Parental perceptions of vocational agriculture supervised occupational experience programs in Iowa

by

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CHAPTER I.

INTRODUCTION[1]

Vocational agriculture instruction should contribute directly and positively to the educational philosophy and objectives of the local school curriculum of which it is a part. An important purpose of vocational education programs is training for gainful employment in an economy where occupations are continually changing. In this sense, the general aim underlying the secondary school vocational agriculture program is preparation for careers in agriculture (27, 32).

Vocational education in agriculture uses three major teaching methods to accomplish its objectives. Classroom and laboratory instruction through courses is used to transmit basic knowledge and develop skills; leadership abilities are developed through the Future Farmers of America (FFA) organization; and supervised occupational experience (SOE) provides actual involvement in performing tasks in an agricultural occupation. SOE programs involve students in scheduled occupational experiences on a job, at school, projects at the student's home or other locations in the community. Phipps (22) defined SOE as "activities of educational value conducted by students outside of class for which systematic instruction and supervision are provided by teachers, parents, employers, and other adults."

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[1]As part of Project 2150 of the Iowa Agriculture and Home Economics Experiment Station, the research procedures for this study were reviewed and approved by the Agriculture and Home Economics Experiment Station Committee on the Protection of Human Rights.

SOE is a "learning by doing" concept which aids in accomplishment of the program objectives for vocational agriculture. It also serves as a catalyst for other learning methods used in vocational agriculture programs.

SOE programs are an important means used in vocational agriculture to prepare students for careers in agriculture. The vocational agriculture teacher is primarily responsible for providing guidance, instruction and supervision of the many experiences relevant to job preparation in agriculture. The teacher must believe in the benefits derived from SOE programs and relate it to the student, school, and community. Ross and Clements (25) observed that the teacher must be enthusiastic about students' plans for participation in vocational agriculture. The teacher must be a good salesperson, informing officials, parents, and the public of the worth of SOE programs.

Effective SOE programs lead to establishment in agricultural occupations, the ultimate objective of vocational agriculture programs. Carwin (4, p. 1) supported the belief that SOE programs assist students in becoming established in their chosen occupations. He stated that SOE programs help students to: (1) understand the requirements of an occupation; (2) apply knowledge and skills learned; (3) grow into an occupation; and (4) define occupational interest and choice.

In an age of advancing technology, the demand for trained agriculturists will continue to increase. In order to fulfill the challenge, existing and new vocational agriculture programs must

continually change to meet industry and students' needs. SOE provides a means to adapt agricultural instruction to a changing industry. In a report entitled Developing Occupational Experience Programs, Christian (5, p. ii) indicated a need for continual change in agricultural education programs. He stated that:

> The changing character of the agriculture industry in our society has created a need for change in programs of agricultural education. . .(5, p. ii).

He further stated that in order to effectively meet the needs of those who will seek employment in agricultural occupations, programs in agricultural education must break the bonds of traditionalism and provide instructions and experiences previously untapped.

As programs change, new resources must be identified, and existing resources activated or reassigned. One untapped resource for vocational agricultural programs is parents of students enrolled. Parents are perhaps more influential than any other single factor in determining occupational choices of students. Campbell, Waltz, Miller and Kriger (3, p. 207) emphasized a need for involving parents in the career decision-making and planning process. They stated that:

> It is likely the future will see greater opportunity for parents to be involved with younger people on matters relating to career planning and with thinking about planning for their own careers. . .(3, p. 207).

According to Phipps (22), SOE experiences should be supervised by teachers, parents, employers, and other adults. Parents in many communities are capable and are equipped to supervise home-based SOE programs. Many parents have acquired agricultural and related

experiences from their involvement in agricultural occupations. Parents can become "teacher aides" for the vocational agriculture teacher through the day-to-day supervision of home-based SOE programs of students.

Parental assistance in SOE programs has been limited and unorganized. There is great potential for parents to assist vocational agriculture teachers in guidance, supervision and instruction relevant to initiating and conducting SOE programs for their sons and daughters. Williams (39), in A Study of Supervised Occupational Experience Programs of Iowa Vocational Agriculture Students, found that out of 18 factors, parents were rated most important in developing SOE programs as perceived by vocational agriculture students. The study was designed to determine how important students thought selected factors were in developing their SOE. It included a random sample of 300 vocational agriculture students who were seniors in 1975-76, who had either an ownership, responsibility or placement SOE program. This study showed a need for organizing and utilizing experiences of parents as a local resource in working with student SOE programs.

Statement of Problem

The use of SOE programs as an effective method in teaching vocational agriculture has declined in recent years. The decline may be attributed to a belief by teachers that parents of students do not recognize benefits derived from SOE programs or that parents are not

willing to assist with such activities. Therefore, the problem of this research was to determine the benefits derived from vocational agriculture SOE as perceived by parents of former vocational agriculture students and to assess parental assistance in developing and conducting vocational agriculture SOE programs.

Purpose of Study

The central purpose of this study was to determine the benefits students derived from vocational agriculture SOE programs as perceived by parents of vocational agriculture students and to assess parental assistance in developing and conducting SOE programs. A secondary purpose was to study the relationships between selected benefits students derived from SOE programs and parental assistance in developing and conducting SOE programs. The specific objectives of this study were to:

(1) Identify personal and situational characteristics of senior vocational agriculture students in Iowa.

(2) Identify personal and situational characteristics of parents of senior vocational agriculture students in Iowa.

(3) Determine if significant relationship exists between selected student characteristics and selected parent characteristics.

(4) Identify the benefits vocational agriculture students derived from SOE programs as perceived by parents.

(5) Determine if significant differences exist in benefits students derived from SOE when parents are grouped according to the FFA degree received by their sons and/or daughters.

(6) Determine if significant relationships exist among selected benefits derived from student SOE programs.

(7) Identify parental assistance provided in developing and conducting student SOE programs.

(8) Determine if significant differences exist in parental assistance provided in developing and conducting student SOE programs when parents are grouped according to the FFA degree received by their sons and/or daughters.

(9) Determine if significant relationships exist among ways parents provide assistance in developing and conducting student SOE programs.

(10) Determine if significant relationships exist among selected benefits and selected ways parents provided assistance in developing and conducting student SOE programs.

Significance of Study

Many beginning vocational agriculture students have supervised farming programs or other home-based SOE programs in which parental assistance is important. It is generally recognized that parents will support educational programs if they can see the benefits provided to their sons and daughters. This study will reveal how beneficial vocational agriculture SOE programs are in terms of educational and

occupational development of students. It will further reveal the assistances parents perceive themselves providing in developing and conducting SOE programs.

This study will be helpful to teachers of vocational agriculture by identifying the assistance parents can provide to student SOE programs. The identification of parent's potential will encourage teachers of vocational agriculture to utilize and activate parents' efforts in their vocational agriculture programs. The results will also provide a basis for the development of materials to acquaint parents of beginning vocational agriculture students with ways they can assist with SOE programs.

Definition of Terms

Supervised occupational experience is all the agriculture activities of educational value conducted by students outside of class for which systematic instruction and supervision are provided by their teacher, parents, employers and others (22). One common type of SOE is supervised farming programs that include productive enterprises, improvement projects, and agricultural skills. Examples of each of these components follows:

Component	Examples
a. Productive enterprise	a1. Sow and litter a2. Corn production a3. Vegetable production
b. Improvement projects	b1. Constructing terraces b2. Eradicating pests b3. Beautifying home

c. Agricultural skills	c1. Castrate pigs c2. Treat seeds c3. Dehorn cattle

Vocational agriculture is a vocational education program designed to prepare individuals for entry and advancement in agricultural occupations. It consists of three component parts: classroom-laboratory instruction, Future Farmers of America (FFA) activities and supervised occupational experience (SOE) programs.

American Farmer Degree is a FFA degree conferred by the national organization based on the following minimum qualifications: (1) must have the State Farmer Degree and have been an active member for at least the immediate past 36 months and have a record of satisfactory participation in the activities at the local Chapter and State Association; (2) must have satisfactorily completed the equivalent of at least three years of secondary school instruction in a vocational education program for an agricultural occupation; have been out of school for at least 12 months prior to the Convention at which the degree is granted, and have in operation an outstanding supervised farming and/or other agricultural occupational experience program which must show comprehensive planning, continuation, growth and increase in scope with records to substantiate such accomplishments; (3) must have earned and productively invested at least $1000 from the member's own efforts from a supervised agricultural occupational experience program; and show outstanding ability as evidenced by leadership and cooperation in student chapter and community activities and have a satisfactory scholarship (13).

Iowa (State) Farmer Degree is a FFA degree conferred by the State Association based upon the following minimum requirements: (1) have received the Chapter Farmer Degree and have been an active FFA member for at least two years; (2) while in high school, must be enrolled in at least the second year of instruction in a vocational education course for an agricultural occupation; if out of high school, must have completed two full years of instruction in addition to a supervised farming and/or other agricultural occupational experience program; (3) have earned and productively invested at least $500 by the member's own efforts or worked at least 600 hours in a supervised agricultural occupational experience program; (5) have a satisfactory scholastic record; (6) participate in the planning and completion of Chapter program of activities; (7) participate in five activities above the Chapter level; and (8) meet other requirements as established by the State Association (13).

Chapter Farmer Degree is a FFA degree conferred by the local chapter based on the following minimum qualifications: (1) must have received the Greenhand Degree; (2) must have satisfactorily completed at least one semester of instruction in vocational agriculture, have in operation an improved supervised farming and/or other agricultural occupational experience program and be regularly enrolled in a vocational agriculture class; (3) have satisfactory knowledge of the local constitution and of the local program of activities; (4) satisfactorily participated in at least three official functions in the Chapter program of activities; (5) have earned at least $50 by the member's own effort or worked 50 hours in a supervised agricultural occupational experience

program; (6) demonstrate ability to effectively lead a group discussion for 15 minutes; (7) demonstrate five parliamentary procedure abilities; (8) demonstrate progress toward achievement of an agricultural proficiency award on the local level; (9) have a satisfactory scholastic record in an agricultural course; (10) submit application for the degree for chapter records; and (11) meet other requirements as established by the Chapter and/or State Association (13).

Greenhand Degree is a FFA degree conferred by the local FFA chapter based on the following minimum qualifications: (1) be regularly enrolled in a vocational education course for an agricultural occupation and have satisfactory plans for a supervised agricultural occupation program; (2) learn and explain the FFA creed, motto and salute; (3) describe the FFA emblem colors and symbols; (4) explain the proper use of the FFA jacket and blazer; (5) have satisfactory knowledge of the history of the organization; (6) know the duties and responsibilities of the FFA members; (7) personally own or have access to Official FFA Manual; and (8) submit written application for the Degree for Chapter records (13).

Perceive being aware of or understanding.

CHAPTER II.

REVIEW OF LITERATURE

This chapter will encompass a review of literature and relevant research upon which this study was based. The review includes sections on the value of vocational agriculture and SOE in education, attitudes and influences of parents in education and career decisions of youth and parent involvement in supervised experience programs.

Value of Vocational Agriculture in Education

Vocational education is an important part of general education. Both vocational and general education are essential ingredients of education for work.

The Advisory Council of Vocational Education (31) in its report, The Bridge Between Man and His Work, stated that "vocational education is not a separate discipline within education, and must be a basic element of each person's education."

Wenrich and Wenrich (36) in discussing the difference between general and vocational education indicated the difference is not in subject matter, but in what use is made of subject matter. Some of the same subject matter are taught and learned in both vocational and general education areas. For example, in general education, science is being taught from the standpoint of understanding and using scientific principles. In vocational education science is taught as it relates to a particular occupation.

