CHARACTERISTICS AND TRAITS OF AGRICULTURAL EDUCATION STUDENTS WHO DO NOT TEACH

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CHARACTERISTICS AND TRAITS OF AGRICULTURAL EDUCATION STUDENTS WHO DO NOT TEACH

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C. N. D.

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CHAPTER I

THE PROBLEM AND DEFINITIONS OF TERMS USED

For several years, educators in vocational agriculture in the state of Michigan have been concerned with the number of students who have not entered the teaching profession after having enrolled in agricultural education at Michigan State University. While some experimental data concerning the attributes of a good teacher of vocational agriculture is available, very little scientific research has been done with respect to the traits and characteristics which might preclude a student from becoming a teacher of vocational agriculture.

I. THE PROBLEM

Statement of the problem. It was the purpose of this study (1) to determine what the prospective teachers of vocational agriculture, who did not enter the teaching profession, did after dropping from the curriculum; (2) to determine what per cent of prospective teachers of vocational agriculture did not enter the teaching profession; (3) to determine the characteristics and traits of prospective teachers of vocational agriculture who did not enter the teaching profession; (4) to determine if the individual's records maintained in the Agricultural Education Office at Michigan State University are adequate to predict if he will not teach.

In characterizing the prospective teacher of vocational agriculture who does not teach, questions which arise are: (1) At what point in the college career did he drop out?, (2) Can the home agricultural situation in which an individual lives, aid in determining if he will not teach?, (3) Does his grade point average when leaving agricultural education have any bearing on whether he transfers to another curriculum or drops out of school entirely?, (4) Are some areas of farm experience more valuable than others in predicting if he will not teach?, (5) Do the student profile factors in the areas of scholarship, professional characteristics, and qualifications in farming, as used in the Profile of Prospective Teachers of Vocational Agriculture, aid in identifying him?

Importance of the study. One of the primary purposes of the Department of Vocational Education is to train teachers of vocational agriculture. If students who enter this curriculum fail to teach, the time and effort spent by the department on these students is fruitless as far as the fulfillment of this objective is concerned. If these students could be detected prior to their enrollment in agricultural education, it would not only benefit the students by allowing them to take other courses which might prove more beneficial to them, but would also enhance the contributions of the department to the agricultural education field. Perhaps Sledge, an agricultural teacher educator at the University of Wisconsin, realized some of these implications when he stated that a study should be conducted on the profile data of

teachers who drop-out from or never enter teaching vocational agriculture.[1]

Scope. This study was based on the prospective agricultural education teachers enrolled at Michigan State University in the classes of 1953, 1954, and 1955. As some records for freshmen and sophomore students were not available prior to 1951, it was necessary to substitute for the freshmen and sophomores in the class of 1953 and the freshmen in the class of 1954. The freshmen and sophomore students in the class of 1956 were substituted for the class of 1953, and the freshmen for the class of 1957 were substituted for the class of 1954.

For these classes, each student's file located in the Agricultural Education Office was utilized.

Method of Research. The names of the agricultural education students used in this study were obtained from the College of Agriculture's "Term Roster".[2] This was also the source used for detecting those students who dropped out prior to graduation.

After obtaining the names of the students, their records, located in the Agricultural Educational Office, were surveyed and analysed with respect to factors which might indicate whether or not a student would teach. The factors taken from the group who did not enter the

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[1]George W. Sledge, "Relationship Between Some Pre-teaching Characteristics and Subsequent Performance of Teachers of Vocational Agriculture" unpublished Doctor's thesis, Michigan State University, East Lansing, 1954, p. 258.

[2]"College of Agriculture's Term Roster" East Lansing: College of Agriculture, Michigan State University, 1949-55, (Mimeographed.)

teaching profession were compared with the factors of the group who did enter the teaching profession.

The records were also surveyed to obtain the number of students who entered the teaching profession; the number of students who graduated but did not teach, and what occupation they entered; and the number of students who dropped out and their activities after dropping out.

II. DEFINITIONS OF TERMS USED

Prospective teachers of vocational agriculture. A prospective teacher of vocational agriculture is any person who has enrolled in the curriculum of agricultural education.

Home agricultural situations. The home situations in which the student lived prior to entering Michigan State University were roughly classified into two groups. They were, (1) non-commercial, and (2) commercial farms.

Grade point average. The grade point average is the average number of grade points earned per credit and is computed by allowing four points for an A, three points for a B, two points for a C, one point for a D, zero points for an F, finding the sum, and dividing by the number of credits earned.

Areas of farm experience. Areas of farm experience were classified in the following groups: (1) dairy, (2) swine, (3) poultry, (4) horticulture, (5) crops, (6) soils, (7) farm mechanics, and (8) farm management.

Profile of prospective teachers of vocational agriculture. This was a composite representation of agricultural education student's scores and achievements of measurable characteristics, accumulated during the training period at Michigan State University. These scores and achievements are grouped into three areas as follows: (1) scholarship, (2) professional characteristics, and (3) qualifications in farming.

Scholarship. The measures were determined by the decile rank of a student in mechanical aptitude, reading comprehension, the ACE Intelligence test, and by his honor-point ratio in the freshman, sophomore, and junior classes, the five basics, and basic English.

Professional characteristics. The characteristics are shown by letter grades received by a student in Psychology 201, Education 202, Education 207, and Education 305, his decile ratings on "Interests of a Teacher"[3] and "Teaching Satisfaction"[4]; and the instructor's composite rating in terms of superior, excellent, acceptable, doubtful, and unacceptable.

Qualifications in farming. This area included a student's amount of farm experience in years, a letter grade assigned to the scope and variety of farm experience, the number of years as a member in the Future Farmers of America, as a student of high school agriculture, as a member of 4H Club, his honor-point ratio in first and second year

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[3]E. K. Strong, Jr., "Vocational Interest Blank for Men (Revised) Form M" (Stanford: Stanford University Press, 1938).

[4]K. G. Nelson, "The Interests of Teachers of Vocational Agriculture as Related to Vocational Satisfaction" unpublished Doctor's thesis, The University of Minnesota, Minneapolis, 1952, p. 263.

agricultural courses, and a decile rating on "Interests of a Farmer."[5]

Mechanical Index Rating. This was a measure of mechanical interest and ability established through the cooperation of the Department of Agricultural Engineering and the Department of Agricultural Education. Scores are derived from a checklist of traits observed by an instructor in Agricultural Engineering and are recorded by deciles.[6]

Reading Comprehension Test. This was one examination in a battery of examinations given to entering freshmen at Michigan State University. It is a measure of reading comprehension from "The Michigan State College [University] Reading Test."[7]

ACE intelligence test. This was an intelligence test of the American Council on Education Psychological Examination. All students entering Michigan State University for the first time as undergraduates are required to take this examination. It is:

> . . . a group test of scholastic ability, standardized on entering college freshman [sic]. ACE scores are given in terms of deciles. Norms are based upon Michigan State College [University] freshman [sic].[8]

Honor-point ratio. It is:

> . . . a ratio between honor points and credits earned. Honor-point ratios for the first, second, and third years in college are recorded on the student profile. Honor-point ratios are computed on the basis of a mark in courses of an "A" equal to

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[5]Strong, loc. cit.

[6]Sledge, op. cit., p. 21.

[7]Ibid., p. 20.

[8]Ibid.

> four points, "B" equal to 3 points, "C" equal to 2 points, "D" equal to 1 point, and "F" equal to zero points. Approximately 45 credits of course work are included in the honor-point ratio for the first year; 90 for the second year; and 145 for the third year.[9]

Five basics. All undergraduate students were required to take five of the seven courses offered in Basic College. The seven Basic College courses were Written and Spoken English, Physical Science, Biological Science, Social Science, Effective Living, Literature and Fine Arts, and History of Civilization. The same method, as used in the honor-point ratio, was used to provide the score for the five basics.

Basic English. This was one of the five required Basic College courses. The scores listed for this factor represent an average honor-point ratio of courses in basic English.

