R E P O R T R E S U M E S

ED 012 743 VT 000 032

EDUCATIONAL AND VOCATIONAL GOALS OF RURAL YOUTH IN THE SOUTH.

BY- SPERRY, IRWIN V. AND OTHERS
NORTH CAROLINA UNIV., RALEIGH, N.C. STATE UNIV.

REPORT NUMBER SOUTHERN-COOP-BULL-107 PUB DATE SEP 65
EDRS PRICE MF-$0.25 HC-$1.44 36P.

DESCRIPTORS- *RURAL YOUTH, *EDUCATIONAL ATTITUDES, GRADE 9, GRADE 10, YOUTH CLUBS, *HIGH SCHOOL STUDENTS, *VOCATIONAL INTERESTS, *PARENT ATTITUDES, BACKGROUND, SEX (CHARACTERISTICS), SOUTHERN STATES, SOUTHERN REGIONAL COMMITTEE FOR FAMILY LIFE, KENTUCKY, NORTH CAROLINA, TENNESSEE, VIRGINIA, RALEIGH

THE OBJECTIVES OF THE STUDY WERE TO--(1) COMPARE EDUCATIONAL GOALS OF RURAL YOUTH AND THEIR PARENTS AND (2) DETERMINE THE RELATIONSHIPS OF THE SIMILARITIES AND DIFFERENCES TO SUCH FACTORS AS GEOGRAPHIC AREA, STATE, SEX, LEVEL OF LIVING, RESIDENCE, FAMILY SIZE, AND CLUB MEMBERSHIP. A SURVEY SAMPLE, SELECTED FROM AN EQUIPARTITIONED UNIVERSE CHARACTERIZED BY RURAL RESIDENCE AND SCHOOL SIZE, INCLUDED SIX NINTH-AND 10TH-GRADE CHILDREN FROM EACH OF 48 SUBGROUPS IN KENTUCKY, NORTH CAROLINA, TENNESSEE, AND VIRGINIA. QUESTIONNAIRES AND INTEREST INVENTORIES WERE ADMINISTERED. BOYS PREFERRED OUTDOOR, MECHANICAL, COMPUTATIONAL, SCIENTIFIC, AND PERSUASIVE ACTIVITIES, WHILE GIRLS PREFERRED ARTISTIC, LITERARY, SOCIAL SERVICE, MUSICAL, AND CLERICAL ACTIVITIES. MOTHERS ENCOURAGED CONTINUANCE OF EDUCATION MORE STRONGLY THAN FATHERS. NO DIFFERENCES IN EDUCATIONAL AND VOCATIONAL PLANS WERE FOUND BETWEEN MEMBERS AND NONMEMBERS OF 4-H CLUBS, FUTURE HOMEMAKERS OF AMERICA, AND FUTURE FARMERS OF AMERICA. YOUTH'S EDUCATIONAL EXPECTATIONS INCREASED IN RELATION TO LEVEL OF LIVING BACKGROUND. (JM)

Educational and Vocational Goals of Rural Youth in the South

Bulletin 107
Southern Cooperative Series
September 1965

SOUTHERN COOPERATIVE SERIES

Bulletin No. 107

This bulletin is the 107th in the series of Southern Cooperative Bulletins. Under the procedure of cooperative publication, Bulletin No. 107 becomes, in effect, a separate publication for each of the cooperating stations and is mailed under the frank and indicia for each of the cooperating stations.

Since the bulletin is identical for all the stations, it is suggested that copies be requested from only one source.

Requests from outside the cooperating states should be mailed to the North Carolina Agricultural Experiment Station.

W. A. Seay, Director, Kentucky Agricultural Experiment Station, Lexington, Kentucky.

R. L. Lovvorn, Director, North Carolina Agricultural Experiment Station, Raleigh, North Carolina.

J. A. Ewing, Director, Tennessee Agricultural Experiment Station, Knoxville, Tennessee.

Coyt Wilson, Director, Virginia Agricultural Experiment Station, Blacksburg, Virginia.

ACKNOWLEDGEMENTS

This report was prepared by the state members of the Technical Committee for Project S-48 with the assistance of the Administrative Adviser, C.S.R.S. Representatives, and Consulting Statistician.

In addition to those contributors listed on the opposite page, acknowledgement is made to the following persons who assisted with this study at various stages during its development: A. L. Finkner, Statistician, Research Triangle, North Carolina, for his assistance with the statistical design; Harold L. Holloway, Texas State College for Women, for his assistance with the project outline and development; Henry Leveck, Mississippi Agricultural Experiment Station, Former Administrative Adviser; Helen R. Marshall, Drexel Institute, for her assistance with the development of the project; Darby J. Reed, for her assistance with the initial work in Tennessee; and Nancy M. Myers, for her assistance with the initial work in North Carolina.

Acknowledgement is made to the Department of Experimental Statistics, North Carolina State University for its compilation of the data. Appreciation is also expressed to the North Carolina Agricultural Experiment Station for the publication of this report.

The Technical Committee is deeply indebted to the rural school administrators, youth, and parents from the contributing states whose cooperation made this study possible.

SOUTHERN REGIONAL COMMITTEE FOR FAMILY LIFE

Administrative Advisers:

Kenneth R. Keller, Assistant Director in Charge of Tobacco Research, North Carolina Agricultural Experiment Station, Raleigh

Mary Beth Minden, Representative, Cooperative State Research Service, Washington

Paul J. Jehlik, Alternate Representative, Cooperative State Research Service, Washington

State Members:

Irwin V. Sperry, Chairman, Technical Committee, University of North Carolina at Greensboro

Vira R. Kivett, Secretary, Technical Committee, University of North Carolina at Greensboro

Ruth L. Highberger, University of Tennessee

Betty I. Jeffrey, University of Tennessee

Shirley Newsom, University of Kentucky

Virle C. Payne, Virginia Polytechnic Institute

Cooperators:

Kentucky Agricultural Experiment Station and School of Home Economics, University of Kentucky, Lexington

North Carolina Agricultural Experiment Station and School of Home Economics, University of North Carolina, Greensboro

Tennessee Agricultural Experiment Station and College of Home Economics, University of Tennessee, Knoxville

Virginia Agricultural Experiment Station and Department of Home Economics, Virginia Polytechnic Institute, Blacksburg

United States Department of Agriculture, Washington

Consulting Statistician:

Charles Proctor, Department of Experimental Statistics, North Carolina State University, Raleigh

This bulletin was accepted for publication in September, 1965. The list of names above represents the committee composition at the time of development of the manuscript.

CONTENTS

EDUCATIONAL AND VOCATIONAL GOALS OF RURAL YOUTH IN THE SOUTH

Introduction

The present day emphasis given the President's economic opportunities program reinforces previous concern over the rural population's educational and vocational aspirations and expectations. The relationships between education, occupation, and level of living have been amply established. That the educational goals of rural youth are generally surpassed by those of urban youth is likewise recognized.

For some time now several organizations available to rural youth have incorporated into their programs units pertaining to careers. These programs were designed to enlighten rural youth in terms of job opportunities and requirements. In 1961, objectives of the 4-H program included as a longtime and annual county goal "have the youth in the 16-20 year group improve their understanding of career and employment requirements and opportunities" (6). In Future Farmers of America and in Future Homemakers of America general objectives are "to develop competent, aggressive, rural agricultural leadership" and "to help individuals improve personal, family, and community living," respectively (38, 27). Purposes also listed include furthering interest in agriculture and home economics.

A concern for a better understanding of certain of the rural population's educational and vocational goals and some factors possibly related to these goals led to the present study. The objectives of this cooperative project were: (1) to describe similarities and differences in educational and vocational goals of rural youth and of their parents for them; and (2) to determine the relationships of the similarities and differences in these goals to such factors as (a) geographic area; (b) state; (c) sex; (d) level of living; (e) farm or nonfarm residence; (f) family size; and (g) membership in certain rural youth organizations.[1]

Two reviews have recently summarized available research on educational and occupational goals of rural youth and their families (3, 15). The present account, therefore, will discuss, first, studies as to the age level of youth chosen for study, and then, in turn, available findings on the other six independent variables of the present survey affecting youths' expressed attitudes and aspirations and those of their parents.

[1] See page 9 for definition of the variables employed in this study.