According to Cook (6, p. 3), the chief purpose of education is

> To train an individual to think, in order that he may solve problems both economic and social which he may meet in life, and to prepare for complete living. . .(6, p. 3).

Cook (6) further emphasized that the above stated purpose of education underlines the seven cardinal principles of education. The National Association of Education in 1961 recognized the above purpose of education as being compatible with vocational education (12).

Cook (6, p. 3) identified from the seven cardinal principles of education the contribution vocational agriculture makes to education. These contributions are: (1) vocational agriculture affords an opportunity for health since it provides not only classroom study of the various food elements which contribute to health, but also provides a great deal of outdoor life; (2) vocational agriculture helps the student to have a better command of fundamental processes through constructive thinking and problem-solving; (3) vocational agriculture provides wonderful training for worthy home membership in that much of the work taught applies to the home in making it a better place to live; (4) vocational agriculture through SOE programs offers the students a chance to put into practice the work studied in the classroom; (5) vocational agriculture prepares the student for efficiency in agriculture and gives him an understanding of his obligations as a citizen; (6) vocational agriculture, through Future Farmers of America (FFA) organization, offers a study of nature, and many other activities which aid in the use of leisure time, and (7) vocational agriculture, through the instructor, offers an

opportunity for developing ethical character since the instructor spends much time with the students who often try to be like him.

An education not only contributes to the development of students' ability to think and solve problems, but it also develops desirable attitudes, interests in the development of social sensitivity and resourcefulness of students (22).

Objectives of vocational education in agriculture have changed over the years due to significant pieces of legislation supporting vocational agriculture in public education. A U.S. Office of Education Publication (30, p. 4-5) identified the following objectives as the most recent governing vocational agriculture programs. They are: (1) to develop agricultural competencies needed by individuals engaged in or preparing to engage in production agriculture; (2) to develop agricultural competencies needed by individuals engaged in or preparing to engage in agricultural occupations other than production agriculture; (3) to develop an understanding and appreciation for career opportunities in agriculture and the preparation needed to enter and progress in agricultural occupations, (4) to develop the ability to secure satisfactory placement and to advance in agricultural occupations through a program of continuing education; (5) to develop those abilities in human relations which are essential in agricultural occupations; and (6) to develop the abilities needed to exercise and follow effective leadership in fulfilling occupational, social and civic responsibilities.

The promotion of these objectives is a responsibility of public education as a result of legislation and constitute areas of a well-

rounded education which should be consistent with objectives of public education.

Vocational agriculture in public schools should be available to students with interest in agricultural occupations. It also should be available to students with avocational interest in agriculture. Phipps (22, p. 2) supports this idea. He stated that:

> Agriculture education should be for everyone and public schools should offer courses to meet the needs of everyone whether funds are available or not. . .(22, p. 2).

Value of SOE in Education

Vocational agriculture is an integral part of vocational education. Vocational education disciplines are composed of three component parts. These parts collaborate and contribute to the purpose of a well-rounded education. One important part of vocational education is occupational experience. Occupational experience in vocational education provides an opportunity for students to develop skills needed to enter an occupation.

The occupational experience component of the vocational agriculture program is SOE. Christian (5, p. 1) identified the main purpose of the occupational experience phase of the program of vocational agriculture as:

> To develop entry level managerial and operative abilities under real life conditions which will enable him to secure a position in and make satisfactory progress in an agricultural occupation of his choice, whether on or off the farm. . . (5, p. 1).

He further identified seven important contributory objectives pertaining to occupational experience programs. They are: (1) to provide an opportunity for students to learn better through application on their own agricultural enterprises, the basic principles, knowledge, and skills being learned in school; (2) to provide students greater assurance of successful full-time employment upon completion of the vocational program in the high school or post-high school setting; (3) to provide students greater opportunity to gain knowledge and experience in aspects of jobs or careers not available in the school setting; (4) to provide students an opportunity to develop desirable on-the-job personality traits including learning to cooperate and work with fellow employees; (5) to provide students an opportunity to develop a sense of responsibility toward a job; (6) to serve a guidance function in providing students the opportunity to explore agricultural and agriculturally related occupations through a "try out" period; and (7) to provide an opportunity to earn while learning.

SOE is an essential and important component of vocational agriculture. McCracken (18, p. 182) described SOE and its effect on students when he stated:

> SOE is the application of knowledge and experience learned in the classroom. Teachers who develop application of instruction through occupational experiences are increasing the probability that their students will learn more effectively. . . (18, p. 182).

He continued to say that classroom instruction in vocational agriculture can be applied in three different settings: (1) school laboratory,

(2) business or industry, and (3) supervised program utilizing farm, home, or community resources.

Carwin (4), Christian (5), and Phipps (22) emphasized that SOE programs are beneficial to students. They identified a number of factors deemed valuable to the student. They are: (1) help student to make occupational choices in agriculture; (2) provide an opportunity to receive on-the-job instruction in the field of interest; (3) provide an opportunity to become trained in entry level skills; (4) provide an opportunity to grow in a selected occupation; (5) provide realistic training by having him perform in an actual job under working conditions; (6) provide an opportunity to apply at-school instruction received to the position for which he is training; and (7) provide an opportunity to earn and learn while still in school.

SOE programs are not only beneficial to students but also have a profound effect upon the school and community. Factors identified to be beneficial to the school are: (1) increase the interest and participation in school programs by the community and helps establish good relations between the school and community; (2) expand the high school vocational agriculture program by incorporating off-farm placement activities into that program at a nominal cost; (3) relieve overcrowded classrooms by having some students in on-the-job training centers during specified periods of time; (4) make students aware of the need for, and importance of, other general subjects in the high school curriculum; (5) reduce dropout problem by keeping some students in school who might otherwise leave; and (6) provide an opportunity for

the school to share in decreasing the number of unemployed. Factors beneficial to the community are: (1) develop better citizens as students discover the satisfaction of being able to hold a job and to support themselves; (2) provide graduates with vocational training for entry level positions common in the community; (3) increase employment skill levels in the community which in turn will provide incentives for industry to locate there; and (4) keep graduates in the community when jobs are available (4, 5, 21).

Carwin (4) in a report, Supervised Occupational Experience, emphasized that through SOE programs students have an opportunity to accumulate cash savings and other capital assets and that SOE programs can be an important motivating experience for students.

John Dewey was an early exponent of providing experience as part of school. He emphasized that the only adequate training for occupations is training through occupations (10).

There is a need for SOE programs as a part of the total program of vocational education in agriculture. Christian (5, p. 1) indicated that the need and value of SOE programs are grounded in the following principles of vocational education. They are: (1) vocational education in all of its phases is an integral part of the total program of education and should be in tune with prevailing time and conditions; (2) programs of instruction should be directly related to employment opportunities and determined by school officials in cooperation with occupationally concerned and competent individuals and groups; (3) the environment and facilities in which the student is prepared (trained)

should duplicate as nearly as possible the desirable conditions and environment of the occupation in which the student will sequently work; (4) the preparation the student receives should include practice in the same operation, the same types of managerial decisions as are found in the occupation itself; (5) the students should be prepared in mental habits and manipulative habits required in the occupation itself; (6) training for an occupation is carried to the point of developing marketable skills, abilities, understanding, attitudes and work habits sufficient to enable the trainee to secure the progress in a job in that occupation; and (7) the closer the time of the training to actual job entry, the more effective the training becomes.

Parental Attitudes and Influences in Vocational Education and Career Decisions

There is a need to involve parents in the career-decision making process of students. According to Campbell et al. (3), "parents portray social values which are based on inadequate information and job stereotyping that interferes with wise decision-making of a young person regarding future opportunities." Further, it was stated that "parents are in a position to impart meaningful information and experiences to young people which can be relevant to them in their decision-making."

The image and information made available to students by parents about occupations has great influence on students' perceptions and knowledge about careers. According to Smoker (26, p. 59), parents tend to guide their children away from vocational education.

He stated that:

> At the very heart of our problem is a national attitude that says vocational education is designed for somebody else's children. . . (26, p. 59).

He continued by saying that "many students who make inappropriate choices are victims of the national yearning for education prestige often because the folks wanted them to go to college."

Roe (24, p. 215), in her study of early determinates of vocational choice, concluded that vocational choice is affected by the existence of strong relationship between parent and child. She stated that:

> Early experience and later attitudes, interests and other personalities factors. . .affect the ultimate vocational direction of the individual. . .(24, p. 215).

Occupational dissatisfaction of the parent may be another factor in the formation of parental influence upon the child. According to Kazanas and Wolff (16), the dissatisfied worker is a probable source of basis perception upon the career choice of his children in school.

Hoyt et al. (15) suggested that it is essential that parents become aware of how attitudes in the home affect their children's orientation to the world of work. He further emphasized that efforts should be made to adopt, change or modify parental attitudes relating to careers.

According to Campbell et al. (3, p. 131), when involving parents in career decision-making, it is important to remember that vocational development of students can be strengthened by helping parents to: (1) understand the need for planning for future educational training possibilities, (2) understand the nature of the vocational development

process, and (3) realize the importance of allowing the student to exercise freedom of choice in decision-making.

Cook and Apolloni (7, p. 168-169) suggested that schools should develop programmatic provisions for parental involvement and participation in many and varied school activities. They further suggested 10 postulates gleaned from educational and psychological literature supporting parental involvement in schools. These 10 postulates are: (1) involved parents can do a great deal toward providing support systems for one another. They may assist one another with knowledge, skills, encouragement, and strength; (2) parental involvement may serve as a partial solution to the shortage of competent and dedicated paraprofessionals; (3) parental involvement and activism in educational systems should serve to maximize intrinsic consumer satisfaction at a time of widespread public dissatisfaction; (4) educational strategies and technologies now existing can be implemented by supervised parents to move principles developed in educational laboratories into homes and communities; (5) parental involvement seems to decrease the financial cost of education to society in the long run; (6) the discipline of applied behavior analysis has provided the insight that the behavior of children is shaped and maintained to meet the requirements of an environmental context. Moreover, naturalistic observers in psychology have reliably reported the young children spend most of their time at home, with parents; (7) a substantial body of research has shown that the period of development from 18 months to three years is of profound and lasting developmental significance. In order to provide comprehensive

educational and stimulatory activities to children of that age, parents necessarily need to be involved; (8) parents who learn to teach their children at an early stage of development have been shown to retain their skills and apply it over extended periods of time; (9) parents who develop skills in instructional and interpersonal interaction with their children have proven likely to share their knowledge with fellow parents. Thus, a "diffusion effect" occurs increasing still further the cost of effectiveness of parental involvement; and (10) parental involvement in the education of their children is further justified, since from our society's perspective, parents are both morally and legally responsible for their children's performance, behavior and development.

In a study by Doss (11), designed to determine the influence parents' careers exert on career ambitions of 156 fourth graders, it was concluded that: (1) very few fourth graders (six percent) had any desire to pursue the career of their parents; (2) approximately three percent would least like to pursue their parents' careers; (3) approximately 96 percent aspired to graduate from high school; and (4) approximately 84 percent planned to finish college. It can be concluded from this study that most children no longer aspire to follow the careers of their parents.

In another related study by Werts and Watley (37) to examine the relationship between the occupations of fathers and the skills developed by their children, results indicated fathers directly and/or indirectly encourage their sons to develop specific skills which the father himself

has acquired; in turn, he also discouraged those skills which he himself had not developed. The study involved 127,125 students entering 248 four-year colleges and universities in 1961.