Psychology 201. This is an introductory course in Psychology. It is:

> An introduction to the scientific study and interpretation of human behavior. Consideration of such topics as learning, motivation, emotion, intelligence, perception, personality, and inter-personal relationships. Basic psychological principles with the practical application of these principles to everyday living.[10]

Education 202. This course is known as "Principles of Education" and has a prerequisite of sophomore standing. It is:

> An introductory course for all who wish to prepare for high school teaching. It is a resume of the educational philosophy of the public school system with specific emphasis

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[9] Ibid., p. 21.

[10] Michigan State College Catalog 1946-1948 (East Lansing: Michigan State College, 1948), p. 421.

> on that of Michigan. Attention is given to the work of the classroom teacher and to available means for evaluating teaching in the light of the philosophy developed. In connection with the course, opportunity is given the student to counsel with the instructor regarding his fitness and qualifications for teaching. The course serves also as a basis for more specialized courses which follow.[11]

Education 207. The prerequisites for this course are Education 202, and Psychology 201. The course name is "Educational Psychology." It is:

> A study of those principles of psychology related to the problems of education. Habits, memory, motives, individual differences, and the laws of learning will be given special attention.[12]

Education 305. The prerequisites for this course are Education 207 and junior standing, and the name was "Introduction to Agricultural Education." It is:

> . . . designed to develop an understanding of the objectives and basic elements of a complete program of vocational education in agriculture and to prepare students for student-teaching experiences and study of methods of teaching vocational agriculture.[13]

Interests of a teacher, interests of a farmer, and teaching satisfaction. These scores were derived from the "Vocational Interest Blank for Men (Revised) Form M."[14] Appropriate methods of scoring were used to derive the score of interests of a teacher of vocational

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[11] Ibid., p. 255

[12] Ibid.

[13] Ibid., p. 256

[14] Strong, loc. cit.

agriculture, interests of a farmer, and teaching satisfaction. Scores on teaching satisfaction were based upon a scoring device developed by Nelson.[15]

Average mark in "100-200" agricultural courses. It is:

> The average mark in series 100 and 200 technical agricultural courses is computed as the honor-point ratio. Courses are represented from such areas as: agricultural engineering, agricultural economics, soils, animal husbandry, poultry, et cetera.[16]

Instructors' rating (composite). This was a student profile factor which had:

> . . . five degrees of quality: superior, excellent, acceptable, doubtful, and unacceptable. The rating is an averaged or composite score of the trainee in terms of judgment of the over-all potential qualities of the man preceding student teaching by teacher educators familiar with the trainee.[17]

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[15]Nelson, loc. cit.

[16]Sledge, op. cit., p. 25.

[17]Ibid., p. 24.

CHAPTER II

PRESENTATION OF DATA

For the purposes of this study the agricultural education students in the classes of 1952, 1953, and 1954, at Michigan State University were divided into four groups. They were: (1) graduates of the agricultural education curriculum who taught vocational agriculture, (2) graduates of the agricultural education curriculum who did not teach vocational agriculture, (3) students who transferred to other curricula, and (4) students who were enrolled in the agricultural education curriculum and dropped out of Michigan State University entirely. For simplicity, the four groups were called teachers, non-teachers, transfers, and drop-outs, respectively, for the study.

Students that entered military service after graduating from the agricultural education curriculum were not included in either the teacher or non-teacher groups.

Each of these four groups were compared, as closely as the completeness of their records would allow, with respect to (1) scholastic ability and achievement, (2) professional achievement and interest, (3) qualifications in farming, (4) age when entering college, (5) size of high school from which they graduated, and (6) prior college training, if any. Size and type of farm and home agricultural situation in the qualifications in farming area, age when entering college, size of high school from which they graduated, and prior college training, if any,

were not part of the "Profile of Prospective Teachers of Vocational Agriculture".

As certain records for freshmen of 1949-1950 and 1950-1951 were not available, the records for freshmen of 1952-1953 and 1953-1954 were substituted. Also, certain records for sophomores of 1950-1951 were not available, therefore, records for sophomores of 1953-1954 were substituted.

I. CLASSIFICATION OF STUDENTS

The drop-outs were tabulated as dropping out of school as freshmen, sophomores, juniors, or seniors. A student was considered a freshman when he had less than 45 term hour credits, a sophomore when he had 45 to 90 term hour credits, a junior when he had 90 to 145 term hour credits, and a senior when he had 145 or more term hour credits.

Agricultural education students who did not graduate from the agricultural education curriculum were classified as drop-outs or transfer-outs, while those who entered the agricultural education curriculum after having been enrolled in some other curriculum or college were designated as transfer-ins.

There were 82 students who transferred into the agricultural education curriculum. Of these 82 students, 40 transferred-in from other institutions, the majority of whom entered as third term sophomores or first term juniors. Only 5 of these 40 students did not

graduate from the agricultural education curriculum. Of these 5 students, 4 transferred to other curricula, and 1 dropped-out of school. Of the 35 students who transferred-in from other institutions and graduated, 26 taught vocational agriculture, 6 entered other occupations, and 3 were in military service at the time of the study.

In addition to the 40 students who transferred-in from other institutions, 42 transferred-in from other curricula within the university, making a total of 82 students in the transfer-in group. As there were 42 students transferring-in from other curricula and 41 students transferring-out to other curricula, all within the university, these two groups nearly balanced in numbers, as shown in Table I.

Of the 42 transferring-in from other curricula within the university, 20 students were in the classes used to supplement the freshmen and sophomore classes of the class of 1952, and the freshmen of the class of 1953. Of the remaining 22, 32 per cent graduated and entered the service, 14 per cent graduated and taught vocational agriculture, and 54 per cent dropped-out of school or transferred to other curricula.

There were 35 students in the drop-out group. Of this group, 30 students dropped as either freshmen or sophomores with about equal drops occurring in each class. It should be noted, however, that the sophomore class group was smaller than the freshmen class group, thus percentage wise, the drop-outs were higher in the sophomore year than in the freshmen year. This, in part, is due to the fact that sophomore students are eliminated by the university if their grade average is below a C. As there were 35 drop-out students and 40 students who

transferred-in from other institutions, the one group about cancels the other out.

TABLE I

MOVEMENT OF STUDENTS DURING THEIR FOUR YEARS IN THE AGRICULTURAL EDUCATION CURRICULUM IN THE CLASSES OF 1952, 1953, AND 1954

Students in Ag. Ed. Curr.	Classes Fresh.	Soph.	Juniors	Seniors	Total
Beginning enrollment	87	65	70	93	315
Trans-in	18	25	39	0	82
Dropped	14	16	2	3	35
Trans-out	15	12	14	0	41
Ending enrollment	76	62	93	90	321

The sum of the beginning enrollment of the four classes is 315, while the sum of the ending enrollment for the four classes is 321, as shown in Table I. By comparing the two figures, it can be concluded that, on the average, about the same number of students will graduate from the agricultural education curriculum as enter the curriculum as first term freshmen. It was estimated that less than one-fourth of those freshmen would graduate from that curriculum.

Of the 41 students who transferred-out, 9 transferred to other colleges within the university, and the remaining 32 transferred to other curricula within the College of Agriculture. Seven of these 32 students, the largest group, transferred to the agricultural economics curriculum. The remaining 25 students were quite equally distributed

among the other curricula in the College of Agriculture.

II. SCHOLARSHIP

The area of scholarship was divided into two general categories, ability and achievement. Ability refers to the capacity of a student to produce, and achievement refers to the accomplishment of the student in his school work.

Ability

The ability of a student was determined by the decile rank received on the ACE intelligence test, reading comprehension test, and the mechanical index rating. All students when entering Michigan State University are required to take the ACE intelligence test and reading comprehension test. As shown in Table II, the decile rank received for these two tests by the students in each of the four groups, transfers, drop-outs, teachers, and non-teachers, were compared to the decile ranks of other university students.

The mechanical index rating is made on agricultural education students in the university when they enroll for the beginning agricultural engineering courses. The decile ranks, computed from the mechanical index rating, for the students in each of the four groups were compared. The Chi Square method was used to determine if the difference between the groups was significant.

ACE intelligence test. The ACE intelligence test showed that all four groups of students were lower in ability than other students in the university. The difference was significant at the .01 level.