Age and the Choice Process

Evidence from earlier research has indicated that occupational interest begins to stabilize in the ninth grade (35). There is support also that many decisions having a bearing on college and occupational plans are made several years prior to the senior year in high school, as the young person chooses school subjects, activities, and friends (30, 23, 31). The importance of gaining information from young adolescents has been further emphasized through a study of rural youth in Iowa in which it was found that boys and girls who wanted to become farmers or farm wives made their decision early in high school and then became less flexible about their choice than other youths (5, 4).

State and Area within State

Considerable variability among economic regions and subregions is usually attributed to the labor force as well as to the availability of jobs for new entrants to the labor force. Some rural areas provide only subsistence farming and unskilled labor of a seasonal nature whereas other areas have been found to be highly industrialized counties with a minimum of differences in terms of rural-urban aspirational levels (37, 19).

In each of the states contributing to this study, agriculture has shown a decline while industrialization has spread into those geographical locations affording adequate sources of raw materials, transportation, or manpower. Manufacturers contributing to a rapid industrial development in the southern area included here have been the extractive, tobacco, food, pulp and paper, chemical, furniture, and textile industries. It should be pointed out that agriculture, none the less, still remains a major element in the economy of many sections of the Southern Appalachian area.

The distinct difference which area within a state may make in occupational planning is illustrated in the work of Schwarzweller (33) in studying young men who did and did not leave poorer farming areas of Eastern Kentucky. The influence of industrialization was similarly seen in Ford's (17) Appalachian survey which pictured conditions and opinions in the mountain areas of the four states involved in the present study. Evidence was produced that these areas are no longer isolated in thinking and in educational values. Many organizational differences in educational systems exist among states. Consequently, no attempt has been made to generalize for the four-state area.

Sex Comparisons

Ford's (17) survey pointed out that earlier disparities in regard to education of boys and girls are being erased in rural mountainous areas even more than in urban localities. In a national survey of 14 to

18 year olds reported by Douvan (10), it was shown that percentages of high school boys expecting to attend college increased during high school years. In another study of 14 to 18 year old girls, Douvan (12) reported that the percentage of girls expecting to attend college diminished during the high school years.

Studies using the Kuder interest inventory have repeatedly confirmed the sex differences which led its originators to provide separate norms and profiles for boys and for girls. A study of tenth grade Ohio youth indicated that parents showed more agreement with respect to their daughter's top interest rather than their son's. Youth-parent agreement varied according to the sex of the youth and to the particular field of interest (22).

In many of the occupational choice studies made, residence differences have appeared for boys but not for girls (1, 2, 11, 13). Authors have often attributed this phenomenon to the secondary importance girls give to employment.

Level of Living

The relation between socioeconomic level and the hopes and efforts of young people toward their future life work has been a consistent observation (3, 28). Larger percentages of high than of low socioeconomic status youth have been found to continue their formal education in Pennsylvania (2), New Jersey (18), Washington (14), Indiana (8), and in Utah (7). In Kentucky socioeconomic status of the family was found to be particularly influential for boys (32). In two South Appalachian studies the general economic level of the whole community in which the youth grew up was noted to be of significance in their decisions regarding education (16, 33).

Residence

Although most studies of educational and occupational goals have pointed toward rural-urban differences, Haller (20) found no significant difference in the aspirations of farm and nonfarm rural boys when occupational opportunities other than farming were controlled.

There is little question that farm boys planning to farm differ in their value orientations from boys not planning to farm (20, 24, 36). They prefer rural living, outdoor work, work involving physical activity and the use of machinery, and work involving little contact with people.

Family Size

Family size has received little attention in studies related to choices of academic subjects, college attendance, or occupational choice. Edlefsen (14) reported that the only child expressed more certainty of

entering college than did those having brothers and sisters. Nam and Cowhig's (26) nation-wide study of factors related to college attendance indicated a slight negative influence of family size on numbers of youth actually reaching college who had planned to attend in the fall of their senior year. Elder (15), reviewing data concerning achievement orientations and career patterns of rural youth, noted that the size of the family determines theoretical maximum financial support for each child. Strauss' (36) investigation of personal characteristic and functional needs in the choice of farming as an occupation noted that family size did not influence choice of farming.

Membership In Organizations

Membership in rural youth groups as a variable in studies of occupational plans has occurred in relation to choice of farming. Kaldor (24) found length of 4-H Club membership was not greatly different between boys planning to farm and other boys. As might be expected, boys planning to farm were more frequently members of FFA. A study concerning career choices among 4-H Club members in Virginia reported that members listed the local 4-H leader and participation in the 4-H Career Exploration as most helpful in learning about careers (34).

Procedures

The Technical Committee for the regional project established the procedures to be followed by all contributing states. A complete study was carried out in each state, and later, data were pooled in order to obtain a four-state analysis.

The sample of ninth and tenth graders was designed to include six children from each state in each of 48 subgroups. There were 48 combinations of two sexes by two membership roles by three levels of living by two residences by two family sizes ($48=2\cdot3\cdot2\cdot2\cdot2$). The six students were spread geographically over the state—two from each of three areas.[2] The design ultimately called for a state sample of 288 youth, their mothers and their fathers.

Student information sheets which served to classify youth as to subgroup, were administered to the ninth and tenth grade students of randomly selected schools. The public schools of each state which were predominantly white, non-parochial, not located within corporate limits of cities of 50,000 or more and had chapters of FFA, or FHA or 4-H were visited in random order. Students who lived with both parents at a rural residence were eligible for selection which was

[2] These areas were delimited on the basis of soil and type of farming. Areas within the states usually took the names Eastern, Central, and Western areas.

made at random in randomly selected subgroups for each school visited.[3] The total sample included 285 cases in Kentucky, 281 in North Carolina, 288 in Tennessee, and 285 in Virginia.

The selection of the sample, then measurement of youths' attitudes toward an education, their educational and occupational plans, and vocational preferences required three visits to each school. Questionnaires identical to those of the youth were administered by an interviewer to mothers and fathers in their homes. Parents were asked to answer the questionnaires as they hoped their sons or daughters answered them at school.

Data Analyses

Analyses of variance were employed to point out notable differences among means on educational questionnaire scores and vocational preference subscores for seven control variables. These variables included: sex, boy or girl; membership, with a background of at least one semester in FFA or FHA, or one year in 4-H Club against no such background; level of living, interpreted as high, middle, or low as measured by a level of living scale;[4] residence, interpreted as farm or nonfarm; family size, defined as 1-2 child family or 3 or more child family; state, Kentucky, North Carolina, Tennessee, or Virginia; and area, the three areas in each state as determined by soil type. The three areas of each state would be said, in analysis of variance parlance, to be *nested* in the state classification and then both were *crossed* with all of the other five variables.

In this study, data from a survey have been analyzed by analysis of variance methods developed largely for handling data from experiments. Our terminology (e.g. "control variables" and "effects") has been colored by the experimentalist and we must take care that our interpretations do not suffer from a confusion of survey and experiment. In the first place the sample was not representative of the population of ninth and tenth graders in their proper proportions. For example, children of small families and lower levels of living were relatively scarce in the population but they were equally represented in the sample. In North Carolina, where the tally sheets used in drawing the sample were examined, it was found that in the schools visited there were as many as 532 boy nonmembers of middle level of living nonfarm residents and from large farm families and as few as 13 boy members of low level of living nonfarm residences and small family size in a partition. Our sample can be called "equi-partitioned" rather than "representative."

[3] In North Carolina, for example, 6,923 eligible students were contacted in the 51 schools visited. Of this number, 3,557 were boys; 2,827 were members; 1,899 were in low, 3,509 in middle, and 1,515 were in high level of living groups; 2,790 were living on farms; and 1,844 came from small size families.

[4] An adaptation of the Cornell Level of Living Scale (9).

Next, keeping in mind the equi-partitioned universe from which our equi-partitioned sample was drawn, we chose to generalize to only the four-state geographic "region." The state variable was treated as fixed. The reader who wonders whether an effect might be more widespread geographically would do well to see if it interacted with the state variable and not expect its persistence if there were an interaction (Tables 1, 2 and 3).

Readers when applying our findings in their work with youth would not expect to manipulate the "control" variables of this study, but rather, will manipulate their own actions in accord with the control variable values of the youth with which they deal. For example, one will not change residences but will take note of them. To say that there was a "sex main effect" is simply a rather misleading way of saying there was a difference between boys and girls (One should add "in the equi-partitioned universe.").