In a study of the influences on educational choice, Parker (21) reported that boys cited their fathers, mothers, teachers, older brothers or sisters, and other adults in that order to have influence on their educational choices; among the girls, the relative position of mother and father was reversed. Stienke and Kaczkowski (28), in another related study entitled Parents Influence the Occupational Choice of Ninth Graders, it was concluded that parents, relatives or friends, and persons who themselves held the preferred occupations were reported in that order to have influenced the occupational preferences of ninth graders. Super (29) regards as key figures those persons who influence another vocational development in one of several ways: Those with whom the developing person identifies vocationally, those who function as occupational role models, those who provide him with the information upon which he bases his occupational decisions or those who influence his choice at successive stages.

Waters (34) reported in a study designed to demonstrate that if parents were given information about their child, his interests, skills and competencies, information about the world of work and practice in simulated career decision-making, they will transmit this training to their child. Twenty parents of tenth and eleventh grade students were asked to volunteer for six training sessions with the school counselor

to acquire skills to enable their child to explore career alternatives. Evaluation of the results of this study revealed that: (1) parents in the experimental group did transmit some career knowledge obtained in the training sessions to their child, and (2) parents and students demonstrated an improved proficiency in career decision-making determined by a simulated situation test.

Gordon (14) suggested that in addition to influencing children's values by modeling, parents can use one other approach to teach what they feel is right or wrong. This approach is the sharing of ideas, knowledge and experience.

Parent Involvement in Supervised Experience Programs

Parents are interested and concerned about work experience programs involving students. Therefore, they should be involved. Law (17, p. 13) mentioned parents' interest and concern for work experience programs when he wrote:

> A cooperative education program, as it is an important transition from childhood and school to work in the adult world, is surely a matter of interest and concern for parents. For more than the selection of any high school subject the commitment to payroll employment training represents a vital step in a young person's school career, one which calls for the informed support and approval of parents. . . .(17, p. 13).

Cushman et al. (9) reported in a study designed to determine the concerns and expectations of students, parents, and employers regarding prospective participation in work experience programs, it was found that

parents were principally concerned about transportation, employers, adequacy of on-the-job supervision and interference with other activities. Parents expected credit toward graduation, insurance coverage, and good employers. The study involved 105 agriculture students, one or both parents and 52 prospective employers.

Weir (35) suggested that factors relating to vocational choice and career planning of students should be discussed with parents. He further suggested that in order for work experience programs to be effective it is necessary that parents understand the vocational aims of the program and how the program will function.

Parents are involved more extensively in the initial stage of planning students' work experience programs. The initial stage begins with informing parents about work experience programs through conferences and individual contact.

Rath (23, p. 210) identified five purposes for arranging conferences with parents: (1) to understand the student, (2) to utilize this understanding in developing the student vocational program, (3) to interpret the program to the parent, (4) to enlist the aid of the parent in the program, and (5) to enable the teacher to know firsthand the "grass roots" philosophy of the community. She went on to say the following about the value of parent conferences:

> To understand the student-learner the teacher must be aware of the student background, social milieu, and the attitudes of his parents. During a parent conference the teacher can become aware of many of the following things: (1) relationship between the

> student-learner, his parents, and the brothers and sisters. For example, he might be able to tell whether the student-learner may be striving to imitate the successes of an older brother or sister or whether parents are influencing the student-learner. . .(2) the family's status can be noted more readily through home visitation but it may also reveal itself during a school conference. . .(3) physical health conditions concerning either the student-learner or his immediate family come to surface. . .(4) ideological affiliation can be determined. . . (5) the success of the parents in their roles of responsibility for the family becomes obvious. . .(23, p. 210).

Weir (35, p. 71) agrees that parent conferences are one of the most effective methods of orienting and involving parents in work experience programs of students. He stated that:

> The ideal place to hold the conference would be at the home of the student. Most parents would feel freer to discuss the school, work experience program, and their child in their home environment. By holding the conference at home, the teacher can see as well as listen to the beliefs of the parents to their values, and their aspirations (35, p. 71).

A North Dakota manual (20) stated that the main objectives of home conference are: (1) to explain and interpret the program, (2) to orient the parents concerning the parents' and student's responsibilities in the program, (3) to become acquainted with the student's background, (4) to assist in developing the student-learner's vocational plans with the parents and student, (5) to determine the parents' interest in the program, (6) to determine the parent-student relationship, (7) to gain assistance from the parents in the guidance and placement of the student, (8) to determine the grass roots philosophy of the community, (9) to discuss the income to be received or being received from the employment

and any implications, (10) to discuss and correct any difficulties in fulfilling a duty or responsibility, (11) to commend good work and to seek assistance in improving student's performance, and (12) to broaden and improve home and school relations.

Blendon (1) suggested that parents can be reached and involved through the use of some of the following devices: Describe the program at a scheduled meeting of the home school association; invite employment managers to explain their job opportunities in their community; arrange for students in the program and graduates to tell about their experiences; ask parents of students enrolled in the program to inform the group of the benefits and advantages; permit parents to observe school-work classes; and prepare appropriate literature for distribution to parents of interested students.

Parental involvement in supervised experience programs has been limited and unorganized in past years. For example, early writings by Cook (6, p. 232) portray the limited involvement of parents in vocational agriculture SOE programs when he wrote:

> Many times an instructor may take for granted that everybody knows that if a boy enrolls in the agricultural course he must do the supervised practice necessary. He may wait until school opens before explaining the proposition to the boys, and after he has explained it tells each boy to go home and find out what he can have for a project. He informs them that he does not understand much about it. . . . The parents have perhaps heard something of such work, so they tell the boy he can have something if the teacher requires it. The boy goes back to school and notifies the teacher he can have a pig project, so the teacher asks the boy to take home a written agreement requesting the father to sign it. . .the father signs it (6, p. 232).

Many vocational agriculture programs have been and still are victims of this image.

CHAPTER III.

DESIGN AND METHODOLOGY

This chapter describes the design, the population for the study, the sampling procedure, the development of instrument, the method of data collection, and the analyses of the data.

Design

The design for this investigation was causal-comparative method. Borg and Gall, in Educational Research (2, p. 297), stated that:

> The causal-comparative method is aimed at the discovery of possible causes of a behavior by comparing subjects in whom this pattern is present with similar subject in whom it is absent.

They further stated that the causal-comparative method is often used instead of the experimental method to test research hypotheses about cause-and-effect relationships.

Borg and Gall (2, p. 298) pointed out that:

> The limitation of causal-comparative research is that one cannot infer causes and effect of findings. All that can be concluded is that a relationship between two variables exists.

Borg and Gall (2, p. 298) further stated that "despite this limitation the causal-comparative method can be used to identify possible causes and thus give direction to later experimental studies that are more likely to produce clear-cut results."

Population

The population for this study was the parents of Iowa vocational agriculture students who were high school seniors in 1976-77. This population was divided into four subpopulations based on the highest FFA degree received by the students. The subpopulations were: (1) parents of students who held the Iowa Farmer Degree, (2) parents of students who held the Chapter Farmer Degree, (3) parents of students who held the Greenhand Degree, and (4) parents of students who held no FFA degree.

Selection and identification

Vocational agriculture teachers in the 255 Iowa public schools offering vocational agriculture were asked to assist in the identification of the population. A questionnaire with a cover letter and a postage-paid envelope was mailed to each of the 255 vocational agriculture departments on June 6, 1977. Three follow-up mailings were made at two-week intervals to non-respondents. Teachers were asked to list parents' names and addresses of all their vocational agriculture students who were classified as seniors and the highest FFA degree attained by the students. The procedures identified 1,983 students in 206 schools. Forty-nine schools did not provide names and addresses requested.

The materials mailed to each Iowa vocational agriculture department in identifying the population appear in Appendix A.

Sample

The population was divided into four subpopulations based on the highest FFA degree received by the students. A random sample was drawn from each of the subpopulations and identified by groups as follows:

Group 1 - Parents of 100 students who had attained no FFA degree.

Group 2 - Parents of 96 students who had attained the Greenhand Degree as their highest FFA degree.

Group 3 - Parents of 150 students who had attained the Chapter Farmer Degree as their highest FFA degree.

Group 4 - Parents of 100 students who had attained the Iowa Farmer Degree as their highest FFA degree.

Instrument Construction

A three-part questionnaire was developed for this study. Part I of the questionnaire gathered data on selected personal and situational variables. Part II assessed parents' perception of the benefits their sons and/or daughters received from SOE programs. Part III assessed the assistance parents had given their sons and/or daughters in developing and conducting their SOE programs.

Instrument items for Parts II and III of the questionnaire were identified and compiled from a review of literature. The items were reviewed by a panel of jurors consisting of faculty and staff members in the Department of Agricultural Education. This procedure reduced the instrument to 40 benefit items and 30 assistance items.

Selection and use of scale

A 1 to 99 point response scale was used to assess perceived benefits and assistance. The number 99 indicated "much benefit" or "much assistance", 50 indicated "average benefit" or "average assistance", and 1 indicated "no benefit" or "no assistance". Directions for responding were provided for each part of the questionnaire.

The 1 to 99 scoring scale was used because research indicates that longer scales have more discrimination power than shorter scales (38). A study by Warren, Klonglan and Sabri (33) supported the 1 to 99 scale on the basis of reliability.

Testing of instrument

To ensure clarity and understanding of items on the questionnaire, a draft of the instrument was field tested. Selected vocational agriculture teachers were asked to assist in the identification of field test participants. Participants, both parents of vocational agriculture students, were asked to complete the questionnaire and make comments and suggestions that would improve clarity of directions and items. This form of the questionnaire with a cover letter and postage-paid envelope was mailed to the home of field test participants on August 25, 1977. A follow-up phone call was made three days later. The field test participants were parents of 1975-76 high school graduates who were former students of vocational agriculture. A cover letter and names and addresses of field participants appear in Appendix B.

After careful consideration of the comments and suggestions made by field test participants, revisions were made and printed in final form. The questionnaire appears in Appendix C.

Data Collection

The questionnaire with a cover letter was mailed to the home of 446 parents included in the samples on October 28, 1977. Each questionnaire was coded with three numbers. These numbers identified participants by individual and group. Four follow-up mailings were made at two-week intervals to non-respondents. Directions indicated that both parents should work together and give a single response.

A definition of SOE, the thrust of agricultural education at Iowa State University and the importance of parents' efforts in the study were specified in the cover letter and questionnaire. The materials mailed to each respondent appears in Appendix D. Table 1 gives the sample size and response rate for each of the four groups.

Data Analysis

A coding system was developed, and the data were keypunched by the Computer Center at Iowa State University. The coding system appears in Appendix E.

Data in Parts II and III of the questionnaire were transformed so that a scale value of 1 received a -2.33 normal deviate rating, a scale value of 50 received a 0.00 normal deviate rating, and a scale value of 99 received a 2.33 normal deviate rating (33, p. 10). To eliminate

Table 1. Sample size and response rate

Parent group[a]	Number in sample	Number returned	Percent returned	Number usable	Percent usable
	N	N	%	N	%
Group 1	100	61	61	51	51
Group 2	96	64	67	44	46
Group 3	150	105	72	100	70
Group 4	100	92	92	87	87
Total	446	322	73	282	63

[a]Group 1 = parents of students who attained no FFA degree; Group 2 = parents of students who attained the Greenhand Degree; Group 3 = parents of students who attained the Chapter Farmer Degree; Group 4 = parents of students who attained the Iowa Farmer Degree.

negative numbers and decimal points, the results of the normal deviates were multiplied by 100 and then added to a constant of 500.