In the drop-out group 69 per cent of the students had scores between the first and third deciles and the remaining 31 per cent had scores between the fourth and seventh deciles. There were no scores between the eighth and tenth deciles for this group. The other three groups, transfers, teachers, and non-teachers were very similar. In the transfer group 31 per cent of the students were between the first and third deciles, while the teacher and non-teacher groups had 34 and 23 per cent of the students, respectively, in this range. In the non-teacher group 77 per cent of the students were between the fourth and seventh deciles while 62 per cent and 55 per cent of the students in the transfer and teacher groups, respectively, were between these deciles. Between the eighth and tenth deciles the transfer, teacher, and non-teacher groups had 8, 11, and 0 per cent of the students, respectively. By comparing the drop-out group with the other three groups, the statistics showed that group to be inferior to the others. The difference was significant at the .01 level.

Reading comprehension test. In the reading comprehension test, the drop-out, teacher, and transfer groups were significantly lower than other university students. The difference was significant at the .05 level. There was no significant difference between the non-teacher group and other university students.

The drop-out group, as might be expected, had 63 per cent of the students between the first and third deciles, 34 per cent between the fourth and seventh deciles, and only 3 per cent in the eighth decile or above. The teacher group which was next to the lowest group had 37,

TABLE II

A COMPARISON OF THE DECILE RANKS ON THE ACE INTELLIGENCE AND READING COMPREHENSION TESTS, AND MECHANICAL INDEX RATING OF AGRICULTURAL EDUCATION STUDENTS IN THE CLASSES OF 1952, 1953, AND 1954 BY GROUPS

Measures	Groups	Decile Ranks 1-3	4-7	8-10	Chi Sq.
ACE					
	Transfer	12	24	3	10.998**
	Drop-out	24	11	0	30.33 **
	Teacher	18	29	6	9.31 **
	Non-teacher	4	13	0	10.99 **
Reading Comp.					
	Transfer	11	22	5	6.644*
	Drop-out	22	12	1	21.47 **
	Teacher	19	28	5	10.33 **
	Non-teacher	7	7	3	1.578
Mech. Index					
	Teacher	11	16	20	
	Non-teacher	0	8	8	
					3.790

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

54, and 10 per cent of the students between the first and third, fourth and seventh, and eighth and tenth deciles, respectively. It is interesting to note that for this group the percentages are almost identical with those in the ACE intelligence test. The transfer group was slightly superior to the teaching group having 29, 58, and 13 per cent of the students in the three groupings of deciles, respectively. The non-teacher group was the highest group and as previously mentioned there was no significant difference between it and other university students for the reading comprehension test. Of the non-teacher group, 41 per cent were between the first and third decile, 41 per cent between the fourth and seventh decile, and 18 per cent between the eighth and tenth decile.

Mechanical index rating. Mechanical index rating is not usually made until late in the sophomore year or in the junior year, therefore, the number of students on whom it was given in the transfer and drop-out groups was so small that these two groups had to be eliminated for this criterion. A comparison of the teacher and non-teacher groups are shown in Table II. There was no significant difference between the two groups.

Achievement

The area of achievement includes the honor-point ratio for the forst, second, and third years, the five basics, and basic English for the four groups. To determine if the difference was significant, the Chi Square method was used. In order to compare the four groups, the average was computed for each of the groups.

Honor-point ratio first year. From Table III, it can be seen that the transfer and non-teacher groups are nearly equal. The drop-out group is very much lower and the teacher group is slightly lower than the transfer and non-teacher groups. As the drop-out group was so low, it contributed the greatest to the significant difference at the .05 level.

Honor-point ratio second year. The honor-point ratio for the second year is about the same as that for the first year. The drop-out group was still very low. The teacher and non-teacher groups' point average increased .4, but the non-teacher group was still the highest. The difference was significant at the .05 level, with the drop-out group contributing the most and the non-teacher group contributing to a lesser degree.

Honor-point ratio third year. The honor-point ratio had gradually increased for all groups, but the groups were separated more. The number of students in the drop-out group had become noticeably smaller due in part to failures, and the difference between this group and the other groups had widened. It is also noticeable that the difference between the non-teacher group and the other groups had grown larger. The transfer and teacher groups remained quite similar. Again the drop-out group and the non-teacher group contributed the most to the Chi Square which is significant at the .05 level.

Honor-point ratio for five basics. The honor-point ratio for the five basics substantiate the trends established by the honor-point ratio for the first, second, and third years. The drop-outs were

TABLE III

A COMPARISON OF THE HONOR-POINT RATIOS FOR THE FIRST, SECOND AND THIRD YEARS, THE FIVE BASICS, AND BASIC ENGLISH OF AGRICULTURAL EDUCATION STUDENTS IN THE CLASSES OF 1952, 1953, AND 1954 BY CLASSIFIED GROUPS

Honor-point ratio	Groups	Ave. Honor-point ratio 2.1& below	2.2-2.5	2.6 & above	Ave.	Chi Sq.
1st yr.	Transfer	12	13	12	2.2	
	Drop-out	20	5	0	1.3	
	Teacher	21	11	11	2.0	
	Non-teacher	4	6	3	2.2	
						12.749*
2nd yr.						
	Transfer	13	11	12	2.2	
	Drop-out	13	3	1	1.4	
	Teacher	13	15	15	2.4	
	Non-teacher	0	9	4	2.6	
						14.730*
3rd yr.						
	Transfer	9	8	9	2.3	
	Drop-out	4	0	1	1.5	
	Teacher	12	23	20	2.4	
	Non-teacher	0	5	10	3.0	
						13.253*
5 Basics						
	Transfer	15	8	13	2.2	
	Drop-out	18	2	0	1.2	
	Teacher	16	9	13	2.2	
	Non-teacher	4	5	8	2.5	
						19.075*
Basic Eng.						
	Transfer	8	15	13	2.3	
	Drop-out	16	8	1	1.4	
	Teacher	3	26	8	2.1	
	Non-teacher	0	10	2	2.3	
						36.109**

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

extremely low and the non-teacher group was the highest. Again these two groups contributed the greatest amount to the significant difference at the .05 level.

Honor-point ratio for basic English. The honor-point ratio for basic English is based on three grades for each student. The significant difference, however, was at the .01 level and as the drop-out group was extremely low, that group contributed the most to the difference. The other three groups were quite close together with the transfer and non-teacher groups slightly higher than the teacher group. The honor-point ratio for basic English easily identified the drop-out students as did the other honor-point ratios.

III. PROFESSIONAL CHARACTERISTICS

Professional characteristics were divided into the three subdivisions of (1) achievement, (2) interests, and (3) instructor's composite rating.

Achievement

The achievement area of professional characteristics included Psychology 201, Education 202, Education 207, and Education 305. The Chi Square method was employed to determine if there was a significant difference between the four groups for the four courses.

Psychology 201. There was no significant difference between the four groups in Psychology 201. If a higher trend could be indicated, it would be in favor of the non-teacher group as 67 per cent of the students in this group received and A or B grade. The next closest

group was the teacher group with 28 per cent falling in this same grouping.

Education 202. The difference between the four groups in Education 202 was not significant. As the Chi Square figure in Table IV indicates, the difference is less significant than for Psychology 201. No conclusions could be drawn from these data.

Education 207. In Education 207 there was again no significant difference between the four groups, but it was noted that the number of students in the transfer and drop-out groups was considerably less. This indicated that a large portion of students either drop out or transfer prior to taking this course. As there were so few students in the transfer and drop-out groups, no attempt was made to compare them with the other groups. It was noted that the teacher and non-teacher groups were very similar.

Education 305. In Education 305 only two groups, the teacher and non-teacher groups, were compared as the number of students in the transfer and drop-out groups were so small that the results would have been questionable. Results of these two groups in this area are shown in Table IV. The teacher and non-teacher groups were very similar and there was no significant difference. It should be pointed out that Education 305 is a junior course and nearly all of the drop-outs and transfers occurred prior to this time.