Table 1. Significance Levels in Percents Where Null Hypotheses Were Rejected Upon Testing 22 Effects on Each of 11 Youths' Scores*

	Scale										
	Educational	Outdoor	Mechanical	Computational	Scientific	Persuasive	Artistic	Literary	Musical	Soc. Service	Clerical
Main Effects											
Sex	.05	.05	.05	.05	.05	.05	.05	.05	.05	.05	05
Membership		.05	.05	.50							2.5
Level of Living	.05				.05				5.0		.50
Residence	1.0	.05	1.0		1.0		5.0				
Family Size	5.0						5.0				
Interaction											
Sex by Memb.		.05									
Sex by LOL											
Sex by Res.	2.5	2.5				0.1					
Sex by Fam. S.											
Memb. by LOL				5.0			2.5				
Memb. by Res.		.50									
Memb. by Fam. S.											
LOL by Res.											
LOL by Fam S.											
Res. by Fam. S.							1.0				
Blocking Effects											
State	.05	5.0								2.5	
Area in State	2.5	5.0						5.0			2.5
Blocking Interactions											
State by Sex		5.0	5.0	5.0			1.0		.50	2.5	
State by Memb.	2.5							5.0			
State by LOL									5.0	5.0	
State by Fam. S.											2.5

* Significance levels are shown as percents, for example, 5.0 = $p < .05$.

Table 2. Significance Levels in Percents Where Null Hypotheses Were Rejected Upon Testing 22 Effects on Each of 11 Fathers'-Minus-Youths' Scores*

	Scale										
	Educational	Outdoor	Mechanical	Computational	Scientific	Persuasive	Artistic	Literary	Musical	Soc. Service	Clerical
Main Effects											
Sex	.05	.05	.05	.05	.05	2.5	.50	1.0	.05	.05	.05
Membership											
Level of Living								2.5		5.0	
Residence											
Family Size											
interactions											
Sex by Memb.		1.0				2.5					
Sex by LOL											
Sex by Res.					5.0	2.5					
Sex by Fam. S.										5.0	
Memb. by LOL											
Memb. by Res.											
Memb. by Fam. S.							5.0				
LOL by Res.											
LOL by Fam. S.											
Res. by Fam. S.											
Blocking Effects											
State		.05	.05			2.5		.05	.05	5.0	.05
Area in State											
Blocking Interactions											
State by Sex	2.5	.05							1.0		5.0
State by Memb.							5.0				
State by LOL					2.5	2.5				.50	
State by Res.											
State by Fam. S.											

* See notation, bottom of Table 1.

The shape of the distribution of deviations between observed educational questionnaire scores and the fitted subgroup means was a little flat in the center but still passably close to the bell-shaped normal distribution. In no case, among the 33 variables analyzed, did the higher-than-second-order pooled interaction mean square exceed to any extent the within subgroup mean square. These two results gave evidence that use of the F-tables was probably quite proper.

Every first order effect and all two-way interactions for each of the six factors (area in state and state were considered as one factor) were tested for each of the 33 analyses. This involved 22 x 33 = 726 tests and even with purely random data about 36 rejections at the 5 percent level would be found. Tables 1, 2, and 3 show considerably more cases of rejection but it should be recognized that 10 or 20 could have occurred by chance.

Table 3. Significance Levels in Percents Where Null Hypotheses Were Rejected Upon Testing 22 Effects on Each of 11 Mothers'-Minus-Youths' Scores*

	Scale										
	Educational	Outdoor	Mechanical	Computational	Scientific	Persuasive	Artistic	Literary	Musical	Soc. Service	Clerical
Main Effects											
Sex	.05	.05	.05	.05	.05			.50	.05	.05	.05
Membership				2.5							
Level of Living					.50						5.0
Residence			5.0								
Family Size											
Interactions											
Sex by Memb.											
Sex by LOL							1.0				
Sex by Res.						.50					
Sex by Fam. S.											
Memb. by LOL											
Memb. by Res.		.10									.05
Memb. by Fam. S.											
LOL by Res.											
LOL by Fam. S.											
Res. by Fam. S.											
Blocking Effects											
State	.50		.05	.05	.50		.05			.05	
Area in State											
Blocking Interactions											
State by Sex		5.^		.05	1.0		.50		.05		5.0
State by Memb.	5.0						5.0				
State by LOL											
State by Res.											
State by Fam. S.											

* See notation, bottom of Table 1.

Contingency table chi-square values were used to signal significant associations between vocational questionnaire items and sex, level of living, family size, residence, and membership status. Data on these items were analyzed separately for each state for boys and for girls and for parents of boys and for parents of girls. The total number of chi-square tables examined was 240. Only those associations reaching a significant level in two or more st:'s (a total of 23) were considered for description. While chi-square probably does a good job of indicating differences in proportions responding to the items from boys to girls, from members to nonmembers and so forth, it does not take into account the stratification, in equi-partitioned style, of the sample. In an example worked in detail it was found that the chi-

square test did not detect a difference at the .01 level when a test accounting for the stratified nature of the sample did show such a relationship. This indicates that the chi-square test may be an overly conservative procedure.

Educational Attitude Scores

The Hieronymous questionnaire, Attitude Toward Education, was administered to the students, and later, each of their parents was asked to respond to the statements as they hoped their youngster had answered them. This scale was designed to test the student's opinion as to the value of an education in general rather than on his attitude toward the educational practices of the school which he was attending. The scale was constructed by the method of summated ratings. Two types of items were included, (1) a number of favorable and unfavorable statements about the value of an education, such as:

The most common way in which poor people raise their standard of living is through education.

A. Strongly Agree B. Agree C. Undecided D. Disagree E. Strongly Disagree

and; (2) a number of multiple choice items depicting student situations in life which reflected the value placed upon education, such as:

How much of the time do you enjoy being in school?

a) All the time
b) Most of the time
c) Fairly often
d) Hardly ever
e) Never

Although the principal focus of this study was on differences in score averages—differences associated with changes in the subgroupings of the sample—an appreciation of these differences can best be gained by observing the overall level of the scores and their range of variation. This base line information is provided in Table 4.

For the equi-partitioned sample the mean score on the educational value scale was 181.7.[5] This was an estimate of the mean of the equi-partitioned population and had a standard error of estimate of .44 score points. Such a value suggested that had the entire eligible school populations of all four states been measured, re-measured again and again, and the resulting mean scores for each subgroup been averaged, then the result would not be further away from 181.7 than perhaps twice .44. We "know" the average to be in the range 181 and 183; if it is not then our sample is truly an unlikely one.

The standard deviation of 14.7 (see Table 4) indicates how much one youth differed from the next when they were both in the same

[5] The mean for the equi-partitioned sample in North Carolina was 188.0. When each partition was expanded by the reciprocal of its sampling fraction the estimated mean in the actual population was 182.7. The similarity of these two results show that in this case a survey of the school population in North Carolina would have given a mean educational score close to that for the equi-partitioned sample.

Table 4. Educational Score Mean and Kuder Vocational Score Means, Standard Errors of the Means and Score Standard Deviations for Youth and Parent-Minus-Youth Differences

Scale	Youth			Father-Youth			Mother-Youth		
	Mean	± S.E.	St. Dev.	Mean	± S.E.	St. Dev.	Mean	± S.E.	St. Dev.
Educational	181.7	± .44	14.7	1.3	± .60	20.4	3.5	± .62	20.9
Outdoor	39.1	± .35	11.7	3.3	± .48	16.3	−2.9	± .44	14.8
Mechanical	32.6	± .27	9.3	5.1	± .42	14.2	−4.0	± .26	8.8
Computational	24.9	± .20	6.7	2.9	± .26	8.8	2.1	± .39	13.1
Scientific	37.5	± .33	11.1	.5	± .37	12.6	−2.4	± .37	12.6
Persuasive	38.6	± .27	9.0	.8	± .33	11.3	−1.4	± .33	11.2
Artistic	26.9	± .26	8.8	−2.6	± .28	9.6	− .3	± .29	9.7
Literary	18.8	± .19	6.4	− .3	± .24	8.0	.2	± .23	7.8
Musical	13.3	± .18	6.1	−1.0	± .22	7.4	.4	± .20	6.8
Soc. Service	44.7	± .28	9.5	− .3	± .39	13.2	2.6	± .39	13.2
Clerical	54.5	± .33	11.3	−1.3	± .44	14.9	4.4	± .45	15.2

subgroup. Whatever be the mean for a subgroup (some value near 181.7) about two-thirds of the youths' scores were within 14.7 points of this mean and 95 percent of them were within twice 14.7 or 29.4 score points of the mean. For example, while boys' and girls' means differed by 6 points it should be understood that a good many boys had scores above a good many girls even though the mean for girls was 6 points higher than the mean for boys.