The following FORTRAN (8) and Statistical Package for the Social Sciences (SPSS) (18) were used to analyze the data:

(1) Ratings for each response were transformed to normal deviations using a FORTRAN WAT FIV Program.

(2) SPSS subprogram - FREQUENCIES, CROSSTABS AND CHI SQUARES were used to assess personal and situational variables.

(3) SPSS subprogram - ONE-WAY ANALYSIS OF VARIANCE was used to test for significant differences among the four groups on each of the 40 benefit and 30 assistance items. The Scheffé

test was used to identify significant differences among groups at the .05 level of probability.

(4) SPSS subprogram - FACTOR ANALYSIS was used to identify cluster benefit and assistance factors.

(5) SPSS subprogram - PEARSON CORRELATION was used to determine inter-item relationships between benefit items, between assistance items, and between benefit and assistance items.

CHAPTER IV.

FINDINGS AND DISCUSSION

The primary purpose of this study was to determine the benefits students derived from vocational agriculture SOE programs as perceived by parents of vocational agriculture students and to assess parental assistance in developing and conducting SOE programs.

The findings of this study are based upon data collected from 283 parents grouped according to highest FFA degree attained by vocational agriculture students who were seniors in 1976-77. The groups were: (1) parents of students who attained no FFA degree, (2) parents of students who attained the Greenhand Degree, (3) parents of students who attained the Chapter Farmer Degree, and (4) parents of students who attained the Iowa Farmer Degree. Table 1 summarized the sample size and response rate of each group. The total response shows a 73 percent return from 446 parents to whom questionnaires were mailed. Total usable returns from respondents were 10 percent less than total returns. Groups 1 and 2 accounted for most of the difference between returns and usable returns. A majority of these parents indicated they were not interested in nor knowledgeable of the vocational agriculture program. Therefore, they returned the questionnaire uncompleted. This may be a justification of the low response in the study. Group 4 (parents of students who attained the Iowa Farmer Degree) showed the greatest total returns of 92 percent and greatest usable returns of

87 percent. Parents of students who attained the Chapter Farmer Degree showed a 72 percent total return and a 70 percent usable return.

The findings of this study are divided into the following sections:

(1) Personal characteristics of students.

(2) Personal characteristics of parent (fathers).

(3) Benefits derived from vocational agriculture SOE programs.

(4) Cluster analysis and correlations between benefits derived from SOE programs.

(5) Parental assistance provided in developing and conducting student SOE programs.

(6) Cluster analysis and correlations between ways parents assisted in developing and conducting SOE programs.

(7) Correlations between benefits derived from students' SOE programs and parental assistance provided.

Personal Characteristics of Students

Table 2 summarizes the years of vocational agriculture completed by students who received different FFA degrees. Sixty-five percent of all students had completed four years of vocational agriculture. Another eight percent had completed three years. Almost all (97.7 percent) of the Iowa Farmer Degree students and 80 percent of the Chapter Farmer Degree students had completed four years of vocational agriculture while enrolled in high school compared to 15.7 percent and 25 percent of the Greenhand Degree students and students with no FFA

Table 2 . Years of vocational agriculture completed by students

Years of vocational agriculture	Group 1[a]		Group 2[a]		Group 3[a]		Group 4[a]		Total	
	No.	%[b]	No.	%[b]	No.	%[b]	No.	%[b]	No.	%[c]
One	21	47.7	21	41.2	1	1.0	00	0.0	43	15.2
Two	9	20.5	16	31.4	6	5.9	00	0.0	31	10.9
Three	3	6.8	6	11.8	13	12.9	2	2.3	35	8.5
Four	11	25.0	8	15.7	81	80.2	85	97.7	185	65.4
Total	44	100.0	51	100.0	101	100.0	87	100.0	283	100.0

[a]Group 1 = students with no FFA degrees; Group 2 = students with Greenhand degrees; Group 3 = students with Chapter Farmer degrees; Group 4 = students with Iowa Farmer degrees.

[b]Percentage of N for each group.

[c]Percentage of total sample.

degree, respectively. Almost one-half (47.7 percent) of the students with no FFA degree had completed only one year of vocational agriculture.

Table 3 summarizes the types of SOE programs participated in by students according to highest FFA degree. Only four percent of the students did not participate in an SOE program while enrolled in vocational agriculture.

Seventy-nine percent of the students participated in a farming program during their vocational agriculture program. Slightly less than one-half (44 percent) of the students participated in a farm placement program and 23 percent of the students participated in agribusiness placement. School laboratories were used by 47 percent of the students to obtain occupational experience. One-third (33 percent) of the students participated in exploratory experience programs at some time in vocational agriculture.

Almost one-half (45 percent) of the students participated in more than one type of occupational experience program. It was observed that 16 percent of the students with no FFA degree did not have an SOE program while enrolled in vocational agriculture.

The most important type of SOE program that students had as perceived by parents is reported in Table 4. Almost two-thirds (64 percent) of the parents felt that farming programs were the most important type of SOE for their sons and daughters. Approximately 20 percent felt that employment on a farm or employment in an agribusiness was the most important.

Table 3. Types of SOE students participated in while enrolled in vocational agriculture

Types of SOE programs	Group 1[a]		Group 2[a]		Group 3[a]		Group 4[a]		Total	
	No.	%[b]	No.	%[b]	No.	%[b]	No.	%[b]	No.	%[c]
Farming program	20	45.5	33	64.7	86	85.1	86	98.9	225	79.5
Employment on farm	8	18.2	23	45.1	49	48.5	46	52.9	126	44.5
Employment in agribusiness	4	9.1	8	15.1	28	27.7	26	29.9	66	23.3
Laboratory	12	27.3	18	35.3	52	51.5	50	57.5	132	46.6
Exploratory	12	27.3	17	34.3	35	34.7	29	33.3	93	32.8
None	7	15.9	3	3.9	2	3.0	00	0.0	12	4.2

[a]Group 1 = students with no FFA degree (N = 44); Group 2 = students with Greenhand degrees (N = 51); Group 3 = students with Chapter Farmer degrees (N = 101); Group 4 = students with Iowa Farmer degrees (N = 87).

[b]Percentage of N for each group.

[c]Percentage of total sample.

Table 4. Most important type of student SOE program as perceived by parents

Type of SOE program	Group 1[a]		Group 2[a]		Group 3[a]		Group 4[a]		Total	
	No.	%[b]	No.	%[b]	No.	%[b]	No.	%[b]	No.	%[c]
Farming program	17	38.6	26	51.0	70	69.3	68	78.2	181	64.0
Employment on farm	3	6.8	6	11.8	12	11.9	6	6.9	27	9.5
Employment in agribusiness	6	13.6	6	11.8	8	7.9	9	10.3	29	10.2
Laboratory	4	9.1	6	11.8	7	6.9	1	1.1	18	6.4
Exploratory	2	4.5	1	2.0	0	0.0	0	0.0	3	1.1
Other and no response	12	27.2	6	11.8	4	4.0	3	3.4	25	8.8
Total	44	100.0	51	100.0	101	100.0	87	100.0	283	100.0

[a]Group 1 = parents of students with no FFA degree; Group 2 = parents of students with Greenhand Degree; Group 3 = parents of students with Chapter Farmer Degrees; Group 4 = parents of students with State Farmer Degrees.

[b]Percentage of the N for each group by column.

[c]Percentage of the total sample by column.

Over 50 percent of the parents in each group, except parents of students with no FFA degree, indicated that farming programs were the most important SOE for their sons and daughters.

Future occupations of students as perceived by parents are repeated in Table 5. Thirty-seven percent of the parents indicated that their sons or daughters planned to enter farming. Another 20 percent planned to enter off-farm agribusiness occupations. Approximately 28 percent indicated plans for non-agricultural occupations. It is interesting to note that a higher percentage (45 percent) of the Chapter Farmer Degree students than the Iowa Farmer Degree students (39.1 percent) planned to farm. It was observed that 30 percent of the students with no FFA degree had plans to enter an agricultural occupation.

Personal Characteristics of Parent

This section describes the personal characteristics of parents and tests for significant relationships between selected personal characteristics of students and their parents.

Parents' place of residence are summarized in Table 6. Eighty-one percent of the parents lived on farms. A high percentage of the parents in all four groups lived on farms. It is interesting to note that only 5.7 percent of the parents of Iowa Farmer Degree students did not live on farms.

Data pertaining to father's highest FFA degree attained while enrolled in vocational agriculture are reported in Table 7. Seventy-four percent of the parents had received no FFA degree. Twenty-one percent

Table 5. Future occupations of students as perceived by parents

Future occupation	Group 1[a]		Group 2[a]		Group 3[a]		Group 4[a]		Total	
	No.	%[b]	No.	%[b]	No.	%[b]	No.	%[b]	No.	%[c]
Farmer	8	18.2	16	31.4	46	45.5	34	39.1	104	36.9
Agribusiness	5	11.4	8	15.7	15	14.9	30	34.5	58	20.5
Non-agricultural related	22	50.0	20	39.2	28	27.7	10	11.5	80	28.3
Don't know and no response	9	20.5	7	13.7	12	11.9	13	14.9	41	14.5
Total	44	100.0	51	100.0	101	100.0	87	100.0	283	100.0

[a]Group 1 = students with no FFA degree; Group 2 = students with Greenhand degree; Group 3 = students with Chapter Farmer degree; Group 4 = students with Iowa Farmer degree.

[b]Percentage of N for each group.

[c]Percentage of total sample.

Table 6. Parents' place of residence

Place of residence	Group 1[a]		Group 2[a]		Group 3[a]		Group 4[a]		Total	
	No.	%[b]	No.	%[b]	No.	%[b]	No.	%[b]	No.	%[c]
On farm	27	61.4	38	74.5	83	82.2	82	94.3	230	81.2
Off farm	17	38.6	13	25.5	18	17.8	5	5.7	53	18.8
Total	44	100.0	51	100.0	101	100.0	87	100.0	283	100.0

[a]Group 1 = parents of students with no FFA degree; Group 2 = parents of students with Greenhand degree; Group 3 = parents of students with Chapter Farmer degree; Group 4 = parents of students with State Farmer degree.

[b]Percentage of N for each group.

[c]Percentage of total sample.

Table 7. Father's highest FFA degree attained while enrolled in vocational agriculture

FFA degree received	Group 1[a]		Group 2[a]		Group 3[a]		Group 4[a]		Total	
	No.	%[b]	No.	%[b]	No.	%[b]	No.	%[b]	No.	%[c]
None and no response	40	90.9	39	76.4	77	76.3	53	60.9	209	73.8
Greenhand	3	6.8	8	15.7	5	5.0	4	4.6	20	7.1
Chapter Farmer	1	2.3	4	7.8	17	16.8	19	21.8	41	14.5
Iowa Farmer	0	0.0	0	0.0	1	1.0	10	11.5	11	3.9
American Farmer	0	0.0	0	0.0	1	1.0	1	1.1	2	0.70
Total	44	100.0	51	100.0	101	100.0	87	100.0	283	100.0

[a]Group 1 = fathers of students with no FFA degree; Group 2 = fathers of students with Greenhand degree; Group 3 = fathers of students with Chapter Farmer degree; Group 4 = fathers of students with Iowa Farmer degree.

[b]Percentage of N for each group.