Interests

The interests of the students in the four groups were determined by Strong's Interest Inventory. Nelson developed two scoring keys to

TABLE IV

A COMPARISON OF GRADES RECEIVED IN PSYCHOLOGY 201, EDUCATION 202, 207, AND 305 BY AGRICULTURAL EDUCATION STUDENTS IN THE CLASSES OF 1952, 1953, AND 1954 BY CLASSIFIED GROUPS

Courses	Groups	Letter Grades A	B	C	D	F	Chi Sq.
Psy. 201							
	Transfer	1	4	14	1	0	
	Drop-out	0	1	6	5	0	
	Teacher	4	13	25	4	0	
	Non-teacher	3	7	5	0	0	
							14.315
Educ. 202							
	Transfer	1	5	9	0	0	
	Drop-out	2	2	7	2	0	
	Teacher	6	26	19	3	0	
	Non-teacher	1	10	4	0	0	
							9.130
Educ. 207							
	Transfer	0	3	2	2	0	
	Drop-out	0	0	6	0	1	
	Teacher	7	20	23	1	0	
	Non-teacher	2	8	5	0	0	
							9.183
Educ. 305							
	Teacher	16	28	11	0	0	
	Non-teacher	6	7	4	0	0	
							.450

Strong's Interest Inventory which were used to determine the teaching satisfaction rating and the vocational agricultural teacher interest rating for each student. Strong's Interest Inventory is usually administered in the freshman or sophomore year, thus a high percentage of drop-out and transfer students took the test. Results for this tabulation are shown in Table V.

The Chi Square method was employed to determine if there was a significant difference between the groups. Table V shows the results of the four groups in this area.

Teaching satisfaction. There was no significant difference between the four groups with respect to the teacher satisfaction rating. The drop-out, teacher, and non-teacher groups were quite similar but the transfer group was lower in the rating scale than the other groups. This, perhaps would indicate a trend for the transfer group.

Vocational agricultural teacher interest. In the vocational agricultural teacher interest inventory the transfer, drop-out, teacher, and non-teacher groups were all very similar. There was no significant difference and no trend was indicated.

Instructor's Composite Rating

The instructor's rating is not given until late in the junior year, thus most of the students in the drop-out and transfer groups did not receive this rating. As a result, only the teacher and non-teacher groups could be compared by the instructor's composite rating. The results of this tabulation are shown in Table VI.

Although there was no significant difference between the teacher

TABLE V

A COMPARISON OF THE RATINGS RECEIVED ON THE TEACHERS SATISFACTION AND VOCATIONAL AGRICULTURAL TEACHERS INTEREST PORTIONS OF STRONG'S INTEREST INVENTORY, BY AGRICULTURAL EDUCATION STUDENTS IN THE CLASSES OF 1952, 1953, AND 1954 BY CLASSIFIED GROUPS

Groups	Interest Ratings 4.8&below	4.9-6.0	6.1&above	Chi Sq.
Teachers Satisfaction				
Transfer	8	6	1	
Drop-out	3	6	2	
Teacher	15	24	12	
Non-teacher	3	10	4	
				4.414
Vo-Ag. Teachers Int.				
Transfer	6	7	2	
Drop-out	4	5	2	
Teacher	12	27	12	
Non-teacher	4	11	2	
				2.185

and non-teacher groups, the non-teacher group had a slightly higher rating.

TABLE VI

THE INSTRUCTOR'S COMPOSITE RATING FOR AGRICULTURAL EDUCATION STUDENTS IN THE CLASSES OF 1952, 1953, AND 1954 BY CLASSIFIED GROUPS

Groups	Super-ior	Excel-lent	Accep-table	Doubt-ful	Unaccept-able	Chi Sq.
Teacher	0	16	34	4	0	
Non-teacher	0	8	8	0	0	
						2.053

IV. QUALIFICATIONS IN FARMING

This is a very broad area which included farm experience, number of years as an F.F.A. member, years of high school agriculture, number of years as a 4H Club member, average mark in "100-200" agricultural courses, and interests of a farmer as determined by Strong's Interest Inventory. The Chi Square method was used to determine the significant difference between the transfer, drop-out, teacher, and non-teacher groups. These data for this area were very complete as most of the students' qualifications in farming took place prior to their entering the university and the data, for the most part, was recorded at the time of, or shortly after, their entry.

Farm Experience

A student's farm experience was divided into four categories as

follows: (1) amount, in terms of the number of months employed full time on a farm, (2) coverage — referred to a letter grade assigned by a staff member with respect to the amount and quality of farm experience a student has had, and the experience a student has had in the different areas of farming as determined by the farm experience inventory, (3) the type and size of farm on which the student received his farm training, and (4) the home agricultural situation of the student. The latter two were not included in the "Profile of Prospective Teachers of Vocational Agriculture."

Amount. The difference between the transfer, drop-out, teacher, and non-teacher groups, with respect to the number of months employed full time on a farm, was significant at the .01 level. The average amount of farm experience for the four groups fell into two distinct categories as shown in Table VII. The first and low category contained the drop-out and transfer groups, while the second, and high category, contained the teacher and non-teacher groups. The transfer and drop-out groups, composing the low category, were very similar and the average amount of farm experience was almost identical. Of the two groups in the high category, the non-teacher group was slightly superior to the teacher group, and the average amount of farm experience was two months more for the non-teacher group.

One of the requirements for graduation from the agricultural education curriculum is that a student must have at least 24 months of farm experience. Over half of the students in the transfer and drop-

out groups did not have this experience.

TABLE VII

NUMBER OF MONTHS OF FARM EXPERIENCE FOR AGRICULTURAL EDUCATION STUDENTS BY GROUPS IN THE CLASSES OF 1952, 1953, AND 1954

Groups	No. of Months 21mo.&below	22-26mo.	27mo.&above	Ave. amt.	Chi Sq.
Transfer	19	6	7	21.3	
Drop-out	14	9	5	21.7	
Teacher	0	31	24	29.9	
Non-teacher	0	7	10	31.9	
					39.213**

**Significant at the .01 level.

Coverage. The first portion of farm experience coverage was devoted to the letter grades assigned by an agricultural education staff member to the farm experience inventory completed by each student. A breakdown of the four groups by the letter grade received is shown in Table VIII. There were two distinct categories in this area. The transfer and drop-out groups were similar in all respects and the average grade, received by both groups, was identical. These two groups again composed the low category and the teacher and non-teacher groups composed the high category. This was the same condition which existed when the amount of farm experience was considered. The two groups in the high category were also very similar and likewise had the same average grade.

The second portion of farm experience coverage was concerned

TABLE VIII

GRADES RECEIVED IN FARM COVERAGE FOR AGRICULTURAL EDUCATION STUDENTS IN THE CLASSES OF 1952, 1953, AND 1954 BY CLASSIFIED GROUPS

Groups	Letter Grades A(4.0)	B(3.0)	C(2.0)	D(1.0)	F(0)	Ave. Grade	Chi Sq.
Transfer	0	5	15	10	0	1.8	
Drop-out	0	6	10	9	1	1.8	
Teacher	6	19	28	2	0	2.5	
Non-teacher	1	7	8	1	0	2.5	
							21.052*

*Significant at the .05 level.

with the level of ability on the farm experience inventory. If a student could perform the skill, he placed two check marks in front of the item, if he had performed the skill but was not capable of doing so at the present time, he placed one check mark in front of the item. The skills were arranged in the areas of (1) dairy, (2) swine, (3) poultry, (4) horticulture, (5) soils, (6) crops, (7) farm mechanics, and (8) farm management. The check marks were weighted so that the double checks received two points and the single checks received one point. The results of the tabulation are shown in Table IX.

The areas of swine and farm management showed no significant difference between the four groups. Poultry and crops showed a significant difference at the .05 level. The transfer and drop-out groups were considerably lower than the other two groups in both areas. The transfer group, however, was superior to the drop-out group in both areas. The teacher and non-teacher groups were similar in the crops area and both had the same average number. In the poultry area the teacher group was slightly higher than the non-teacher group.

The areas of dairy, horticulture, soils, and farm mechanics all had a significant difference at the .01 level. In all of these areas the teacher group had the highest average. This group was closely followed by the non-teacher group. A large difference then existed between the non-teacher group and the other two groups. Of these latter two groups, the transfer group was superior except in the area of farm mechanics where they were about equal.