Youths' educational questionnaire scores varied according to state, sex, level of living, residence, and family size.[6] Girls' mean score was higher by 5.8 points than that of boys, nonfarm youths' score exceeded that of farm youth by 2.5 points, and the mean score of youth from small family backgrounds was higher by 1.9 points than that of youth from larger families. The level of living effect revealed higher scores than the mean among youth from high (by 2.8 points) and middle (by .74 points) level of living backgrounds than among youth in the low level of living group who scored 3.6 points lower than the average.

Parent-son score disparities contributed primarily to youth-parent score differences on the educational questionnaire. Whereas boys' educational mean score was lower by 4.5 points than their fathers' score, girls' score was higher by 2.0 points than that of their fathers. Girls' mean score approximated their mothers' score (a difference of only .24 points), while boys' score was less than their mothers' score by 6.8 points.

Vocational Preference Scores

The *Kuder Preference Record* was designed to measure an individual's occupational preferences in 10 broad areas. These areas in-

[6] No main effect by membership was noted but there was a state by membership interaction. In all states except Virginia, members had slightly higher educational scores than nonmembers. In Virginia members averaged 4.9 points less than nonmembers.

clude: Outdoor, Mechanical, Computational, Scientific, Persuasive, Artistic, Literary, Musical, Social Service, and Clerical. The instrument was developed upon the assumption that an individual's preferences indicate that he likes certain types of activities. Upon identification of these preferences he can investigate the occupations that involve these activities. The form consists of numerous activities set up in groups of three. The youth were asked to indicate which of the three activities they would most prefer, and secondly, which activity they would prefer least. The parents were asked to select the activity that they hoped their youngster most preferred, and then, the activity they hoped that he least preferred.

The predominance of the sex effect is evident in the first row of Tables 1, 2, and 3. This is no surprise with regard to vocational preferences as revealed by the Kuder and it may not be surprising for educational values. At any rate Table 5 is offered in lieu of any extended discussion at present of these sex differences. Boys exceeded girls in preferring mechanical and outdoor pursuits, while girls preferred clerical and social service more than boys. Mothers and fathers agreed with each other in opposing, if only in their hopes, this sex difference exhibited by their children.

Although outdoor and mechanical interests were prime examples of youth-mother and youth-father differences, clerical, social service and scientific preferences were also involved. For example, boys showed much more mechanical interest than girls (by 23.0 points). Fathers of boys hoped their sons would be less interested in mechanical by .7 of a point, while fathers of daughters hoped the reverse to the extent of 10.9 points; the difference was between —.7 and +10.9 which is shown as —11.5 in Table 5 (Fathers of Boys-Fathers of Girls)-(Boys-Girls). Also mothers of boys hoped their sons would be less interested in mechanical by 9.1 points while mothers of girls

Table 5. Average Differences, Boys' Score Minus Girls' Score, for 33 Variables

	Youths' Scores	...er Minus Youth	Mother Minus Youth
Educational	— 5.8	6.4	6.5
Outdoor	20.4*	—12.3*	—10.0*
Mechanical	23.0*	—11.5*	—10.2
Computational	3.0*	— 3.1	— 2.1*
Scientific	10.5	— 5.9	— 3.8*
Persuasive	1.6	— 1.6	— 1.1†
Artistic	— 3.2*	1.7	.8†
Literary	— 3.1	1.4	1.4
Musical	— 5.9*	2.7*	2.1*
Social Service	—10.1*	7.2	6.4
Clerical	—13.0	5.1*	4.7*

† Not a significant difference

* A state-with-sex interaction is also present.

hoped the reverse to the extent of 1.1 points; the difference shown is −10.2.

The *outdoor* scores changed by membership status and residence and were more apparent for boys than for girls. The means as seen in Table 6 show the pattern and point to the relatively low position of the nonfarm, nonmember boys on outdoor scores.

Table 6. Outdoor Score Means of Boys and Girls According to Residence and Membership

	Boys		Girls	
	Farm	Nonfarm	Farm	Nonfarm
Members	53.3	50.8	29.4	28.2
Nonmembers	51.0	42.3	30.8	27.4

Membership and residence differences appeared on the *mechanical* preference scores: a higher mean was found among farm youth (33.2) than among nonfarm youth (31.9), and among members it was 33.7 while nonmembers had 31.4.

Membership again was a "statistically significant" factor in *computational* preferences, where nonmembers' average score exceeded that of members by 1.3 points. This was, however, a slight score difference and was almost completely confined to the higher level of living youth.

Scientific preference scores were associated with level of living—averaging 39.4 for high, 38.1 for middle, and 34.9 for low level of living subpopulations. This relationship was seen to change more rapidly between low and middle than between middle and high. The nonfarm half of the sample had an average scientific preference score of 38.4 versus 36.6 for the farm half.

The *persuasive* scores were fairly uniform over the study subpopulations. A sex difference was found among the nonfarm half; 40.3 for boys versus 36.9 for girls, but not very much among the farm group; 38.4 for boys and 38.6 for girls.

The *artistic* scores followed residence and family size differences as Table 7 shows. The youth from small, farm families had notably lower scores on artistic preferences.

Table 7. Artistic Score Mean of Youth According to Residence and Family Size

	Family Size	
	Small Size	Large Size
Farm	25.2	27.6
Nonfarm	27.6	27.2

Literary scores were much the same, except for the sex differences already noted. *Musical* scores varied a bit by level of living from 13.8 to 13.2 to 12.7 from high to low levels of living. In North Carolina, however, the middle level of living group had the highest average

musical preference. On the *social service* subscale score, differences were slight.

The *clerical* scores showed changes in level by membership and level of living differences. The nonmembers scored an average of 55.3 against 53.8 for members. Along the level of living axis clerical score averages rose from 53.3 to 54.2 to 56.1 while levels of living changed from high to middle to low.

In Table 2 the effects signalled were so scattered that, other than those sex differences previously mentioned, we chose not to discuss them. In Table 3 the number of significant effects are, as in Table 2, not worthy of too much attention but the extreme level of two membership-by-residence interactions led to the presentation of table 8 showing mother-minus-youth score averages.

Membership differences were not the same among farm as among nonfarm youth. On clerical scores youth were closer to their mothers' scores among farm members and nonfarm nonmembers and showed differences (they were quite far below their mothers) among farm nonmembers and nonfarm members. Just the reverse of this pattern was found for girls on their outdoor scores; the farm member and nonfarm nonmember girls were further below their mothers' scores for them. Only the mothers of nonfarm, nonmember boys came at all close to the scores of their sons on outdoor preferences (Table 8).

Table 8. Mother Minus Youth Outdoor and Clerical Score Averages According to Residence and Membership

	Outdoor				Clerical (Youth Combined)	
	Boys		Girls			
	Farm	N. Farm	Farm	N. Farm	Farm	N. Farm
Members	−7.6	−10.2	3.5	1.4	2.4	6.3
Nonmembers	−9.6	− 4.3	1.2	2.2	5.7	3.3

Educational and Occupational Plans

The vocational questionnaire was constructed by the technical committee. Youth were asked their expectations or opinions in regard to: (1) length of schooling, (2) plans—noncollege, college, (3) degree of parental urging received to continue schooling, (4) degree of financial help—schooling, (5) occupation desired, (6) occupation expected, (7) parents' attitude toward plans, (8) parents' opinion of plans, and (9) degree of financial help—occupation. Parents of the youth were given the same questionnaire and they were asked to respond according to their expectations and opinions of their son's or daughter's future.