[c]Percentage of total sample.

had received degrees (Greenhand or Chapter Farmer) awarded by the local FFA chapter. Four percent received FFA degrees awarded on the State level. The American Farmer Degree had been received by less than one percent of the parents. Only nine percent of the parents of students with no FFA degree and only 23 percent of the parents of students with Greenhand Degrees had received an FFA degree, none of which were above the Chapter level.

A significant relationship existed between father's years of vocational agriculture completed in high school and student's highest FFA degree as indicated by the chi-square value of 12.38 reported in Table 8. Sixty-one percent of the parents were not enrolled in high school vocational agriculture. Fifteen percent completed one to three years of vocational agriculture and 24 percent completed four years.

The chi-square value of 7.56 reported in Table 9 indicated that no significant relationship existed between years of vocational agriculture completed by fathers and years of vocational agriculture completed by students. Only 39 percent of all parents were enrolled in vocational agriculture while in high school.

Table 10 summarizes father's occupation. Seventy-two percent were engaged in farming. Eight percent in agribusiness and 20 percent in non-agricultural related occupations. A significant chi-square value of 18.40 was observed indicating a significant relationship existed between father's occupation and student years of vocational agriculture.

Table 8. Chi square test for relationship between father's years of vocational agriculture completed and student's highest FFA degree

Years of vocational agriculture	Frequency of response									
	Group 1[a]		Group 2[a]		Group 3[a]		Group 4[a]		Total	
	No.	%	No.	%	No.	%	No.	%	No.	%
None	28	10.2	31	11.3	62	22.6	46	16.8	167	60.9
Less than 4 years	6	2.2	11	4.0	14	5.1	10	3.6	41	15.0
4 years	6	2.2	6	2.2	24	8.8	30	10.9	66	24.1
Total	40	14.6	48	17.5	100	36.5	86	31.6	274	100.0
								Chi square = 12.38*		

[a]Group 1 = students who attained no FFA degree; Group 2 = students who attained the Greenhand Degree; Group 3 = students who attained the Chapter Farmer Degree; and Group 4 = students who attained the Iowa Farmer Degree.

*Significant at the .05 level of probability.

Table 9. Chi square test for relationship between father's years of vocational agriculture completed and student's years of vocational agriculture completed

Father's years of vocational agriculture	Students' years of vocational agriculture									
	One year		Two years		Three years		Four years		Total	
	No.	%	No.	%	No.	%	No.	%	No.	%
None	29	10.6	16	5.8	16	5.8	107	39.1	168	61.3
Less than 4 years	7	2.6	6	2.2	5	1.8	23	8.4	41	15.0
4 years	6	2.2	5	1.8	3	1.1	51	18.6	65	23.7
Total	41	15.3	27	9.9	24	8.8	181	66.1	274	100.0

Chi square = 7.56 ns

Table 10. Chi square test for relationship between father's occupation and student's years of vocational agriculture completed

Father's occupation	Student years of vocational agriculture									
	One year		Two years		Three years		Four years		Total	
	No.	%	No.	%	No.	%	No.	%	No.	%
Farmer	23	8.2	19	6.8	14	5.0	147	52.3	203	72.2
Agribusiness	3	1.1	3	1.1	3	1.1	12	4.3	21	7.5
Non-agricultural related	16	5.7	9	3.2	7	2.5	25	8.9	57	20.3
Total	42	14.9	31	11.0	24	8.5	184	65.5	281	100.0
									Chi square = 18.40**	

**Significant at .01 level of probability.

Table 11. Chi square test for father's occupation and student's highest FFA degree

Father's occupation	Student's highest FFA degree									
	No degree		Greenhand		Chapter Farmer		Iowa Farmer		Total	
	No.	%	No.	%	No.	%	No.	%	No.	%
Farmer	22	7.8	32	11.4	79	28.1	70	24.9	208	72.2
Agribusiness	5	1.8	2	0.7	6	2.1	8	2.8	21	7.5
Non-agricultural related	17	6.0	16	5.7	15	5.3	9	3.2	57	20.3
Total	46	15.7	50	17.8	100	35.6	87	31.0	281	100.0
								Chi square = 23.56***		

***Significant at .001 level of probability.

Table 12. Chi square test for relationship between father's occupation and future occupations of son or daughter as perceived by parents

Father's occupation	Future occupation of son or daughter									
	Don't know		Non-agricultural		Agribusiness		Farmers		Total	
	No.	%	No.	%	No.	%	No.	%	No.	%
Farmer	90	33.1	41	15.1	93	15.8	21	7.7	198	71.7
Agribusiness	3	1.1	6	2.2	8	29.0	4	1.5	21	7.7
Non-agricultural related	11	4.0	11	4.0	28	10.3	6	2.2	56	20.8
Total	104	38.2	50	21.3	79	29.0	31	11.4	272	100.0
								Chi square = 25.52***		

***Significant at .001 level of probability.

A significant relationship existed between father's occupation and student's highest FFA degree as indicated by the chi-square value of 23.56 reported in Table 11.

The chi-square value of 25.52 reported in Table 12 shows a significant relationship existed between father's occupation and future occupations of sons and daughters.

Benefits Derived From Students' SOE Programs

Analysis by total sample

Table 13 presents the means, standard deviations and F-ratios for benefits derived from student SOE programs as perceived by the total sample and subgroups of parents. The benefit items are listed in the table in rank order based on means for the total sample.

The mean ratings for all parents ranged from 490 to 574. All but one item, "Improve school attendance until graduation," had means above 500, indicating that parents perceived SOE to be beneficial (average benefit or above) to their sons and daughters.

The five most important (items with highest means) were: (1) promote the acceptance of responsibility, (2) develop self-confidence, (3) develop pride in ownership, (4) develop independence, and (5) provide an opportunity to learn on his/her own. It is interesting to note that all five of these benefits pertain to general human development. Items with specific agricultural orientation were not among the greatest benefits derived from SOE as perceived by parents.

Table 13. Means, standard deviations and F-ratios for benefits derived from students' SOE as perceived by total sample and subgroups of parents

Benefits[a]	Total Sample Mean S.D.	Group 1[b] Rank	Group 1[b] Mean S.D.
Promoted the acceptance of responsibility	574.12 103.67	3	544.30 104.40
Developed self-confidence	568.52 101.74	4	543.34 113.36
Developed pride in ownership	565.54 111.43	8	528.22 121.09
Developed independence	563.62 102.64	2	545.44 113.80
Provided an opportunity to learn on his/her own	560.32 96.21	6	534.63 117.95
Developed pride in employment	559.24 110.41	1	547.15 121.41
Encouraged the production of animals and crops	558.33 115.08	22	500.30 140.32

[a]Benefits are listed in rank order based on means for the total sample.

[b]Group 1 = parents of students who attained no FFA degree (N = 44); Group 2 = parents of students who attained the Greenhand Degree as their highest FFA degree (N = 51); Group 3 = parents of students who attained the Chapter Farmer Degree as their highest FFA degree (N = 101); Group 4 = parents of students who attained the Iowa Farmer Degree as their highest FFA degree (N = 87).

**Significant at the .01 level of probability.

Group 2[b]		Group 3[b]		Group 4[b]		F-ratio
Rank	Mean S.D.	Rank	Mean S.D.	Rank	Mean S.D.	
7	517.17 123.12	1	571.78 91.74	2	624.93 79.38	15.09** (4>3,1 3>2)
8	516.61 117.22	5	563.02 84.47	4	617.18 83.56	13.55** (4>3,2,1)
14	511.65 125.34	3	564.71 95.03	5	616.35 93.90	13.05** (4>1, 3>2)
17	508.27 117.01	6	557.92 89.98	6	611.10 80.76	13.10** (4>3, 3>2)
5	519.50 98.18	2	566.38 85.12	16	589.60 84.73	7.33** (4>3, 1>2)
9	513.87 125.97	4	563.76 90.78	18	586.60 108.15	5.01** (4>2)
6	519.27 122.36	12	548.28 101.60	3	621.51 78.21	16.95** (4>3,2,1)

Table 13. Continued

Benefits[a]	Total Sample Mean S.D.	Group 1[b] Rank	Group 1[b] Mean S.D.
Built a working relationship with other students	555.86 97.99	12	515.15 100.34
Developed an appreciation for work	553.25 94.66	5	542.13 100.34
Developed initiative	553.04 103.39	13	514.02 114.59
Promoted student-vocational agriculture teacher relationship	552.66 114.48	19	502.76 116.54
Developed abilities in cooperation	549.36 92.60	11	521.69 111.84
Provided an opportunity to plan work	548.43 94.26	7	531.51 105.21
Promoted interest in agricultural studies	548.66 112.82	29	485.20 126.95
Provided an opportunity to make decisions	548.78 92.62	9	525.60 111.91
Provided an opportunity to solve problems	547.59 91.00	10	519.13 114.84
Provided motivation for learning	546.96 107.98	16	507.63 128.08
Developed citizenship traits	544.24 102.18	20	502.42 97.63
Encouraged the keeping of records	544.61 120.74	21	507.88 113.87
Provided an opportunity to put plans into action	543.56 90.48	15	500.55 109.05

Group 2[b]		Group 3[b]		Group 4[b]		F-ratio
Rank	Mean S.D.	Rank	Mean S.D.	Rank	Mean S.D.	
4	520.27 97.51	7	555.91 92.78	12	596.85 87.43	10.82** (4>3,2,1)
16	508.53 97.65	9	551.51 88.54	19	586.58 76.49	8.09** (4>2)
12	513.20 108.55	14	545.75 92.59	8	603.94 85.05	13.16** (4>3,1,2)
1	533.63 114.24	24	535.06 111.46	7	608.89 95.63	12.30** (4>3,2,1)
21	502.46 93.17	8	551.71 82.08	17	587.26 76.85	11.62** (4>1, 3>2)
19	506.05 105.23	11	550.65 87.09	26	578.56 79.25	7.26** (4,3>2)
18	508.14 119.79	10	551.33 105.28	10	599.81 82.94	14.46** (4>3,2, 3>1)
2	521.53 91.98	19	540.64 83.04	20	585.48 82.28	7.60** (4>3,1,2)
3	521.37 95.74	13	545.77 82.66	24	579.16 74.05	6.62** (4>1,2)
11	513.35 118.91	18	540.94 94.35	15	593.17 88.59	9.81** (4>3,2,1)
20	504.70 117.37	21	539.15 89,68	13	593.62 88.66	13.14** (4>3,2,1)
30	484.93 131.91	16	543.75 111.51	9	601.60 101.96	14.03** (4>3,1, 3>2)
10	513.57 86.80	17	541.52 80.18	23	580.77 80.79	9.71** (4>3,2,1)

Table 13. Continued

Benefits[a]	Total Sample Mean S.D.	Group 1[b] Rank	Group 1[b] Mean S.D.
Encouraged use of approved agricultural practices	538.52 102.80	22	498.20 131.66
Developed skills needed by people in farming	538.65 103.47	31	482.18 131.00
Provided experience in conducting business	536.20 109.15	23	496.79 111.91
Promoted student-parent relationship	535.19 107.90	26	491.83 130.44
Contributed to relationships between school and home	533.19 99.64	24	496.62 101.11
Provided an opportunity to manage money	532.25 115.82	32	479.65 124.88
Encouraged learning while earning money	531.92 114.24	33	476.40 125.90
Encouraged the use of business procedures	531.30 100.66	17	504.79 117.82
Helped maintain a favorable home environment	529.12 99.90	18	502.97 113.69
Aided in making career choices	528.71 114.69	14	509.21 111.26
Developed occupational skills needed in an off-farm agricultural occupation	519.53 113.14	25	493.70 130.03
Provided a way to grow into an agribusiness job	518.55 121.38	36	464.54 133.01