TABLE IX

COMPARISON OF THE LEVELS OF EXPERIENCE IN VARIOUS FARM AREAS OF AGRICULTURAL EDUCATION STUDENTS IN THE CLASSES OF 1952, 1953, AND 1954 BY GROUPS

Title	Groups	Weighted Points 0-18	19-37	38-56	Ave.	Chi Sq.
Dairy	Transfer	15	11	7	23.0	
	Drop-out	12	14	3	22.1	
	Teacher	2	36	17	33.2	
	Non-teacher	3	10	4	29.1	
						29.134**
		0-12	13-25	26-38	Ave.	
Swine						
	Transfer	20	6	7	13.9	
	Drop-out	17	10	2	12.3	
	Teacher	20	23	12	17.1	
	Non-teacher	8	7	2	14.4	
						9.782
		0-25	26-51	52-77	Ave.	
Poultry						
	Transfer	20	9	4	26.4	
	Drop-out	19	9	1	22.8	
	Teacher	17	26	12	36.6	
	Non-teacher	5	10	2	34.4	
						15.802*
		0-16	17-33	34-50	Ave.	
Horticulture						
	Transfer	23	9	1	13.6	
	Drop-out	23	4	2	12.6	
	Teacher	23	20	12	21.6	
	Non-teacher	7	8	2	20.6	
						17.134**
		0-16	17-33	34-50	Ave.	
Soils						
	Transfer	18	9	6	12.0	
	Drop-out	19	8	2	9.5	
	Teacher	15	23	17	16.4	
	Non-teacher	3	11	3	16.0	
						21.252**

TABLE IX CONT'D

Title	Groups	0-19	20-39	40-48	Ave.	Chi Sq.
Crops						
	Transfer	16	12	5	23.3	
	Drop-out	15	11	3	21.7	
	Teacher	12	31	12	30.0	
	Non-teacher	3	11	3	30.0	
						13.143*
		0-29	30-59	60-79	Ave.	
Farm Mech.						
	Transfer	23	10	0	24.1	
	Drop-out	21	7	1	24.3	
	Teacher	12	34	9	43.7	
	Non-teacher	4	11	2	41.5	
						31.662**
		0-5	6-11	12-18	Ave.	
Farm Manag.						
	Transfer	21	7	5	5.8	
	Drop-out	20	8	1	5.1	
	Teacher	32	13	10	6.6	
	Non-teacher	10	3	4	6.9	
						3.269

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

Type and Size of Farm

To determine if there was a significant difference between the four groups with respect to the size of farms, in terms of tillable acres, the number of tillable acres were divided into three intervals as shown in Table X. The farms in this category were those on which the students received their farm experience. The Chi Square method was used to determine if the difference was significant.

TABLE X

SIZE OF FARMS IN TILLABLE ACRES FOR AGRICULTURAL EDUCATION STUDENTS IN THE CLASSES OF 1952, 1953, AND 1954 BY CLASSIFIED GROUPS

Groups	Tillable Acres 0-59	60-140	141 & up	Chi Sq.
Transfer	2	16	15	
Drop-out	4	14	11	
Teacher	5	31	19	
Non-teacher	1	9	7	
				1.443

There was no significant difference between the four groups with respect to the size of farms in tillable acres.

The types of farms on which the students received their farm experience were divided into specialized and general. The results of the tabulations and the Chi Square for the four groups are shown in Table XI.

Although there was no significant difference between the groups, a trend for the transfer group to come primarily from specialized farms,

and the drop-out group to come primarily from general farms was noted. The other two groups had a few more students coming from general farms than from specialized farms.

TABLE XI

TYPE OF FARM FOR AGRICULTURAL EDUCATION STUDENTS IN THE CLASSES OF 1952, 1953, AND 1954 BY CLASSIFIED GROUPS

Groups	Type of Farm		Chi Sq.
	Specialized	General	
Transfer	18	15	
Drop-out	8	21	
Teacher	22	33	
Non-teacher	7	10	
			4.724

Home Agricultural Situation

The home agricultural situation was determined as being either commercial or non-commercial. If a student lived in town or on a farm on which the farm operator pursued another occupation, the student was placed in the non-commercial category. If a student lived on a farm operated full time and if the farm was the primary source of income for the family, he was placed in the commercial category.

The results of the tabulation by groups and the Chi Square are shown in Table XII.

There was no significant difference between the groups and no

trend was indicated.

TABLE XII

HOME AGRICULTURAL SITUATION FOR AGRICULTURAL EDUCATION STUDENTS IN THE CLASSES OF 1952, 1953, AND 1954 BY CLASSIFIED GROUPS

Groups	Commercial	Non-Commercial	Chi Sq.
Transfer	25	7	
Drop-out	20	9	
Teacher	38	17	
Non-teacher	12	5	
			.972

F.F.A. Experience

Students who had been members of the F.F.A. and students who had not been F.F.A. members constituted the two groups in regard to experience in Future Farmer activities. The difference between the groups is shown in Table XIII.

TABLE XIII

AGRICULTURAL EDUCATION STUDENTS THAT DID OR DID NOT HAVE F.F.A. EXPERIENCE IN CLASSES OF 1952, 1953, AND 1954 BY GROUPS

Groups	Non-members	Members	Chi Sq.
Transfer	8	9	
Drop-out	7	14	
Teacher	25	30	
Non-teacher	11	6	
			3.687

Although there is no significant difference between the groups,

it should be pointed out that 65 per cent of the students in the non-teacher group were never F.F.A. members, while in the teacher group it was only 45 per cent.

High School Agriculture

The amount of high school agriculture which the student had was broken into three groups: (1) no high school agriculture, (2) 1-2 years of high school agriculture, and (3) 3-4 years of high school agriculture. The four groups were compared in Table XIV on this basis.

TABLE XIV

A COMPARISON OF THE NUMBER OF YEARS IN HIGH SCHOOL AGRICULTURE OF AGRICULTURAL EDUCATION STUDENTS IN CLASSES OF 1952, 1953, AND 1954 BY GROUPS

Groups	0 Years	1-2 Years	3-4 Years	Chi Sq.
Transfer	6	4	7	
Drop-out	6	4	12	
Teacher	18	14	23	
Non-teacher	9	5	3	
				5.660

There was no significant difference between the groups.

4H Club Membership

The students in the four groups were divided into three areas, with respect to the number of years they had been members of the 4H Club. These three areas were (1) students who had never been a 4H Club member, (2) students with 1 through 5 years of membership, and (3) students with 6 through 10 years of membership. Table XV shows the tabulation.

There was no significant difference between the groups and no generalization could be made.

TABLE XV

A COMPARISON OF THE NUMBER OF YEARS AS A 4H CLUB MEMBER OF AGRICULTURAL EDUCATION STUDENTS IN THE CLASSES OF 1952, 1953, AND 1954 BY CLASSIFIED GROUPS

Groups	0 Years	1-5 Years	6-10 Years	Chi Sq.
Transfer	6	7	4	
Drop-out	13	7	2	
Teacher	22	22	11	
Non-teacher	9	7	1	
				3.806

Average Mark in "100-200" Agricultural Courses

The average mark for all agricultural courses in the 100 and 200 series were averaged for each student in each of the four groups. The four groups were then compared by the Chi Square method and the significant difference determined. The results of the tabulation are shown in Table XVI.

The drop-out group had by far the lowest average and 80 per cent of the students in this group fell in the 2.3 and below interval. The average for the transfer and teacher groups was nearly equal, but in the transfer group the students were congregated at either end of the scale. This would indicate that there were two distinct groups within this group. One of these groups received high grades for the "100-200" agricultural courses, while the other received low grades. The non-teacher

group had the highest average (2.9) of the four groups which was .4 of a point higher than the teacher group. Of the non-teacher group, 76 per cent had grades averaging 2.9 or above. The difference between groups was significant at the .01 level.

TABLE XVI

A COMPARISON OF THE AVERAGE GRADES IN "100-200" AGRICULTURAL COURSES OF AGRICULTURAL EDUCATION STUDENTS IN THE CLASSES OF 1952, 1953, AND 1954 BY CLASSIFIED GROUPS

Groups	2.3&below	2.4-2.8	2.9&above	Ave.	Chi Sq.
Transfer	13	9	17	2.4	
Drop-out	20	5	0	1.5	
Teacher	14	17	21	2.5	
Non-teacher	3	1	13	2.9	
					29.998**

**Significant at the .01 level.

Interests of a Farmer

A student's interest of a farmer, was derived from Strong's Interest Inventory at the same time the teacher satisfaction, and interests of a vocational agricultural teacher rating was made. The student's ratings in the four groups were separated into three intervals as shown in Table XVII. There was no significant difference between the groups.