There was a remarkable similarity between boys and girls in their reported plans for further schooling. This similarity can be seen in Table 9. The general pattern—most youth planning to finish high school, half as many planning to finish college, with lesser numbers in other categories—was perhaps not surprising, but the point-to-point

Table 9. Length of Schooling Expected by Boys and Girls by Level of Living

Response to Length of Schooling Item	Boys Level of Living High	Mid.	Low	Total	Girls Level of Living High	Mid.	Low	Total
This will be last year	0	2	4	6	1	1	2	4
Another year or two	4	6	4	14	0	2	6	8
Finish high school	61	110	144	315	49	112	138	299
Begin college	11	13	7	31	15	13	5	33
Graduate from college	91	47	23	161	97	49	27	173
Continue professional stud	26	14	4	44	26	15	8	49
Sums	193	192	186	571	188	192	186	566

correspondence between the sexes even within level of living groups was noteworthy.[7]

The association between schooling plans and level of living can also be seen in Table 9. The transition from finish-high-school plans to graduate-from-college plans marked the high level of living sector from the other two level of living groups. The middle level of living sector also had a different distribution of plans from the low but the number of those planning to finish high school was not too distinct.

When those youth who did not plan to go to college were asked what training they expected to get, the sex difference became pronounced (see Table 10). This was due primarily to the military training option chosen by the boys and additionally to their heavy choice of the "help my father" response. The relatively few youth who said they planned to go to work immediately is worth noting.[8]

Table 10. Noncollege Plans by Boys and Girls

Response to Item on Noncollege Plans	Boys	Girls
Take training course before working	58	168
Take apprentice or on-the-job training	23	19
Go to work immediately	19	30
Help my family at home (Girls)		9
Help my father in his occupation (Boys)	41	
Marriage as soon as I leave school (Girls)		17
Do military service (Boys)	109	
Undecided	102	97
Not applicable (planning college or non-response)	220	230
Sums	572	570

Youths' perceptions of their parents' urging to continue school were related to level of living in a way that suggested that their perceptions were probably realistic. Most of the results in Tables 11 and 12 support this observation. Boys and girls were quite similar although there was a suggestion ($X^2=24.6$ on 4DF is very impressive) that mothers of girls were seen more often as encouraging their daughters

[7] Remember, the sample is "equi-partitioned" and not "representative."

[8] This also applies to the "equi-partitioned" rather than a "representative" sample.

Table 11. Boys' and Girls' Perception of Fathers' Urging to Go on to School by Level of Living

Response to Urging Item	Boys Level of Living High	Mid.	Low	Total	Girls Level of Living High	Mid.	Low	Total
Has strongly urged me to continue	115	74	48	237	104	73	49	226
Has given me some encouragement	40	68	60	168	59	53	61	173
Has never said much	30	39	55	124	24	54	56	134
Feels I should work after high school	4	10	21	35	1	8	19	28
Feels I should quit high school	3	1	0	4	0	1	0	1
Sums	192	192	184	568	188	189	185	562

Table 12. Boys' and Girls' Perception of Mothers' Urging to Go on to School by Level of Living

Response to Urging Item	Boys Level of Living High	Mid.	Low	Total	Girls Level of Living High	Mid.	Low	Total
Has strongly urged me to continue	123	84	60	267	121	99	75	295
Has given me some encouragement	33	58	56	147	52	58	60	170
Has never said much	19	34	44	97	14	28	29	71
Feels I should work after high school	5	11	20	36	1	6	20	27
Feels I should quit high school	11	4	4	19	0	0	1	1
Sums	191	191	184	566	188	191	185	564

than were mothers of boys by their sons. Paternal encouragement was perceived about the same by sons and by daughters ($X^2=3.26$ on 4DF).

In terms of financial help for schooling, boys expected to be helped in slightly more cases than girls ($X^2=9.72$ on 4DF) as can be seen from the Total columns in Table 13. Again the fairly strong association with level of living is apparent in expectations for financial help with schooling.

Table 13. Financial Help for Schooling Expected by Boys and Girls by Level of Living

Response to Financial Help Item	Boys Level of Living High	Mid.	Low	Total	Girls Level of Living High	Mid.	Low	Total
Willing to pay completely	94	63	44	201	83	59	35	177
Help a great deal	47	59	32	138	46	39	23	108
Able to give some help	47	63	82	192	55	78	88	221
Able to give no help	2	5	16	23	2	11	18	31
Would need help from me	3	2	9	14	2	3	16	21
Sums	193	192	183	568	188	190	180	558

Table 14. Financial Help for Starting Occupation Expected by Boys by Level of Living

Response to Financial Help Item	Boys Level of Living High	Mid.	Low	Total
Will give all of the help	7	4	7	18
Most of the help	104	89	73	266
Some of the help	14	19	13	46
Very little help	47	37	47	131
No financial help	20	41	43	104
Sums	192	190	183	565

As noted in Table 14, the most distinguishing items for boys in terms of financial help for an occupation were "most of the help" and "no financial help." The middle and low level of living boys were very similar to one another while the high level of living boys were more often found responding "most of the help."

Parents' expectations regarding their youths' educational and occupational plans were arranged in tables similar to Tables 9 through 14. These tables are not included here because of their similarity to those of the youth. Ideally we would like to pair the response of a child with his or her parent, characterize the kind of agreement, and then look at the association between agreement and our control variables. With such results one could locate sectors where agreement was low and thus aid in spotting value disagreements between parents and youth.

When this program of analysis was carried out on the item asking for plans for further schooling, only sex and level of living showed strong differences and Table 15 exhibits them. As one goes from youth in the lower level of living to those in a higher level the disagreement with parents increases. Generally, youth and their parents had higher expectations of schooling when they were from a higher level of living

Table 15. Agreement and Direction of Disagreement between Parents and Youth on Plans for Further Schooling by Sex and Level of Living

Degree of Agreement	Boys Level of Living High	Mid.	Low	Total	Girls Level of Living High	Mid.	Low	Total
Fathers								
Expectations greater than those of youth	47	55	41	143	45	40	35	120
Expectations in agreement with those of youth	104	109	118	331	86	108	112	306
Expectations less than those of youth	35	26	24	85	53	38	33	124
Mothers								
Expectations greater than those of youth	48	55	44	147	39	42	35	116
Expectations in agreement with those of youth	103	110	118	331	82	103	113	298
Expectations less than those of youth	35	26	22	83	62	42	32	136
Sums	372	381	367	1120	367	373	360	1100

Table 16. Agreement and Disagreement between Parents and Youth on Noncollege Plans by Sex and Level of Living

Degree of Agreement	Boys Level of Living High	Mid.	Low	Total	Girls Level of Living High	Mid.	Low	Total
Fathers								
Expectations in agreement with those of youth	16	29	33	78	18	39	53	110
Expectations different from those of youth	26	47	80	153	14	44	71	129
Mothers								
Expectations in agreement with those of youth	18	28	32	78	19	39	55	113
Expectations different from those of youth	26	47	82	155	13	44	70	127
Sums	86	151	227	464	64	166	249	479

but they did not always agree on the exact amount. This reflected, in part, the question wording which provided finely drawn distinctions concerning college plans. It should remind us, however, that where there are multiple alternatives, chances for disagreement increase. Where disagreement occurred, parents of boys, especially in the middle level of living, generally had higher expectations than their sons displayed. However, parents' educational expectations for their daughters, especially those in the high level of living group, most often were less than those of their daughters.

Disagreement regarding noncollege plans was likewise seen among parents and youth not anticipating college attendance. More similarity of noncollege plans was found among parents and daughters than among parents and sons (Table 16). Parent-youth disagreement was also more frequent among the low level of living group. This situation complements the case discussed above with regard to disagreement on plans for further schooling among the high level of living parents and youth.

The variation in agreement on parental urging by level of living can be seen in Table 17. Agreement between parents and youth was more common the higher the level of living. Boys reported having received more urging from their mothers than mothers reported having given. The amount of urging girls indicated receiving was equally above and below that reportedly given by their mothers. Fathers usually responded that they had given less urging than their sons and daughters said that they had received from them.

The kinds of occupations that youth desired and expected did not seem to vary greatly by membership, residence, or family size. Only among parents of girls did even level of living rise to an association with occupation. The nature of this relationship can be seen in Table 18 and is exactly what one might expect with the greatest level of living differences being located in preferences for the professional and technical occupations.