Group 2[b]		Group 3[b]		Group 4[b]		F-ratio
Rank	Mean S.D.	Rank	Mean S.D.	Rank	Mean S.D.	
13	512.05 103.26	22	537.57 97.32	27	574.75 79.43	7.38** (4>3)
15	510.53 105.65	20	539.95 94.92	22	581.74 75.01	11.68** (4>3, 2>1)
29	485.63 115.24	28	526.57 97.31	11	597.19 89.23	17.25** (4>3,1,2)
25	495.00 103.69	29	523.45 91.06	14	593.48 91.62	15.59** (4>3,2,1)
24	496.22 103.69	23	535.39 95.44	30	570.53 87.57	8.99** (4>1,2)
27	492.59 128.33	25	530.73 106.70	21	583.43 91.94	11.87** (4>3,2,1)
30	479.72 141.39	15	544.75 92.73	28	574.18 91.22	12.51** (4,3>2,1)
26	493.87 113,28	26	529.93 94.23	31	567.89 77.41	7.59** (4>1,2)
40	432.20 113.07	27	527.73 84.33	21	571.03 83.93	10.74** (4>3,1,2)
33	476.46 112.89	30	520.11 123.29	25	578.67 86.03	10.30** (4>3,1,2)
23	499.65 104.32	31	517.59 116.15	38	546.56 100.75	2.98
22	500.50 132.91	37	508.15 110.62	32	567.31 104.18	8.60** (4>3,2,1)

Table 13. Continued

Benefits[a]	Total Sample Mean S.D.	Group 1[b] Rank	Group 1[b] Mean S.D.
Helped attain advanced FFA degrees	512.88 151.46	39	395.00 126.92
Provided an opportunity for individualized teaching by the vocational agriculture teacher	512.17 109.09	37	463.09 123.98
Provided a way to grow into farming	511.34 118.05	38	451.83 129.89
Contributed to community development	510.15 108.44	34	474.13 127.33
Identified agricultural problems in farming or agribusiness jobs to be solved in vocational agriculture classes	509.18 104.35	30	484.74 109.08
Encouraged the use of approved procedures for marketing agricultural products	509.24 107.57	27	487.11 128.85
Extended education from the school to the community	506.39 107.77	35	465.88 117.97
Improved school attendance until graduation	490.28 129.50	28	486.85 121.55

Group 2[b]		Group 3[b]		Group 4		F-ratio
Rank	Mean S.D.	Rank	Mean S.D.	Rank	Mean S.D.	
38	434.25 142.62	40	483.07 128.25	1	647.05 79.22	60.42** (4>3, 3>1)
31	490.46 125.38	34	508.41 95.25	35	553.33 95.52	8.33** (4>3,2,1)
35	470.98 114.96	33	513.94 115.00	33	561.48 94.54	12.05** (4>3,2, 3>1)
34	471.00 119.81	36	508.25 99.44	34	553.69 84.77	9.05** (4>3,1,2)
36	460.93 115.17	32	515.12 104.66	39	543.39 80.93	7.90** (4>1, 3>2)
37	457.11 122.92	35	508.33 97.60	37	551.66 78.23	9.84** (4>3,1>2)
32	477.51 117.47	38	497.67 96.89	36	553.03 95.74	9.60** (4>3,2,1)
39	433.61 138.33	39	488.11 126.98	40	529.83 119.13	6.22** (4>2)

The five least important benefit items were: (1) improve school attendance until graduation, (2) extend education from the school to the community, (3) encourage the use of approved procedures for marketing agricultural products, (4) identify agricultural problems in farming or agribusiness jobs to be solved in vocational agriculture classes, and (5) contribute to community development.

Analysis by subgroups of parents

The means, standard deviations and F-ratios for the 40 benefit items with parents grouped according to the highest FFA degree attained by students are reported in Table 13. There were significant differences ($P>.01$) among the group means for 39 of the 40 benefit items.

Parents of students who had attained the Iowa Farmer Degree (group 4) rated all 40 items above "average benefit" (500) which indicated that parents felt all items were benefits provided by student SOE programs. The means for group 4 were significantly higher than the means for one or more of the other groups on all benefit items except "Develop occupational skills needed in an off-farm agricultural occupation." The means for all items for group 4 were well above midpoint (500) on the rating scale. The range in the means were from 529 to 624 for this group.

The five benefit items with the highest means for parents of students who attained the Iowa Farmer Degree were: (1) help attain advanced FFA degrees, (2) promote the acceptance of responsibility, (3) encourage the production of animals and crops, (4) develop self-confidence, and

(5) develop pride in ownership. These findings revealed that this group of parents recognized the importance of SOE programs in helping students attain FFA degrees.

The five benefit items with the lowest means for parents of students who had attained the Iowa Farmer Degree were: (1) improve school attendance until graduation, (2) identify agricultural problems in farming or agribusiness jobs to be solved in vocational agriculture classes, (3) develop occupational skills needed in an off-farm agricultural occupation, (4) encourage the use of approved procedures for marketing agricultural products, and (5) extend education from the school to the community.

Parents of students who had attained the Chapter Farmer Degree rated 37 of the 40 items above average (means of 500 or above). The means for group 3 were significantly higher for 34 of the benefit items than the means for parents of students who had attained the Greenhand Degree.

The five benefit items with the highest means for parents of students who attained the Chapter Farmer Degree were: (1) promote the acceptance of responsibility, (2) provide an opportunity to learn on his/her own, (3) develop pride in ownership, (4) develop pride in employment, and (5) develop self-confidence. These findings revealed that this group of parents recognized the importance of SOE programs in developing work ethic.

The five benefit items with the lowest means for parents of students who attained the Chapter Farmer Degree were: (1) help attain advanced FFA degrees, (2) improve school attendance until graduation,

(3) extend education from the school to the community, (4) provide a way to grow into an agribusiness job, and (5) encourage use of approved procedures for marketing agricultural products.

Parents of students who had attained the Greenhand Degree as their highest FFA degree rated 22 of the 40 benefit items above "average benefit" (500). The means for group 2 were significantly higher for 19 of the benefit items than parents of students who had attained no FFA degree.

The five benefit items with the highest means for parents of students who had attained the Greenhand Degree were: (1) promote student-vocational agriculture teacher relationship, (2) provide an opportunity to make decisions, (3) provide an opportunity to solve problems, (4) build a working relationship with other students, and (5) provide an opportunity to learn on his/her own. All five of these benefits were general in nature; two focused on benefits related to the student developing relationships with the teacher and other students.

The five benefit items with the lowest means for parents of students who attained the Greenhand Degree were: (1) help maintain a favorable home environment, (2) improve school attendance until graduation, (3) help attain advanced FFA degrees, (4) encourage the use of approved procedures for marketing agricultural products, and (5) identify agricultural problems in farming or agribusiness jobs to be solved in vocational agricultural classes.

Parents of students who had attained no FFA degree rated only 22 of the 40 benefit items above "average benefit" (500), indicating that all students' benefits derived from SOE may not necessarily be linked to FFA degree and activities.

The five benefit items with the highest means for parents of students who attained no FFA degree were: (1) develop pride in ownership, (2) develop independence, (3) promote the acceptance of responsibility, (4) develop self-confidence, and (5) develop an appreciation for work. The findings indicated that parents of students with no FFA degree perceived their sons and daughters receiving work-oriented benefits from their SOE programs.

The five benefit items with the lowest means for parents of students who attained no FFA degree were: (1) help attain advanced FFA degrees, (2) provide a way to grow into farming, (3) improve school attendance until graduation, (4) provide an opportunity for individualized teaching by the vocational agriculture teacher, and (5) provide a way to grow into an agribusiness job.

Further analysis of benefits derived from student SOE programs as perceived by parents are reported in table form in Appendix F. These tables present data pertaining to benefits derived from student SOE programs when parents were grouped according to place of residence, years of vocational agriculture completed by father, and father's occupation.

Cluster Analysis and Correlations Between Benefits Derived From SOE Programs

Using a factor analysis process, it was observed that the 40 benefit items clustered into three factors or concepts. In this section, it will be demonstrated that the "cluster" (which consists of subsets of the 40 items) revealed by the factor analysis do in fact measure a concept (i.e., share a common core of meaning) and meet scaling criteria. Results of the factor analysis appear in Appendix F.

The first factor or general concept included 17 benefits related to work ethics. These items were: (1) provide experience in conducting business, (2) provide motivation for learning, (3) develop pride in ownership, (4) provide an opportunity to learn on his/her own, (5) develop pride in employment, (6) promote acceptance of responsibility, (8) develop self-confidence, (9) aid in making career choices, (10) encourage learning while earning money, (11) develop an appreciation for work, (12) develop citizenship traits, (13) develop abilities in cooperation, (14) provide an opportunity to plan work, (15) provide an opportunity to make decisions, (16) provide an opportunity to solve problems, and (17) provide an opportunity to put plans into action.

From a theoretical point of view, these items seem to be concerned with the general work ethic. Once these items met theoretical criteria, they were assessed in terms of scalability. A reliability coefficient of .975 as reported in Table 14 was calculated for the 17 benefit items. Inter-item and item-total correlations were also calculated. The mean

Table 14. Criteria for evaluating benefit factors as scales

Factor[a]	Reliability coefficient (alpha)	Mean item intercorrelation coefficient	Minimum item total correlation coefficient	Maximum item total correlation coefficient	$\frac{1}{\sqrt{n}}$
B FACT 1	.975	.708	.738	.906	.242
B FACT 2	.930	.609	.672	.830	.333
B FACT 3	.876	.553	.524	.826	.408

[a]B FACT 1 included 17 variables pertaining to work ethics; B FACT 2 included nine variables pertaining to agricultural career development; B FACT 3 included six variables pertaining to human relations.

inter-item correlation coefficient for the 17 items was .708. The minimum item-total correlation coefficient for the items was .738, which exceeded the minimum acceptable item-total correlation ($r_{it} = \frac{1}{\sqrt{n}}$) as described by Warren et al. (33, p. 14). Therefore, it can be concluded that the 17 items isolated by the factor analysis procedure do in fact represent a work ethic derived from SOE programs.

The second factor or general concept included nine benefit items that were concerned with agricultural career development. These items were: (1) encourage the use of approved agricultural practices, (2) promote interest in agricultural studies, (3) provide a way to grow into farming, (4) provide an opportunity for individualized teaching by the vocational agriculture teacher, (5) help attain advanced FFA degrees, (6) develop skills needed in farming, (7) encourage production of animals and crops, (8) encourage the use of approved marketing procedures, and (9) encourage keeping records.

From a theoretical point of view, these items are concerned with agricultural career development of an individual. Once these items met theoretical criteria, they were assessed in terms of scalability. A reliability coefficient of .930 as reported in Table 14 was calculated. Inter-item correlation and item-total correlation coefficients were also calculated. The mean inter-item correlation coefficient for the nine items was .609. The minimum item-total correlation coefficient for the items was .672 which exceeded the minimum acceptable item-total correlation ($r_{it} = \frac{1}{\sqrt{n}}$). Therefore, it can be concluded that the nine items isolated

by factor analysis represent agricultural career development benefit derived from SOE programs.

The third factor or general concept involved benefit items that were concerned with human relations. These items were: (1) extend education from the school to the community, (2) develop occupational skills, (3) promote parent-vocational agriculture teacher relationship, (4) improve school attendance until graduation, (5) maintain a favorable home environment, and (6) contribute to relationship between school and home.