V. AGE WHEN ENTERING COLLEGE

As has been the procedure in the past, the population of this study was arranged into transfer, drop-out, teacher, and non-teacher groups. These four groups were divided into two intervals, the first

TABLE XVII

A COMPARISON OF THE SCORES RECEIVED ON THE INTEREST OF A FARMER PORTION OF STRONG'S INTEREST INVENTORY BY AGRICULTURAL EDUCATION STUDENTS IN THE CLASSES OF 1952, 1953, AND 1954 BY GROUPS

Groups	2.4&below	2.4-2.8	2.9&above	Chi Sq.
Transfer	6	5	4	
Drop-out	3	6	2	
Teacher	12	26	13	
Non-teacher	7	9	1	
				3.566

interval being composed of those students from 17 through 22 years of age, and the second interval composed of students 23 years of age and over. The ages of the students were determined at the time of matriculation. The results of the tabulation are shown in Table XVIII. This area was not included in the "Profile of Prospective Teachers of Vocational Agriculture".

TABLE XVIII

A COMPARISON OF THE AGES AT MATRICULATION OF AGRICULTURAL EDUCATION STUDENTS IN THE CLASSES OF 1952, 1953, AND 1954 BY CLASSIFIED GROUPS

Groups	Ages 17-22	Ages 23&over	Ave.	Chi Sq.
Transfer	39	2	19.9	
Drop-out	35	0	19.3	
Teacher	34	21	22.7	
Non-teacher	9	8	23.5	
				33.471**

**Significant at the .01 level.

One hundred per cent of the drop-out group and 95 per cent of the transfer group were composed of students 22 years of age or less. The average age of students in these two groups was 19.3 and 19.9 respectively. In the teacher and non-teacher groups there were only 62 and 53 per cent respectively which were 22 years of age or less when entering college. The average age for the teacher group was 22.7 and for the non-teacher group 23.5. The teacher and non-teacher groups are quite similar. The difference was significant at the .01 level as shown in Table XVIII.

VI. SIZE OF HIGH SCHOOL

The size of the high school from which a student came was designated as being a class A, B, C, or D high school. A class A high school has an enrollment of 900 students or more, a class B, 375 to 899 students, a class C, 175 to 374 students, and a class D, 175 students or less. The students in the four groups were tabulated as to the size of the high school from which they graduated as shown in Table XIX. This area was not included in the "Profile of Prospective Teachers of Vocational Agriculture".

The Chi Square method was used to determine if the difference between the groups was significant.

TABLE XIX

A COMPARISON OF THE SIZE OF HIGH SCHOOLS OF AGRICULTURAL EDUCATION STUDENTS IN THE CLASSES OF 1952, 1953, AND 1954 BY GROUPS

Groups	Size of High School A or B	C or D	Chi Sq.
Transfer	9	24	
Drop-out	9	26	
Teacher	9	39	
Non-teacher	5	12	
			2.326

The four groups were very similar and there was no significant difference between them.

CHAPTER III

SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS

I. SUMMARY

The purpose of the study was (1) to determine what the prospective teachers of vocational agriculture, who did not enter the teaching profession, did after dropping from the curriculum; (2) to determine what per cent of prospective teachers of vocational agriculture did not enter the teaching profession; (3) to determine the characteristics and traits of prospective teachers of vocational agriculture who did not enter the teaching profession; and (4) to determine if the individual's records maintained in the Agricultural Education Office at Michigan State University are adequate to predict if he will not teach.

The study revealed that nearly the same number of students graduated from the curriculum as entered as first term freshmen. The number of students leaving the agricultural education curriculum was highest in the sophomore year, followed very closely by the freshman year. In the junior year the number of students leaving had dropped to about half of that for the sophomore year. By the end of the junior year most of the students who left the curriculum had gone.

For the students leaving the agricultural education curriculum in the freshman and sophomore years, the number which dropped out was about equal to the number which transferred to other curricula. After the sophomore year the number of students which transferred out, however, remained constant until the latter part of the junior year, after

which the enrollment remained nearly constant.

Of the students who transferred to other curricula, over three-quarters remained in the College of Agriculture, while the remaining transferred to other colleges within the university.

Approximately 60 per cent of the students who graduated entered the teaching profession while 20 per cent entered the military service. The other 20 per cent entered other occupations.

The data for the characteristics and traits of the students in the study were divided into four classified groups with respect to the outcome of the students. If a student dropped out of school entirely, the data for that student were entered in the drop-out group, or if he transferred to another curricula, the data were entered in the transfer group. The data for a student who graduated from the curriculum were separated into two groups depending on whether the individual taught vocational agriculture or entered another occupation. The two groups were teacher and non-teacher respectively. The transfer, drop-out, teacher, and non-teacher groups showed varying degrees of difference in the areas selected for this study.

In the area of scholarship, significant differences were noted for (1) ACE intelligence test, (2) reading comprehension test, (3) honor-point ratio first year, (4) honor-point ratio second year, (5) honor-point ratio third year, (6) honor-point ratio in five basics, and (7) honor-point ratio for basic English. For all of these scholastic measures the drop-out group was by far the lowest. The transfer and teacher groups were quite similar, while the non-teacher group in

general was slightly superior.

The four groups in the area of qualifications in farming were significantly different in (1) number of months of farm experience, (2) letter grade given by instructor for farm skills, (3) level of ability in a) dairy, b) poultry, c) horticulture, d) soils, e) crops, and f) farm mechanics, and (4) average mark in "100-200" agricultural courses. For all these qualifications in farming measures the drop-out group was low. The transfer group was slightly superior to the drop-out group for levels of ability in various farm enterprises, and very much higher in the average grades received in the "100-200" agricultural courses. The teacher and non-teacher groups were very similar in all aspects and very much superior to the other two groups in all aspects except in the average grade of the "100-200" agricultural courses where the transfer group was about equal to the teacher and non-teacher group.

The last area in which a significant difference between the four groups was noted was "age when entering college". The drop-out group had the youngest average age, while the transfer group's average age was slightly higher. The average age of the students in the teacher and non-teacher was about the same, but considerably higher than for the other two groups.

Measures used in this study which showed no significant difference between the four groups were (1) mechanical index rating, (2) grades in Education courses and Psychology 201, (3) interest ratings for farmers, teaching satisfaction, and vocational agricultural teachers, (4) instructor's composite rating of the students, (5) levels of

abilities in swine and farm management, (6) types or sizes of farm on which the students received their farm experience, (7) home agricultural situations (commercial or non-commercial), (8) number of years as an F.F.A. member, (9) number of years of high school agriculture, (10) number of years as a 4H Club member, and (11) size of high schools attended.

II. CONCLUSIONS

The conclusions based on this study are as follows:

1. The number of students who will graduate from the agricultural education curriculum is approximately equal to the number of students entering the curriculum as first term freshmen. Upon graduation approximately 60 per cent will teach, 20 percent will enter service, and 20 per cent will enter other occupations.

2. The number of students transferring into the curriculum is approximately equal to the combined number of students that transfer-out and drop-out. Nearly all of the students transferring in from other institutions graduate from the agricultural education curriculum. Data were not available to determine the number of students graduating from the agricultural education curriculum, who transferred in from other curricula within the university. Most of the students who transfer in or out, or drop from the curriculum do so in the freshman and sophomore years, and the majority of those transferring will remain in the College of Agriculture.

3. The characteristics and traits of students in the areas of

scholarship, qualifications in farming, and age when entering college are the most valid for determining if a student will drop-out, transfer to another curriculum, graduate from the agricultural education curriculum and teach, or graduate from the agricultural education curriculum and not teach. A student must have a 2.0 honor-point ratio to remain in the university beyond the sophomore year, and have at least 24 months of farm experience to teach vocational agriculture.