Table 17. Agreement and Direction of Disagreement between Parents and Youth on Parents' Urging them to Get Schooling by Sex and Level of Living

Degree of Agreement	Boys Level of Living High	Mid.	Low	Total	Girls Level of Living High	Mid.	Low	Total
Fathers								
More urging reported than was perceived by youth	24	32	45	101	25	51	42	118
Agreement with youth regarding urging given and received	108	104	65	277	108	75	66	249
Less urging reported than was perceived by youth	52	51	63	166	47	48	63	158
Mothers								
More urging reported than was perceived by youth	18	32	41	91	32	43	49	124
Agreement with youth regarding urging given and received	112	98	72	282	110	95	73	278
Less urging reported than was perceived by youth	53	55	60	168	38	40	51	129
Sums	367	372	346	1085	360	352	344	1056

Table 18. Occupations that Parents of Girls Preferred That Their Daughters Follow by Level of Living

	Fathers High	Mid.	Low	Mothers High	Mid.	Low
Professional, Tech.	128	88	72	131	95	64
Managers	1	6	1	0	4	1
Clerical	35	55	59	36	57	63
Sales	0	2	5	0	0	4
Craftsmen	0	0	1	1	0	1
Operatives	1	0	5	1	0	4
Private Housework	0	0	0	0	0	1
Service Work	8	24	28	10	25	31
Laborers	2	0	0	0	0	0
Homemakers	5	4	5	3	1	9
Sums	180	179	176	182	182	179

Summary and Conclusions

Rural ninth and tenth grade youth, approximately 288 from each of four states located in the Southern Appalachian region, were selected at random and tested as to certain of their attitudes toward an education, their educational and vocational expectations, and their vocational preferences. Both mothers and fathers of the youth were given questionnaires similar to those of the youth and were instructed to respond to them as they hoped their teenager had responded to them at school. The objectives of the study were: (1) to describe similarities and differences in educational goals of rural youth and of their parents for them; and (2) to determine the relationships of the similarities and differences in these goals to such factors as (a) geographic area; (b) state; (c) sex; (d) level of living; (e) farm or nonfarm residence; (f) family size; (g) membership in FFA, FHA, or 4-H Club.

Youth were selected at random to represent an equi-partitioned universe characterized by the following criteria: (1) rural residence; (2) enrollment in ninth and tenth grades of predominantly white county school systems having chapters of Future Farmers of America and/or Future Homemakers of America which were not located within the corporate limits of cities with 50,000 or more population. It was necessary that the selected youth be living with both parents.

As might be expected, the differences between boys and girls in regard to vocational interests, educational attitudes, as well as the degree of similarity to their parents' preferences for them, were predominant. Girls' attitudes toward an education were more favorable and were more similar to those their parents hoped they held than were boys' attitudes. The length of time that boys planned to stay in school, however, was markedly similar to girls' plans. This finding was unexpected in view of the differences that appeared between boys' and girls' evaluations of an education. It may, however, be related to the fact that boys more frequently than girls expected to receive complete or a great deal of financial help for schooling from their parents. It appears that there is a "double standard" in the requirements for education. Girls believe in the value of an education—for their brothers and some-day spouses.

Girls and boys reported considerably more "strong urging" to continue their education from their mothers than from their fathers. Burchinal (5) similarly observed that among rural tenth and twelfth grade boys in Iowa, boys talked over occupational plans with their mothers more frequently than with their fathers. In the present study, girls more often reported receiving encouragement from mothers than did boys. This stronger or more frequent maternal urging was probably responsible, in part at least, for girls' attitudes toward the value of an education.

Boys revealed a greater preference than girls for outdoor, mechanical, computational, scientific, and persuasive type activities. Girls, on the other hand, exhibited higher artistic, literary, social service, musical, and clerical interests than boys. Youth had greater sex role oriented vocational interests than their parents did for them, particularly than those of the parent of the opposite sex. Girls had higher interest than parents desired in female oriented activities such as artistic, literary, musical, and social service activities and less interest in such male related activities as outdoor, mechanical, scientific, and persuasive areas. Boys had higher outdoor, mechanical, and scientific interests and lower computational, literary, social service, musical, and literary interests than mothers and fathers preferred. Parent responses to the vocational preference test were elicited under instructions to answer as the parent *hoped* his or her son or daughter felt. It would seem likely that many of the parents' own preferences were reflected since youths' vocational interests were more similar to the responses of the parent of the same sex.

No differences between members and nonmembers of FFA, FHA, or 4-H Clubs were found in regard to attitudes toward the value of an education, nor with regard to educational or vocational plans. Does this finding imply that affiliation with such organizations has no effects on educational values nor plans? Not when this lack of difference is seen in conjunction with the fact that membership status was associated with certain vocational interests. Members' interest was higher than nonmembers' interest in mechanical and outdoor type activities and lower in clerical, computational, and literary type activities.[9] Thus the interests of members were already in areas which traditionally require lesser amounts of schooling. Their educational values and their plans for further study, however, were not noticeably less than those of nonmembers. Other membership-related differences were in the nature of interactions. The outdoor scores appeared to be in accord with the rural instincts which resonate among nonfarm, member boys but which were surprisingly restrained among girls—even the farm girls who were members. Fairly high outdoor scores were also found among the farm boys who were nonmembers. The nonfarm, nonmember boys had relatively low outdoor scores.

A greater value was placed upon an education by youth from a high or middle level of living background rather than those from a low level of living background. Youths' educational expectations increased in relation to level of living background; a college diploma was envisioned almost twice as frequently by boys and girls from a high level of living background as among middle level of living youth, and four times as frequently as among youth from a low level of living background. Youth from a high level of living background reported

[9] The findings reported here reinforce those of a similar study in North Carolina by Price (29). She found that except in the mechanical and social service areas, no significant differences were observable in the vocational preferences of members and nonmembers of Future Homemakers of America or in their attitudes toward the value of an education. Members had greater vocational interest in mechanical and social service areas than nonmembers.

having received more parental urging to continue their education than did other youth which could have accounted, in part, for their higher expectations and more favorable attitudes toward an education. Those results were not unexpected but their magnitude was still impressive.

A "lack of finances" has been found to be a frequent answer given by rural youth when asked why they did not attend college. Christiansen (7) has noted that despite the lack of relationship between reported family income and college plans, a relationship existed between rural youths' perception of their families' relative economic position and their plans for college. A perception of "above average" family income was associated with college plans. In the present study the amount of financial help for schooling that boys and girls expected to receive was seen to increase according to level of living background. The majority of all youth expected some financial help from their family. Sharp differences were noted, however, between the three level of living groups with respect to complete help, a great deal of help, and some help expected. Boys and girls from the high level of living group most frequently expected complete help whereas youth from middle and low level of living backgrounds usually expected some help. Youth from middle and particularly low level of living backgrounds when reporting lack of college plans may have been realistically appraising the financial resources that would be available to them.

The state of agreement between parents' and youths' expectations for further schooling was not too encouraging. About 57 percent of the parent-youth cases were in agreement. The direction of the disagreement varied and disagreement between youth and parents was more pronounced the higher the level of living. Sectors of frequent disagreement were higher level of living girls and their mothers, with girls reporting considerably greater educational expectations than their mothers reported. Youth-parent disagreement regarding non-college plans was more frequent among low level of living families.

Youth from high and middle level of living backgrounds displayed more scientific and musical interest than youth from the low level of living group. This scientific interest is explainable in that certain cultural advantages, generally more prevalent among upper and middle level of living groups, are known to stimulate an interest in discovering new facts and solving problems. Likewise, there may be greater emphasis and resources expended on musical interests among higher level of living families.

Residence, whether farm or nonfarm, was seldom associated with similarities or differences between rural youths' educational attitudes and plans, their vocational interests, and those that their parents hoped they held. Differences in the value youth placed upon an education according to residence were evident. Nonfarm youth placed a higher value on an education than did farm youth. That this residence difference was virtually absent among girls substantiates other studies in which residence differences have occurred for boys but not for girls

(1, 2, 11, 13). This occurrence has been explained as being related to the secondary importance girls attach to employment.

Farm and nonfarm residence were associated with differences in vocational interests. As was the case with educational attitudes, the residence differential was not always present for girls. Artistic-related activities held less interest for farm youth than for nonfarm youth. Little association with art as a medium or as a profession on the part of most farm youth could account for farm-nonfarm differences. A preference for scientific activities was significantly lower among farm than among nonfarm youth. This observation would seem to support similar studies which have shown less inquisitiveness among farm youth than among nonfarm youth.