From a theoretical point of view, these items are concerned with human relations. Once more, these theoretically acceptable items were assessed in terms of scalability. A reliability coefficient of .876 as reported in Table 14 was calculated for the six benefit items. Inter-item and item-total correlation coefficients were also calculated. The mean inter-item correlation coefficient for the six items was .553. The minimum item-total correlation coefficient for the six items was .524 which exceeded the minimum acceptable item-total correlation ($r_{it} = \sqrt{\frac{1}{n}}$). It can be concluded on the basis of both theoretical meaning and scalability criteria that the six items isolated by the factor analysis procedure represent human relations benefit derived from SOE programs.

Further examination of benefits derived from student SOE programs are reported in Appendix F. The results revealed that Factor 1, which measures work ethic, was the most important as indicated by an eigenvalue of 24.4 which accounted for approximately 90 percent of the variance.

Table 15. Intercorrelation coefficients between benefit factors

Benefit factors[a]	B FACT 1	B FACT 2	B FACT 3
B FACT 1			
B FACT 2	0.821****		
B FACT 3	0.836****	0.783****	

[a]B FACT 1 = work ethic; B FACT 2 = agricultural career development; and B FACT 3 = human relations.

****Significant at .001 level of probability.

Factor 4 was dropped because it was of little importance (only accounted for 2.5 percent of the variance) in measuring a benefit concept for SOE programs.

Table 15 summarizes intercorrelation between benefit factors. A significant relationship existed between benefit factor 1 (work ethic) and benefit factor 2 (agricultural career development) as indicated by the coefficient of .821 which was significant at the .001 level of probability.

The coefficient of .836 indicated that a significant relationship existed between benefit factor 1 (work ethic) and benefit factor 3 (human relations skills) at the .001 level of probability.

A relationship also existed between benefit factor 2 (agricultural career development) and benefit factor 3 (human relations) as indicated by the coefficient of .783. It was also significant at the .001 level of probability.

Further correlation analysis of benefits derived from SOE programs as perceived by parents are reported in table form in Appendix F. These tables present intercorrelation matrices of benefit items within each factor and among the three factors.

Parental Assistance Provided in Developing and Conducting Student's SOE Programs

Analysis of total sample

Table 16 presents the means, standard deviations and F-ratios for ways parents provided assistance in developing and conducting student SOE programs as perceived by the total sample and subgroups of parents.

The means for all 30 assistance items were close to the midpoint (500) on the scale, ranging from 430 to 546. The means for eight of the 30 assistance items were 500 or above, indicating that parents perceived themselves providing "average assistance" or above on these eight items. These assistance items were: (1) providing equipment for SOE, (2) providing encouragement for SOE, (3) learning skills in agriculture, (4) determining interest in agriculture, (5) locating a place for SOE, (6) financing SOE enterprises and activities, (7) producing agricultural products, and (8) marketing agricultural products. It should be emphasized that the above listing includes not only parental assistance by providing physical resources, but also assistance items pertaining directly to the development of agricultural skills and knowledges.

Table 16. Means, standard deviations and F-ratios for parental assistance in developing student SOE as perceived by total sample and subgroups of parents

Parental assistance[a]	Total Sample Mean S.D.	Group 1[b] Rank	Group 1[b] Mean S.D.
Providing equipment for SOE	546.32 / 155.96	10	438.85 / 146.18
Providing encouragement for SOE	535.75 / 131.32	3	472.34 / 151.34
Learning skills in agriculture	528.53 / 116.02	1	496.42 / 151.17
Determining interest in agriculture	526.53 / 117.68	2	491.69 / 144.62
Locating a place for SOE	509.78 / 150.12	18	412.17 / 146.62
Financing SOE enterprises and activities	509.20 / 149.18	7	448.51 / 139.93
Producing agricultural products	509.63 / 134.28	4	467.57 / 157.76

[a]Ways parents' assistance are listed in rank order based on means for the total sample.

[b]Group 1 = parents of students who had attained no FFA degree (N = 44); Group 2 = parents of students who had attained the Greenhand Degree as their highest FFA degree (N = 51); Group 3 = parents of students who had attained the Chapter Farmer Degree as their highest FFA degree (N = 101); Group 4 = parents of students who had attained the Iowa Farmer Degree as their highest FFA degree (N = 87).

**Significant at the .01 level of probability.

Group 2[b]		Group 3[b]		Group 4[b]		F-ratio
Rank	Mean S.D.	Rank	Mean S.D.	Rank	Mean S.D.	
1	485.65 168.81	1	565.09 148.27	1	609.57 121.86	16.62** (4,3>2,1)
3	471.41 152.20	2	542.03 111.60	2	595.36 96.96	15.28** (4>3,3>1,2)
2	485.08 137.19	4	532.62 99.55	5	563.83 87.44	6.45** (4>1,2)
4	469.55 120.54	3	533.98 102.97	4	567.45 119.20	9.53** (4>1, 3>2)
8	448.61 166.67	5	522.49 136.24	3	575.64 119.20	16.76** (4,3>2,1)
5	460.10 166.01	8	515.18 142.42	6	558.57 133.97	7.79** (4>2,1)
7	449.83 149.92	6	516.80 132.82	8	548.52 94.71	7.55** (4>1, 3>2)

Table 16. Continued

Parental assistance[a]	Total Sample Mean S.D.	Group 1[b] Rank	Group 1[b] Mean S.D.
Marketing agricultural products	502.57 132.35	8	447.76 146.92
Selecting supplies for SOE	496.49 135.06	9	441.00 122.54
Selecting animals for SOE	487.83 142.88	23	406.14 131.05
Determine cost of producing crops and animals	481.93 126.29	11	430.07 138.96
Determining the size of SOE	479.57 138.65	17	412.34 132.21
Identifying agricultural experiences to obtain	478.09 117.14	5	464.52 145.92
Setting educational goals in agriculture	478.03 124.31	6	455.54 146.84
Developing an agreement for SOE	468.12 132.27	13	420.41 130.34
Setting goals for SOE	456.98 125.35	12	425.26 129.82
Identifying agricultural skills to be developed through SOE	453.23 119.72	15	415.64 121.14
Making decisions related to SOE	452.79 137.22	24	403.50 165.60
Selecting approved practices for SOE	452.72 140.44	28	401.38 155.75
Making long-range plans for SOE	449.52 127.65	14	417.30 121.99

Group 2[b]		Group 3[b]		Group 4[b]		F-ratio
Rank	Mean S.D.	Rank	Mean S.D.	Rank	Mean S.D.	
9	447.67 148.94	7	515.29 126.92	9	545.32 99.93	9.31** (4,3>2,1)
10	438.22 150.53	10	499.87 134.01	10	533.14 116.53	7.93** (4>1,2)
14	416.59 140.87	12	494.93 132.57	7	557.50 123.12	18.32** (4>3,3>2,1)
6	457.83 144.01	9	502.99 118.69	15	496.50 109.34	4.42** (3,4>1)
12	419.25 159.21	11	498.65 133.61	11	523.09 110.74	10.73** (4,3>2,1)
11	419.48 113.68	13	490.14 109.70	14	504.56 99.85	6.43** (4,3>2)
13	418.89 124.08	14	481.87 110.89	12	518.29 105.93	7.71** (4,3>2)
18	409.22 138.44	15	473.09 127.55	13	505.32 119.92	7.81** (4>1, 3>2)
15	414.39 137.98	23	456.34 120.03	16	496.14 111.16	5.84** (4>1,2)
21	407.44 117.03	16	464.47 120.05	21	484.74 109.02	6.40** (4>2,1)
20	407.55 129.94	18	459.82 132.95	17	495.49 115.38	7.02** (4>2,1)
16	411.72 139.51	17	462.13 142.90	18	491.28 116.38	6.02** (4>2,1)
23	404.20 128.32	25	452.33 125.60	20	487.35 122.07	5.80 (4>1,2)

Table 16. Continued

Parental assistance[a]	Total Sample Mean S.D.	Group 1[b] Rank	Group 1[b] Mean S.D.
Selecting improvement projects relating to SOE	448.80 123.54	20	411.19 121.80
Making business arrangements for SOE	448.24 127.97	26	402.85 121.39
Expanding SOE	444.27 126.92	21	410.95 134.19
Evaluating the SOE program	443.54 121.60	19	411.51 119.92
Selecting crops for SOE	441.26 146.98	30	382.14 114.25
Developing detailed plans for SOE	438.72 123.61	25	403.12 129.01
Developing a budget for SOE	438.11 126.18	22	409.87 127.42
Interpreting results of records for SOE	437.01 126.75	16	413.02 128.79
Keeping records on SOE	436.81 132.50	29	393.53 135.75
Summarizing records on SOE	430.66 124.72	27	402.73 137.21

*Significant at the .05 level of probability.

Group 2[b]		Group 3[b]		Group 4[b]		F-ratios
Rank	Mean S.D.	Rank	Mean S.D.	Rank	Mean S.D.	
25	400.53 115.25	19	459.50 120.26	23	482.23 121.45	6.50** (4>1, 3>2)
24	402.31 128.53	20	458.40 133.86	22	484.22 110.60	6.68** (4>1,2)
30	387.22 116.30	27	446.89 128.41	19	490.05 110.60	8.68** (4>1,2)
28	397.38 117.59	22	457.22 123.88	25	468.29 113.42	5.02** (4,3>2)
17	411.48 148.07	21	457.31 148.57	24	469.14 149.90	4.51** (4>1)
26	398.08 114.35	24	450.57 128.81	26	465.19 111.68	4.70** (4>2)
19	408.22 129.38	28	445.34 129.85	29	459.86 115.56	2.59
27	397.65 130.60	29	443.96 132.61	27	463.17 110.08	3.46* (4>2)
22	406.24 131.75	26	449.01 133.05	28	460.01 124.41	3.65
29	391.14 118.70	30	443.03 125.97	30	452.37 114.34	3.61

The five assistance items with the highest means for the total sample were: (1) providing equipment for SOE, (2) providing encouragement for SOE, (3) learning skills in agriculture, (4) determining interest in agriculture, and (5) locating a place for SOE. These findings indicate parents provided most assistance in facilitating students' SOE programs.

The five assistance items with the lowest means for the total sample were: (1) summarizing records on SOE, (2) keeping records on SOE, (3) interpreting results of records for SOE, (4) developing a budget for SOE, and (5) developing detailed plans for SOE.

Analysis by subgroup of parents

The means, standard deviations and F-ratios for the 30 ways parents provided assistance in developing and conducting student SOE programs when parents were grouped according to highest FFA degree attained by students are reported in Table 16. The means for group 4 were significantly higher than the means for one or more of the other groups on 26 of the 30 assistance items.

Parents of students who had attained the Iowa Farmer Degree indicated they provided above "average assistance" (means of 500 or more) for 14 of the 30 assistance items. Therefore, it may be concluded that parents of students who had attained the Iowa Farmer Degree felt they provided above "average assistance" in developing and conducting student SOE programs in 14 different ways.

The five assistance items with the highest means for the group of parents were: (1) providing equipment for SOE, (2) providing encourage-

ment for SOE, (3) locating a place for SOE, (4) determining interest in agriculture, and (5) learning skills in agriculture.

The five assistance items with the lowest means for group 4 were: (1) summarizing records for SOE, (2) developing a budget for SOE, (3) keeping records on SOE, (4) interpreting results of records for SOE, and (5) developing detailed plans for SOE.

Parents of students who attained the Chapter Farmer Degree rated nine of the 30 assistance items above "average assistance".