The difference in characteristics and traits of the graduates of agricultural education who teach and those who do not teach is very small. Students who have a low rating in the areas of scholarship, and/or qualifications in farming can be expected to leave the curriculum unless their ratings in these areas are improved.

4. The characteristics and traits which are similar for all groups of agricultural education students are in the areas of (1) professional achievement and interests, (2) size of high school, and (3) qualifications in farming dealing with skills in swine and farm management, home farm situations, youth training in agriculture in high school, and interests of a farmer.

III. RECOMMENDATIONS

On the basis of this study the following recommendations are made:

1. Although students who are low in all of the areas become vocational agricultural teachers, students with low ratings in the areas of scholarship and/or farm experience should be encouraged to

improve in these areas if they expect to graduate from the agricultural education curriculum.

2. When determining if a student is a good prospect to become a teacher of vocational agriculture, the measures which did not show a significant difference between the four groups need not be considered.

3. More guidance and counseling should be administered in the freshman and sophomore years as the greatest number of drop-outs and transfers occur in these years. Special attention should be given to students with characteristics and traits similar to those of the drop-out and transfer groups.

4. Characteristics and traits which could differentiate students who will graduate and teach, and those who will graduate and not teach, should be derived.

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APPENDIX

PROFILE OF PROSPECTIVE TEACHERS OF VOCATIONAL AGRICULTURE

NAME_____

Date of birth___ _____

Date of matriculation_____

High school attended_____

College attended_____

Comments:

_____

_____

_____

_____

_____

_____

_____

_____

_____

_____

_____

SCHOLARSHIP

Ability

ACE Intelligence Test	...1...2...3...4...5...6...7...8...9...10
Reading Comprehension	...1...2...3...4...5...6...7...8...9...10
Mechanical Aptitude	...1...2...3...4...5...6...7...8...9...10

Achievement

Honor Point Ratio 1st yr.	0.....1.....2.....3.....4
Honor Point Ratio 2nd yr.	0.....1.....2.....3.....4
Honor Point Ratio 3rd yr.	0.....1.....2.....3.....4
Five Basics	0.....1.....2.....3.....4
Basic English	0.....1.....2.....3.....4

PROFESSIONAL CHARACTERISTICS

Achievement

Education 202	F.....D.....C.....B.....A
Psychology 201	F.....D.....C.....B.....A
Education 207	F.....D.....C.....B.....A
Education 305	F.....D.....C.....B.....A

Interests (Percentile)

Vo-Ag Teachers (Strong's)	...1...2...3...4...5...6...7...8...9...10
Teaching satisfaction "	...1...2...3...4...5...6...7...8...9...10

Instructor's ratings

Composite ( )	U.....D.....A.....E.....S

QUALIFICATIONS IN FARMING

Farm Experience

Amount (years)	0.....1.....2.....3.....4
Coverage (scope and variety)	F.....D.....C.....B.....A
F. F. A. (Rank)	.....GH.....CF.....SF.....AF
H. S. Agriculture (years)	0.....1.....2.....3.....4
4-H Club Member (years	0...1...2...3...4...5...6...7...8...9..10
Ave. mark in "100-200" Agr. courses	F.....D.....C.....B.....A
Interests of a farmer (Strong's)	...1...2...3...4...5...6...7...8...9...10

PERSONAL QUALITIES

FARM EXPERIENCE INVENTORY
for

Prospective Teachers of Vocational Agriculture

Division of Education, Michigan State College
(1945)

1. Name .....Age (nearest birthday).....

2. Farm experience prior to high-shcool graduation:
   a. For how many years did you live on a farm prior to graduation from high school?.....
   b. At what age did this experience begin?.....
   c. At what age did this experience end?.....
   d. Size of farm in tillable acres.....Type of farming.....

3. Farm experience while attending college:
   a. For how many summers have you worked on a farm since high school graduation.....
   b. Size of farm in tillable acres.....Type of farming.....

4. Full-time experience:
   a. For how many months have you had full-time experience since graduation from high school and exclusive of summers reported in No. 3?
   b. Size of farm in tillable acres.....Type of farming.....
   c. Indicate your farming status during this period by recording the number of months of the above experience spent in each status.

Status	Months each status
At home with allowance	.....
Farm laborer with specific wages at home	.....
Farm laborer away from home	.....
At home with income from one or more enterprises	.....
Partner in farm business at home	.....
Partner in farm business away from home	.....
Renter and operator of farm	.....
Owner and operator of farm	.....
Other status	.....

5. How many months have you worked on the college farm? Part-time while attending college....., full-time during summers, etc..... .

Other part-time employment on farms after finishing high school. No. of months..... Proportion of time spent on farm work.....

Experience in occupations closely related to agriculture:

Occupation	No. months employed.
1.....	.....
2.....	.....
3.....	.....

FUNDAMENTAL FARM SKILLS

Which of the following jobs have you performed and feel qualified to demonstrate? Make one check ..✓...if you have performed the job and do not feel qualified to perform it now. Make two checks..✓✓..if you have performed the job and feel qualified to perform it at the present time.

Dairy Cattle

1.....Operated a milking machine
2.....Operated a cream separator
3.....Adjusted a cream separator
4.....Tested dairy products for butterfat
5.....Clipped cows for sanitary milk production
6.....Treated teats of dairy cows for warts
7.....Removed rudimentary teats
8.....Treated cow with caked udder
9.....Made a calf box for raising calves
10.....Planned a dairy barn
11.....Planned a milk house
12.....Teach a calf to drink
13.....Took full charge of feeding dairy herd
14.....Kept records of production for dairy cows
15.....Figured annual production averages of dairy cows in terms of cow years
16.....Applied fast-milking technique
17....Used improved cleaning agents for washing dairy equipment
18....Took samples of milk from individual cows for mastitis test
19....Made sediment test of milk
20....Made up lye solution for rubber parts on milking machines
21....Made up lye solution and boiled rubber parts on milking machines
22....Milked cows by hand
23....Dehorned calves
24....Tap cows for bloat
25....Treated calves' navel cords with iodine
26....Tattooed and ear-tagged calves
27....Treated cows for milk fever
28....Treated cows for mastitis

Beef Cattle

1.....Took full charge of feeding beef herd
2.....Took full charge of feeding animals for slaughter
3.....Butchered a beef animal
4.....Cut up a beef carcass
5.....Estimated weight of animals
6.....Trained horns on young cattle
7.....Castrated bull calves, list methods:.....
.....
8.....Kept records of gains of calves of individual beef cows
9.....Used a pinching chute for catching and restraining beef cattle

Horses

1.....Trained a colt
2.....Detected common unsoundnesses of horses
3.....Determined age of horses by teeth
4.....Trimmed hoofs
5.....Adjusted a harness
6.....Fitted collars
7.....Took charge of feeding work horses
8.....Fed a colt
9.....Directed feeding of idle horses
10.....Break to ride
11.....Break to drive
12.....Treat for parasites
13.....Decorate for show
14.....Handle a stallion
15.....Care for a mare at foaling time

Swine

1....Treated pigs for worms
2....Took full charge of brood sows
3....Attended sows at farrowing time
4....Performed all steps in McLean County system
5....Butchered a hog
6....Cut up a hog carcass
7....Cured pork
8....Castrated boars
9....Kept records for identification
10....Kept records for farrowing
11....Kept records for weights of litters
12....Fed pigs
13....Ear marked litters
14....Estimated weights of hogs
15....Selected gilts for breeding herd
16....Selected boar for breeding herd
17....Clipped needle teeth of pigs
18....Managed sow-testing program, including 56-day litter weights
19....Treated pigs for mange and lice

Sheep

1....Drenched sheep for parasites
2....Docked lambs
3....Castrated lambs
4....Sheared sheep
5....Tied fleece
6....Dipped sheep
7....Butchered a lamb
8....Cut up carcass
9....Attended flock during lambing season
10....Took full charge of feeding a breeding flock
11....Kept records for identification
12....Kept records for lambing
13....Kept records for wool production
14....Kept records for weight of lambs per ewe
15....Culled inferior ewes
16....Fed lambs
17....Determined age of sheep by teeth
18....Selected a ram for breeding flock
19....Caught sheep by approved method
20....Flushed ewes
21....Used phenothiazine in salt to control internal parasites
22....Sprayed sheep
23....Dusted sheep
24....Tagged ewes before breeding and lambing
25....Experience in judging sheep on basis of type
26....Experience in grading market lambs

Other Livestock Skills

1....Applied for registrations and transfers for one kind of livestock
2....Conducted a post mortem for one or more kinds of livestock. List:

.....