The degree of similarity between rural youths' educational and vocational plans and their parents' preferences for them showed no relationship to size of family. A small-family background, that is, two or fewer children, was associated with youths' more favorable attitudes toward the value of an education. Parents with several children are doubtless aware of the crucial apportionment of family resources for schooling and consequently are more likely to communicate to youth less anxiety about their education than other parents. It is surprising, however, that this did not show up in differing educational plans.

The artistic interest exhibited by rural youth from families with three or more children was significantly greater than that shown by youth from smaller families. This difference, however, was confined to the farm group. Differences seen here may be accountable in that leisure time for the development of creative interests is more available in larger farm families in which there are a number of family members to share the farm responsibilities.

Data from this study lend support to the current concern over the economically deprived in that it appears that many of rural youths' educational and occupational expectations and those their parents hold for them are closely related to the family's level of living status.

Bibliography

1. Bertrand, Alvin, and Smith, M. B. *Environmental Factors and School Attendance.* Bulletin 533, Baton Rouge: A and M College and Louisiana State University, May, 1960.
2. Buck, Roy C., and Bible, B. L. *Educational Attainment Among Pennsylvania Rural Youth.* Bulletin 686, University Park: Agricultural Experiment Station, Pennsylvania State University, 1961.
3. Burchinal, L. G. *Career Choices of Rural Youth in a Changing Society.* North Central Regional Publication No. 142. St. Paul, Minnesota: Agricultural Experiment Station, University of Minnesota, 1962.
4. _____. "What About Your Daughter's Future?" *Farm Science,* 14:9-10, No. 12, Agricultural Experiment Station, Iowa State University of Science and Technology, Ames, Iowa: June, 1960.
5. _____. "Who's Going to Farm?" *Farm Science,* 14:12-15, No. 9, Agricultural Experiment Station, Iowa State University of Science and Technology, Ames, Iowa: April, 1960.
6. Carter, G. L., and Clark, R. C. (ed.). *Selected Readings and References in 4-H.* National Agricultural Extension Center for Advanced Study, University of Wisconsin, Publication No. 11. Madison, Wisconsin: June, 1961.
7. Christianson, J. R., Cowhig, J. C., and Payne, J. W. *Educational and Occupational Aspirations of High School Seniors in Three Utah Counties.* Brigham Young University Social Science Bulletin 2; in cooperation with United States Department of Agriculture, Provo, Utah: June, 1962.
8. Coster, J. K. "Attitudes Toward School of High School Pupils from Three Income Levels," *Journal of Educational Psychology,* 49:61-66, April, 1958.
9. Danley, Robert A., Ramsey, Charles E. *Standardization and Application of a Level-of-Living Scale for Farm and Non-Farm Families.* Cornell University Agricultural Experiment Station, N. Y. State College of Agriculture, Memoir 362, Ithaca, New York, 1959.
10. Douvan, E. A. "Social Status and Success Striving," *Journal of Abnormal and Social Psychology,* 52:219-223, March, 1956.
11. _____, and Adelson, J. "Psychodynamics of Social Mobility," *Journal of Abnormal and Social Psychology,* 56:31-66, January, 1958.
12. _____, and Kaye, C. "Adolescent Girls." Ann Arbor: Survey Research Center, University of Michigan, 1957.

13. Ducoff, Louis J. "Occupations and Levels of Living," *Yearbook of Agriculture*. Washington: United States Department of Agriculture, 1963.

14. Edlefsen, J. B., and Crowe, M. J. *Teenagers' Occupational Aspirations*. Bulletin 618, Pullman: Washington State Experiment Station, Washington State University, 1960.

15. Elder, Glen H. "Achievement Orientations and Career Patterns of Rural Youth," *Sociology of Education*, 37:30-58, Fall, 1963.

16. _____. *Adolescent Achievement and Mobility Aspirations*. Chapel Hill: Institute for Research in Social Science, University of North Carolina, 1962.

17. Ford, Thomas R. (ed.). *The Southern Appalachian Region: A Survey*. Lexington: University of Kentucky, 1962.

18. Grigg, Charles M., and Middleton, R. "Community of Orientation and Occupational Aspirations of Ninth Grade Students," *Social Forces*, 38:303-308, May, 1960.

19. Haller, A. O., "Research Problems on the Occupational Achievement Levels of Farm Reared People," *Rural Sociology*, 23: 355-362, December, 1958.

20. _____, and Sewell, W. M. "Farm Residence and Levels of Educational and Occupational Aspiration," *American Journal of Sociology*, 62:407-411, 1957.

21. Hieronymous, A. N. "A Study of Social Class Motivation: Relationships between Anxiety for Educational and Certain Socioeconomic and Intellectual Variables," *Journal of Educational Psychology*, 42:193-205, April, 1951.

22. Hill, George, and Hale, R. M. "Comparison of the Vocational Interests of Tenth Grade Students with Their Parents' Judgement of These Interests," *Educational and Psychological Measurement*, 18:173-183, Spring, 1958.

23. Kagan, J. and Moss, H. A. *Birth to Maturity*. New York: Wiley, 1962.

24. Kaldor, D., *et al. Occupational Plans for Iowa Farm Boys*. Bulletin 508. Ames: Iowa, Agricultural and Home Economics Experiment Station Research Station, Iowa State University, 1962.

25. Kuder, Frederic G. *Kuder Preference Record, Vocational*. Chicago: Science Research Associates, Inc., 1960.

26. Nam, Charles B., and Cowig, J. D. *Factors Related to College Attendance of Farm and Non-Farm High School Graduates*. U. S. Department of Commerce, USDA Series Census, ERS (p-27), No. 32, Washington: June 15, 1962.

27. National Program of Work. *Future Homemakers of America.* Washington: United States Office of Education and Department of Health, Education, and Welfare.

28. Parsons, T., and Bales, R. F. *Family Socialization and Interaction Process.* Glencoe, Illinois: Free Press, 1955.

29. Price, Mary Floyce. "Educational and Vocational Interests of Members of Future Homemakers of America." Unpublished Master's Thesis, The University of North Carolina, Greensboro, 1959.

30. Roe, Anne. "Early Determinants of Vocational Choice," *Journal of Counseling Psychology,* 7:212-217, 1957.

31. Schaefer, E. S., and Bayley, Nancy. *Maternal Behavior, Child Behavior and Their Interrelations from Infancy through Adolescence.* Monograph 20, No. 3, Society for Research in Child Development.

32. Schwarzweller, H. K. "Career Plans of Rural Kentucky High School Seniors," *Kentucky Farm and Home Science,* 6; No. 4., pp. 5, 6, 8. Fall, 1960.

33. _____. *Sociocultural Origins and Migration Patterns of Young Men from Eastern Kentucky.* Bulletin 685. Lexington: Agricultural Extension Service and Experiment Station, University of Kentucky, 1963.

34. Slayton, Aubrey R. "Four-H Club Members' Knowledge and Choice of Careers as Related to Certain Background Factors and a Career Exploration Project in Selected Virginia Counties." Unpublished Ph.D. thesis in cooperative Extension Administration, University of Wisconsin, August, 1962. Copies available through University Microfilms, Ann Arbor, Michigan.

35. Stevenson, R. N. "Mobility Orientation and Stratification of One-Thousand Ninth Graders," *American Sociological Review,* 22:204-12, April, 1957.

36. Straus, M. A. "Personal Characteristics and Functional Needs in the Choice of Farming as an Occupation," *Rural Sociology,* 21:257-266.

37. U. S. Department of Labor. *Man Power Challenge of the 1960's.* Washington: Government Printing Office, October, 1960.

38. Wall, Stanley. *A More Effective FFA.* Danville, Illinois: Interstate Publishing Company, 1963.

Appendix A

INSTRUMENTS

Three questionnaires were administered to the youth and to their mothers and to their fathers. Parents, interviewed after the youth, were given questionnaires corresponding to those given their teenagers and were asked to answer them as they hoped their sons or daughters answered them at school. The schedules used in the study included: the Hieronymous questionnaire, Attitudes Toward Education (21); a vocational questionnaire developed for the study by the Technical Committee; and the *Kuder Preference Record, Vocational Form* (25).

The Attitudes Toward Education scale elicited information about attitudes and opinions regarding the value of an education as well as a consideration of situations in life which reflected the value placed on education. The vocational questionnaire concerned expectations with respect to educational and vocational plans beyond high school and anticipated financial help with these plans. The *Kuder Preference Record* was designed to measure ten areas of vocational interest; outdoor, mechanical, scientific, persuasive, artistic, computational, literary, musical, social service, and clerical.

