.

Table 2. Farming Attitude Classifications Based Upon Raw Scores

Farming Attitude Classification	Range of Scores		
	Vocational	Way of Life	Total Score
Highly Favorable	100 - 110	104 - 115	203 - 225
Favorable	78 - 99	81 - 103	158 - 202
Neutral	55 - 77	58 - 80	113 - 157
Unfavorable	33 - 54	35 - 57	68 - 112
Highly Unfavorable	22 - 32	23 - 34	45 - 67

Several precautions should be observed when interpreting student scores. They are as follows:

1. Units of measurement are not equal throughout the range of scores. A student with a score of 40 does not fall necessarily halfway between

scores of 60 and 20. Neither does a score of 40 represent twice as strong an attitude as a score of 20. What can be inferred is that the score of 40 is 20 units of measurement above the score of 20 and represents a more favorable attitude by 20 units of measurement.

2. Students who score in the neutral range are liable to shift easily in either direction. Do not attach too much significance to scores in the neutral range.

3. Because the number of statements which refer to farming as a vocation does not equal the number of statements which refer to farming as a way of life, Vocational scores and Way of Life scores should not be compared directly with each other.

Analysis of Scores

From the analysis that has been completed, it appears that there are no significant differences in attitudes toward farming between successive grade levels. The largest differences that do occur are between grade nine and ten. Apparently, attitudes may change slightly early during grade 10 and then remain fairly stable throughout the remainder of grade ten and grade eleven.

A five-way classification of students according to favorableness of attitude is shown in Table 3. Referring to total scores, the Wert-Myster

Table 3. Percentage Distribution of 1370 Vocational Agriculture Students in Grades Nine, Ten, and Eleven according to Farming Attitude Classification; May, 1961

Farming Attitude Classification	Percentage Districtuion		
	Vocational	Way of Life	Total Score
Highly Favorable	4.3	10.1	5.8
Favorable	54.2	64.0	62.3
Neutral	38.0	24.2	30.0
Unfavorable	3.3	1.4	1.8
Highly Unfavorable	.2	.3	.1

Scales place less than two per cent of the students below the neutral range, a few less than a third in the neutral range, and approximately two-thirds above the neutral range. Obviously, most vocational agriculture stndents are favorably impressed with farming as a vocation and as a way of life. It can be seen, however, that attitudes are more favorable concerning farming as a way of life than they are with farming as a vocation.

APPENDIX K

(Sample Letter)

143 Kensington Road
East Lansing, Michigan
March 26, 1962

Mr. Searl Briggs, Superintendent
Dansville Agricultural School
Dansville, Michigan

Dear Mr. Briggs:

The study in which you are participating dealing with student drop-out from vocational agriculture is still underway and final analyses are to be made soon. I hope that the report sent to you last fall reporting the farming attitude scores of your students was helpful to you. Early this summer, your school will receive a summary of the entire study.

There is one more item of information that I need from a selected number of your present and former Vo. Ag. students. I need to have the grade point averages for these students as of the end of the June, 1961 school year.

A form is enclosed which lists the names of these students. On this form, there is a column for the listing of grade point averages if you have these already computed on the basis of A = 4, B = 3, C = 2, D = 1, and F = 0. If you do not have these computed, would you please determine the number of A's, B's, C's, D's, and F's each student has earned in high school until June, 1961 and enter these figures in the appropriate columns. With this information, I can compute the grade averages.

Most likely, your school secretary can obtain this information for you from student records.

Thanks again for your cooperation in supplying information. It is truly appreciated for I know that you are extremely busy.

Sincerely yours,

/s/ Richard Bittner

Richard H. Bittner

APPENDIX L

MATURITY RATINGS ASSIGNED TO REASONS EXPRESSED BY STUDENTS FOR RE-ENROLLING IN OR TRANSFERRING FROM VOCATIONAL AGRICULTURE

Maturity Score	Reasons Expressed for Re-enrolling in Vocational Agriculture
2.00	Need knowledge of farming in my future job.
.34	I like the agriculture instructor better than other teachers.
1.34	I'm interested in agriculture.
1.67	There are good jobs for people trained in agriculture.
.00	My friends are taking vocational agriculture.
.83	I've been advised to take agriculture.
1.08	Agriculture meets requirements for getting into college.
.08	It's easy to get good grades in agriculture.
1.91	I want to make the most out of my farm background for getting a job.
1.08	I like practical subjects.
.16	Activities like field trips are lots of fun.
1.00	I like farm shop work.
	Reasons Expressed for Transferring From Vocational Agriculture
1.83	I don't need knowledge of farming in my future job.
.34	I like other teachers better than the agriculture instructor.
1.83	Continuing in agriculture would limit my choice of future jobs.
1.58	I don't like farm shop work.
1.67	I'm not interested in agriculture.
.17	My friends are transferring to other courses.
.02	It's hard to get good grades in agriculture.
1.67	Need other courses for college entrance.
1.00	I've been advised to take other courses.
1.91	Want to explore other subjects to help me choose an occupation.
1.17	I like subjects more academic than agriculture.
.17	Activities like field trips are a waste of school time.

APPENDIX M

Following is a list of the 39 Vocational Agriculture Departments which participated in the study.

Alma	Coronna	Hemlock	Perry
Ashley	Dansville	Lake Odessa	Saline
Bath	Dexter	Leslie	Saranac
Belding	Durand	Lowell	Springport
Bellevue	Eaton Rapids	Manchester	Stockbridge
Breckenridge	Elsie	Morrice	St. Johns
Cement City	Fowlerville	New Lathrop	Sunfield
Chelsea	Fulton	Jackson (Northeast)	Vermontville
Chesaning	Grand Ledge	Okemos	Webberville
Concord	Hartland	Owosso	

APPENDIX N

143 Kensington Road
East Lansing, Michigan
September 25, 1961

Mr. Wonderboy Bailey
Vocational Agriculture Instructor
East Overshoe, Michigan

Dear Mr. Bailey:

First of all, I want to thank you very much for taking the time and effort to have your vocational agriculture students fill out the materials I sent last spring. And, thanks very much for getting everything back to me in good shape.

As promised, I am sending you the Farming Attitude Scores of your students. The white copy is yours to keep. The yellow copy I would like to have returned. A ditto is enclosed which describes how to interpret the scores.

To gather enough data for the study of students who transfer from the re-enroll in vocational agriculture, I now need to know which students re-enrolled in vocational agriculture this fall. I would appreciate it very much if you would do the following on the yellow copy:

1. Correct the spelling of student names. (Some of them were very difficult to decipher.)

2. Check in the first column each student who has re-enrolled in vocational agriculture this fall.

3. Write in the second column the name of the course which may be regarded as that subject taken in place of vocational agriculture by each student who has transferred out of vocational agriculture. If a student left school, please indicate this.

Could you return the yellow sheet this week? I would really appreciate it if you could.

Thank you very much.

Sincerely yours,

/s/ Richard H. Bittner

Richard H. Bittner