.....
3....Fitted and showed one or more kinds of livestock. List:.....

.....
4....Selected beef or dairy animals on a basis of type and inheritance for production
5....Removed horns, list methods:.....
6....Kept breeding records and computed calving efficiency
7....Treated animals for warbles
8....Treated animals for lice
9....Placed ring in nose of bull
10....Trimmed hoofs of animals
11....Attended animal at parturition

Other Livestock Skills (continued)

12....Treated navel of calf
13....Trained animal to lead
14....Mixed minerals and feeds
15....Drenched animal for bloat
16....Treated animal for foot rot
17....Developed a farm fly-control program
18....Threw an animal by rope method
19....Compiled a pedigree (at least 3 generations)
20....Outlined a breeding program to be followed for several years.

Poultry

1....Culled a laying flock
2....Caponized cockerels
3....Candled eggs
4....Graded eggs
5....Operated an incubator
6....Operated a brooder
7....Mixed dry mash
8....Treated poultry house for mites
9....Treated hens for lice
10....Took blood samples for test of pullorum disease
11....Wing banded chicks
12....Took full charge of feeding a laying flock
13....Operated trap nests
14....Thoroughly cleaned a brooder house
15....Killed and dressed fowls
.... a. Dry picked
.... b. Hard scalded
.... c. Slack scalded

16....Selected pullets for laying house
17....Identified several varieties of poultry
18....Constructed suitable mash hoppers for
.... a. Young chicks
.... b. Growing stock
.... c. Laying hens

19....Constructed wire stand for water fountain
20....Made nests
a. Battery of
b. Community
21....Remodelled dropping boards to dropping pits
22....Produced clean eggs
23....Cleaned eggs
24....Drawn poultry
.... a. Broilers and fryers by splitting
.... b. Roaster drawing turkey or roasters
.... c. Cut up chicken
25....Vaccinated pullets for Pox or Newcastle
26....Diagnosed and corrected ventilation and insulation troubles. How about skills or arts on timing or seasonality of doing these skills, such as;
.... a. Marketing broilers in early spring
.... b. Buying chicks in February or March
.... c. House pullets in August
27....Debeaked pullets or fowl
28....Packaged poultry for home freezers
29....Built range shelter for pullets or turkeys

Horticulture

1....Mixed spray materials for orchard
2....Sprayed fruit trees. List types of sprayers:.....
.....
3....Repaired sprayers. List Kinds:
.....
4....Pruned fruit trees. List Kinds:

5....Pruned small fruits. List Kinds:
.....
6....Made graft buddings. List Kinds:
.....
7....Harvested fruit. List Kinds:
.....
8....Graded fruit

Horticulture (continued)

10....Planted fruit trees. List Kinds: .....
11....Planted small fruits and vegetables List Kinds:.....
12....Made cuttings. List:..... .....
13....Made a plan for a garden
14....Made a plan for home-ground planting
15....Made a hotbed
16....Operated a hotbed
17....Thinned fruit
18....Applied fertilizer to plants. List kinds of plants:..... .....
19....Used proper control measures for at least five insect pests of vegetables
20....Operated a cold frame
21....Pruned shrubs
22....Identified common flowering plants
23....Identified shrubs
24....Sprayed a vegetable garden. List crops:.....
25....Applied fruit thinning or pre-harvest drop sprays
26....Operated tillage implements in garden and orchard
27....Applied mulching materials
28....Applied poison for mouse control
29....Applied chemicals for weed control

Crops

1....Sowed Brome grass seed
2....Sowed Reed canary seed
3....Sowed sudan grass seed
4....Filled a silo
5....Harvested sugar beets
6....Treated seed potatoes
7....Treated seed grain. State Method: .....
8....Inoculated legume seed
9....Operated and adjusted fanning mill
10....Tested field crop seeds for germination
11....Stored corn
12....Harvested corn
13....Used chemicals to eradicate weeds
14....Selected and exhibited a sample of grain
15....Performed all steps in making hay
16....Identified plants of atleast twenty common weeds
17....Identified seeds of at least twenty common weeds.
18....Identified 10 farm-crop diseases
19....Identified plants and seeds of 20 Michigan farm crops
20....Harvested a seed crop of a Michigan forage crop
21....Made a McNaughton tall field bean stack
22....Graded table-stock potatoes
23....Cut potato seed
24....Prepared and applied spray for potatoes
25....Rogued a potato seed field

Soils

1....Top-dressed soil with fertilizer: nitrogen...., phosphate....., Potash....., complete.....
2....Tested soil for acidity
3....Tested soil for nitrogen, phosphorous and potash
4....Identified soils as to texture and structure
5....Applied lime or marl
6....Calculated soil productivity balance of a rotation
7....Applied fertilizer to an alfalfa stand
8....Planned crop rotations
9....Constructed a device to control erosion
10....Built a construction to control a gully
11....Drained wet land
12....Tested plant tissues for nutrient deficiencies
13....Identified nutrient deficiencies by appearance of plants
14....Developed a plan for a soil improvement program for entire farm
15....Interpret soil map (Soil profile identification).
16....Tumbler experiment for lime requirements
17....Soil structure measurement

26....Identified at least twenty harmful insects
27....Graded grain according to market grades. List kinds.....
.....
28....Obtained a stand of alfalfa
29....Calibrated planter, drill, seeder
30....Side dressed a crop

Farm Mechanics

1.....Operated and adjusted a gasoline engine
2.....Adjusted and repaired ignition....carburetion....cooling....and lubrication....system of a tractor
3.....Operated a feed grinder
4.....Operated and adjusted farm machinery, plow....pulverizer....planter....drill....mower....binder....combine....baler....potato digger....
5.....Overhauled and repaired major items of farm machinery, list.....,
.....,.....,.....,.....,.....
6.....Painted a farm building, sprayed.....or brushed.....
7.....Mixed paint
8.....Constructed a building. List..... ....
9.....Selected farm motors for specific needs
10.....Figured a bill of materials for a building
11.....Measured and cut rafters and steps
12.....Filed and set saws
13.....Sharpened hand tools
14.....Operated and maintained power shop equipment, drill press....power saw.....grinder.....
15.....Operated a level for determining grade lines
16.....Figured materials for a concrete construction job
17.....Constructed a concrete job. List..... ....
18.....Used solder for repairing metals. Copper....galvanized iron....brass.....zinc....iron....steel....lead joints.....
19.....Identified kinds of iron and steel
20.....Did simple forge work. Bending....drawing....upsetting....annealing....tempering.....
21.....Measured, cut and threaded pipe
22.....Installed and maintained water and sewage disposal systems
23.....Operated gas welder and cutter
24.....Operated an arc welder
25.....Laid out and installed wiring in farm buildings for light and power
26.....Installed and operated farm coolers and refrigerators
27.....Laid out and constructed sheet-metal projects or jobs
28.....Determined lighting, ventilation and insulation of farm buildings
29.....Drew and sketched to scale some piece of farm equipment
30.....Figured pulley sizes and speeds
31.....Figured gear ratios and speeds (spur, worm, sprocket)
32.....Identified common types of nails, screws, bolts, hinges
33.....Measured, cut and puttied window panes
34.....Built and maintained fences
35.....Planned farmstead wiring
36.....Did extension wiring such as installing additional lights or service outlets.
37.....Repaired and maintained electrical equipment. List..... .....
....

Farm Mechanics (continued)

38....Planned and installed an irrigation system
39....Planned and installed a tile drainage system
40....Built and maintained terraces
41....Planned and built a home farm shop
42....Calibrate a fertilizer drill

Farm Management

1....Kept accounts for entire farm
2....Kept a cost account for one farm enterprise
3....Made a complete farm inventory
4....Prepared a net worth statement
5....Borrowed money and gave note
6....Made an analysis of a farm business
7....Made out a father-and-son farm partnership agreement
8....Made out a farm lease agreement
9....Made out a farm income tax return