Parents also completed an information sheet relating to such data as: number of years of school attended, subject matter studied, past and present occupations.

The education of parents of the students represented a grade range of 0-19 years of schooling. In each state a median grade range of 8-10 was observed for both fathers and mothers of boys and of girls.

Appendix B

The following questionnaire is an example of the type administered to boys and to their parents. Changes occurring on the girls' questionnaire are noted. Parents of boys questionnaire was identical to that of boys and parents of girls questionnaire duplicated that of the girls. Parents were asked, for example, "How far do you expect your son (daughter) to go in school?"

STUDENT VOCATIONAL QUESTIONNAIRE FOR BOYS

INSTRUCTIONS: Read each question carefully. Then answer it according to the instructions given with the question itself.

1. How far do you expect to go in school? (check one)
   _____ This will probably be my last year
   _____ Another year or two
   _____ I intend to finish high school
   _____ I expect to start to college but probably won't finish
   _____ I expect to graduate from a four year college
   _____ I expect to continue professional study after college graduation

2. How many years do you expect to take courses in these subject in high school?

	How many more years will you take?	Check the ones you consider to be important for your future
Agriculture	_____	_____
Biology	_____	_____
Chemistry and physics	_____	_____
Commercial course (such as typing or bookkeeping)	_____	_____
English	_____	_____
Foreign language	_____	_____
Home economics	_____	_____
Industrial training	_____	_____
Mathematics	_____	_____
Social science (such as history, government, economics)	_____	_____

PLANS BEYOND HIGH SCHOOL

3. If you are not planning to attend college, what are your plans? Check the statement below that best fits your plans.

_____ Take training courses before working (such as, trades school, business college, evening vocational classes at high school, correspondence courses)
_____ Take apprentice or on the job training for skilled labor work
_____ Go to work immediately, without further job training
_____ Help my father in his occupation, farm, or business
_____ Get the military service requirement out of the way before further planning
_____ Undecided

(Girls)
If you are not planning to attend college, what are your plans? Check the statement below that best fits your plans.

_____ Take training courses before working (such as beauty school, business college, practical nursing school, evening vocational classes at high school, correspondence courses)
_____ Take apprentice or on the job training, such as for nursing aide, receptionist, etc.
_____ Go to work immediately without further job training
_____ Marriage as soon as I leave school
_____ Help my family at home
_____ Undecided

4. If you are planning to attend college, answer these questions:

a. What college will you attend? _____
(name of college)

b. What courses of study do you plan to follow in college?

_____ Agriculture
_____ Commerce
_____ Dentistry
_____ Education
_____ Engineering
_____ Fine Arts
_____ Home Economics
_____ Law
_____ Liberal Arts (social science, language, etc.)
_____ Nursing
_____ Pharmacy
_____ Physical or Biological Science
_____ Pre-Medicine
_____ Religion
_____ Veterinary Medicine

c. If you plan to enroll in agriculture, which area interests you most?
_____ Agriculture Education
_____ Agricultural Economics
_____ Agricultural Engineering
_____ Agronomy
_____ Animal and Poultry Science
_____ Dairy Processing
_____ Food Technology
_____ General Agriculture
_____ Horticulture
_____ Entomology and Plant Pathology
_____ Landscape Architecture
_____ Rural Sociology
_____ Forestry
_____ Veterinary Medicine

(Girls)
If you plan to enroll in Home Economics, which area interests you most? (check one)
_____ Child development and family relations
_____ Clothing and textiles
_____ General home economics
_____ Home economics education
_____ Foods and nutrition
_____ Interior decoration and design
_____ Home management and housing

5. As to continuing my education beyond high school, my father:
_____ has strongly urged me to continue
_____ has given me some encouragement to continue
_____ has never said much about it
_____ feels that I would be better off going to work after high school
_____ feels that I should quit high school and go to work

6. As to continuing my education beyond high school, my mother:
_____ has strongly urged me to continue
_____ has given me some encouragement to continue
_____ has never said much about it
_____ feels that I would be better off going to work after high school
_____ feels that I should quit high school and go to work

7. As to any further help from my folks in getting a start or in continuing schooling after high school, my parents would be:
_____ willing to pay my way completely
_____ financially able to help me a great deal
_____ financially able to give me some help
_____ financially able to give me no help
_____ would need financial support from me if I went to college

8. The occupations I would most like are:
1. _____ 2. _____
3. _____ 4. _____

9. What do you actually expect you will be doing as a lifetime kind of work? (Be specific as to what occupation you actually plan to follow.)

10. What do your parents think of your present occupational plans? (check one)
_____ Think I am shooting too high
_____ Think it's a good occupation and I have a chance of making it
_____ Think I should be trying for something different
_____ They say it's entirely up to me to get what I want
_____ I have never discussed it with them

(Girls)
My father's opinion is that:
_____ girls should expect to marry rather than prepare for a career
_____ a girl needs little preparation for an occupation because she will work, at most, only a few years before marrying
_____ a girl today should be prepared for both a career and marriage

_____ marriage and homemaking are not a full time occupation for women except when the children are small
_____ a girl needs preparation for a career, but not for marriage

My mother's opinion is that:
_____ girls should expect to marry rather than prepare for a career
_____ a girl needs little preparation for an occupation because she will work, at most, only a few years before marrying
_____ a girl today should be prepared for both a career and marriage
_____ marriage and homemaking are not a full time occupation for women except when the children are small
_____ a girl needs preparation for a career, but not for marriage

11. In getting a start in the occupation I have chosen, my parents:
_____ will give me all the financial help I need
_____ will give me most of the financial help I need
_____ will give me some of the financial help I need
_____ will give me very little financial help
_____ will give me no financial help at all

12. Two lists of occupations follow. One lists occupations in agriculture and one lists occupations in other areas. For each list, indicate your three choices as preferred occupations and your familiarity with each of the nine occupations.

OTHER AREAS

Check the three occupations you most prefer	Check how familiar you are with the work involved in this occupation. I know a lot about it	I know something about it	I know very little about it
_____ Research worker or chemist	_____	_____	_____
_____ Foreman, construction	_____	_____	_____
_____ Construction worker	_____	_____	_____
_____ High school teacher	_____	_____	_____
_____ Weekly newspaper editor	_____	_____	_____
_____ College professor	_____	_____	_____
_____ Real estate salesman or insurance salesman	_____	_____	_____
_____ Construction contractor	_____	_____	_____
_____ Manager of a factory	_____	_____	_____

OCCUPATIONS IN AGRICULTURE

Check the three you most prefer	Check how much you know about the work involved in this occupation A Lot	Something	Little
_____ County extension agent	_____	_____	_____
_____ Manager of a large (dairy plant, feed mill, etc.)	_____	_____	_____
_____ Farm renter and operator	_____	_____	_____
_____ College professor	_____	_____	_____
_____ Farm owner and operator	_____	_____	_____
_____ High school teacher	_____	_____	_____
_____ Manager of farm implement store	_____	_____	_____
_____ Farm laborer	_____	_____	_____
_____ Research scientist	_____	_____	_____

(Girls)

OTHER AREAS

Check the three you prefer	Check how much you know about the work involved in this occupotion		
	A Lot	Something	Little
— — College professor	____	____	____
— — Reseorch worker (chemist, etc.)	____	____	____
____ High school teocher	____	____	____
____ Weekly newspoper editor	____	____	____
____ Buyer for deportment of a lorger store	____	____	____
____ Reol estote or insurance soleswomon	____	____	____
____ Owner, monoger aportments	____	____	____
____ Office monoger	____	____	____
____ Foctory worker	____	____	____

OCCUPATIONS IN HOME ECONOMICS

Check the three you prefer	Check how much you know about the work involved in this occupotion		
	A Lot	Something	Little
____ College professor	____	____	____
____ Reseorch scientist	____	____	____
____ County home demonstration agent	____	____	____
____ High school teocher	____	____	____
____ Dietition in hospitol, or home ec. advertising or designer clothing foctory	____	____	____
____ Monoger lorge hotel, nursery, restourant, clothing store	____	____	____
____ Owner, operotor, restouront, nursery school, clothing store	____	____	____
____ Monoger and worker small clothing, furnishings store, restouront, nursery school or dressmoker	____	____	____
____ Worker in clothing, foods, furniture foctory or a cook or woitress	____	____	____