The means for parents of students who attained the Chapter Farmer Degree were significantly higher than the means of parents of students who attained the Greenhand Degree and parents of students who attained no FFA degree on the 30 assistance items.

The five assistance items with the highest means for parents of students who attained the Chapter Farmer Degree were: (1) providing equipment for SOE, (2) providing encouragement for SOE, (3) determining interest in agriculture, (4) learning skills in agriculture, and (5) locating a place for SOE. It is interesting to note that these five assistance items had the highest means for group 4.

The five assistance items with the lowest means for parents of students who attained the Chapter Farmer Degree were: (1) summarizing records for SOE, (2) interpreting results of records for SOE, (3) developing a budget for SOE, (4) expanding SOE, and (5) keeping records on SOE.

Parents of students who attained the Greenhand Degree and parents of students who attained no FFA degree did not rate any of the assistance items above "average".

The means for parents of students who attained the Greenhand Degree were significantly higher on only nine of the 30 assistance items than those of parents of students who attained no FFA degree.

The five assistance items with the highest means for parents of students who attained the Greenhand Degree were: (1) providing equipment for SOE, (2) providing encouragement for SOE, (3) determining interest in agriculture, (4) learning skills in agriculture, and (5) locating a place for SOE. It is interesting to note that these five assistance items had the highest means for group 4 and group 3.

The five assistance items with the lowest means for parents of students who had attained the Greenhand Degree were: (1) summarizing records on SOE, (2) interpreting results of records on SOE, (3) developing a budget for SOE, (4) expanding SOE, and (5) keeping records on SOE.

The five assistance items with the highest means for parents of students who had attained no FFA degree were: (1) learning skills in agriculture, (2) determining interest in agriculture, (3) providing encouragement for SOE, (4) producing agricultural products, and (5) identifying agricultural experiences to obtain. It is interesting to note that three of these assistance items had the highest means for group 4, group 3, and group 2.

The five assistance items with the lowest means for parents of students who had attained no FFA degree were: (1) selecting crops for SOE, (2) keeping records on SOE, (3) selecting approved practices for SOE, (4) summarizing records for SOE, and (5) making business arrangements for SOE.

Further analysis of parental assistance provided students in developing and conducting SOE programs are reported in Appendix F. These tables present data pertaining to ways parents provide assistance in developing SOE programs when parents were grouped according to place of residence, years of vocational agriculture completed by fathers, and father's occupation.

Cluster Analysis and Correlation Between Ways Parents Assisted in Developing and Conducting SOE Programs

Factor analysis was used in an attempt to reduce the 30 assistance items into theoretically and statistically acceptable concepts. Results of the analysis reported in Appendix F show that the 30 assistance items clustered into three factors or concepts. In this section, it will be demonstrated that the clusters revealed by the factor analysis does in fact measure concepts in developing and conducting SOE programs and meet scaling criteria.

The first factor or general concept was composed of 15 assistance items related to planning SOE programs. These items were: (1) keeping records on SOE, (2) summarizing records on SOE, (3) interpreting results of records on SOE, (4) developing detailed plans for SOE, (5) setting

Table 17. Criteria for evaluating assistance factors as scales

Factor[a]	Reliability coefficient (alpha)	Mean item intercorrelation coefficient	Minimum item total correlation coefficient	Maximum item total correlation coefficient	$\frac{1}{\sqrt{n}}$
A FACT 1	.976	.735	.789	.894	.447
A FACT 2	.925	.608	.704	.834	.353
A FACT 3	.903	.654	.704	.809	.447

[a]A FACT 1 included 15 variables pertaining to planning; A FACT 2 included eight variables pertaining to skill development; A FACT 3 included five variables pertaining to finance and arrangements.

goals for SOE, (6) developing a budget for SOE, (7) developing an agreement for SOE, (8) making decisions related to SOE, (9) selecting approved practices for SOE, (10) expanding SOE, (11) making business arrangements for SOE, (12) evaluating the SOE program, (13) selecting improvement projects, (14) identifying agricultural skills to be developed through SOE, and (15) making long-range plans for SOE.

From a theoretical point of view, these items are associated with planning SOE programs. Once these items met theoretical criteria, they were assessed in terms of scalability. A reliability coefficient of .976 reported in Table 17 was calculated for the 15 assistance items. Inter-item and item-total correlations were calculated. The mean inter-item correlation for the 15 items was .735. The minimum item-total correlation for the items was .789, exceeding the minimum acceptable item-total correlation ($r_{it} = \frac{1}{\sqrt{n}}$). It can be concluded on the basis of both theoretical and scalability criteria that the 15 items isolated by the factor analysis procedure do in fact measure a concept that is concerned with the planning of SOE programs.

The second factor or general concept involved assistance items that were concerned with skill development. These items were: (1) setting educational goals in agriculture, (2) identifying agricultural experiences to obtain, (3) learning skills in agriculture, (4) producing agricultural products, (5) marketing agricultural products, (6) determining cost of producing crops and animals, (7) determining interest in agriculture, and (8) selecting animals for SOE.

From a theoretical point of view, these items can be said to be concerned with skill development. Once these items met theoretical criteria, they were assessed in terms of scalability. A reliability coefficient (coefficient α = .925) reported in Table 19 was calculated for the eight assistance items. Inter-item and item-total correlations were also calculated. The mean inter-item correlation for the eight items were .608. The minimum item-total correlation for the items was .704, which exceeded the acceptable item-total correlation ($r_{it} = \sqrt{\frac{1}{n}}$). It can be concluded on the basis of both theoretical and scalability criteria that the eight items isolated by the factor analysis procedure do in fact measure a concept that is concerned with skill development.

The third factor or general concept involved assistance items that were concerned with finance and arrangements for SOE programs. These items were: (1) financing SOE enterprises and activities, (2) providing equipment for SOE, (3) determining size of SOE, (4) providing encouragement for SOE, and (5) locating a place for SOE.

From a theoretical point of view, these items can be said to be concerned with finance and arrangement. Once these items met theoretical criteria, they were assessed in terms of scalability. A reliability coefficient (coefficient α = .903) reported in Table 19 was calculated for the five assistance items. Inter-item and item-total correlations were also calculated. The mean inter-item correlation for the five items were .654. The minimum item-total correlation for the items were .704, exceeding the acceptable item-total ($r_{it} = \sqrt{\frac{1}{n}}$). It can be concluded on the basis of both theoretical and scalability

Table 18. Intercorrelation coefficients between assistance factors

Assistance factors	A FACT 1	A FACT 2	A FACT 3
A FACT 1			
A FACT 2	0.754****		
A FACT 3	0.764****	0.734****	

[a]A FACT 1 = planning; A FACT 2 = skill development; and A FACT 3 = financing and arrangements.

****Significant at .001 level of probability.

criteria that the five items isolated by the factor analysis procedure do in fact measure a concept that is concerned with finance and arrangement for SOE programs.

Further examination of ways parents provide assistance in developing and conducting student SOE programs are reported in table form in Appendix F. The results revealed that factor 1, which measures planning, was discovered to be most important as indicated by an eigenvalue of 17.40 which accounted for approximately 84 percent of variance. Factor 4 was dropped because evidence indicates it was of little importance in measuring a concept in SOE programs.

Table 18 summarizes intercorrelation (inter-item) between assistance factors. The results of the table revealed that a significant relationship existed between assistance factor 1 (planning) and assistance factor 2 (skill development) by the intercorrelation coefficient value of .754 which was significant at the .001 level of probability.

The intercorrelation coefficient value of .764 indicated a relationship existed between assistance factor 1 (planning) and assistance factor 3 (finance and arrangements).

A relationship also existed between assistance factor 2 (skill development) and assistance factor 3 (finance and arrangements) as indicated by the intercorrelation coefficient value of .734. It was significant at the .001 level of probability.

Further correlation analysis of assistance provided by parents are reported in table form in Appendix F. These tables present intercorrelation matrices of assistance items within each factor and among factors.

Relationship Between Benefits Derived from Student SOE Programs and Parental Assistance Provided

The correlation analysis was used to determine the relationship between benefit factors and assistance factors. Results of Table 19 describes the relationship. A significant relationship existed between benefit factor 1 (work ethic) and assistance factor 1 (planning) as indicated by the coefficient value of .396, which was significant at the .001 level of probability.

The coefficient value of .432 indicated a relationship existed between benefit factor 1 (work ethic) and assistance factor 2 (skill development). The value was significant at the .001 level of probability.

Table 19. Coefficients of correlation between benefit factors and assistance factors

Benefit factors[a]	Assistance factors[b]		
	A FACT 1	A FACT 2	A FACT 3
B FACT 1	0.396****	0.432****	0.404****
B FACT 2	0.466****	0.547****	0.514****
B FACT 3	0.451****	0.493****	0.398****

[a]B FACT 1 = work ethic; B FACT 2 = education and occupational development; B FACT 3 = human relation.

[b]A FACT 1 = planning; A FACT 2 = skill development; and A FACT 3 = finance and arrangements.

****Significant at the .001 level of probability.

Benefit factor 1 (work ethic) and assistance factor 3 (human relations skills) were significant at the .001 level of probability as indicated by the coefficient value of .404.

There was a significant relationship between benefit factor 2 (education and occupational development) and assistance factor 1 (planning), assistance factor 2 (skill development) and assistance factor 3 (finance and arrangement). The coefficient values, .466, .547, and .514, were all significant at the .001 level of probability.

The coefficient values of .451, .493, and .398 indicated a relationship exists between assistance factor 1 (planning), assistance factor 2 (skill development), assistance factor 3 (finance and arrangement), and benefit factor 3 (human relations skills). The relationships were significant at the .001 level of probability.

It can be concluded that a high relationship existed between benefit factors and assistance factors.

Further correlation analysis of benefits derived from SOE programs and parental assistance provided are reported in table form in Appendix F. These tables present correlation matrices of benefit items with assistance items.

CHAPTER V.

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

Summary

This study was designed to determine the benefits students derived from vocational agriculture SOE programs as perceived by parents of vocational agriculture students and to assess parental assistance in developing and conducting SOE programs.

Parents of Iowa vocational agriculture students who were high school seniors in 1976-77 served as the population for this research. The population was divided into four subpopulations based on the highest FFA degree held by the students. A random sample was drawn from each of the subpopulations and identified by groups as follows:

Group 1 - Parents of students who had attained no FFA degree.

Group 2 - Parents of students who had attained the Greenhand Degree.

Group 3 - Parents of students who had attained the Chapter Farmer Degree.

Group 4 - Parents of students who had attained the Iowa Farmer Degree.

The data for this study were provided by 283 respondents from the four groups.

A three-part questionnaire was developed to collect personal data about the students and parents, benefits derived from student SOE programs, and assistance parents provide to students in developing and conducting

SOE programs. The data were collected during October, November, and December 1977 and January 1978.

Finally, the data were analyzed to: (1) identify personal and situational characteristics of parents and senior vocational agriculture students in Iowa, (2) determine if significant relationships exist between selected student characteristics and selected parent characteristics, (3) identify the benefits vocational agriculture students derive from SOE as perceived by parents, (4) determine if significant differences exist in benefits students derive from SOE when parents are grouped according to the FFA degree received by their sons and daughters, (5) determine if significant relationships exist among selected benefits derived from student SOE programs, (6) identify parental assistance provided in developing and conducting student SOE programs, (7) determine if significant differences exist in parental assistance provided in developing and conducting student SOE programs when parents are grouped according to the FFA degree received by their sons and/or daughters, (8) determine if significant relationships exist among ways parents provide assistance in developing and conducting student SOE programs, and (9) determine if significant relationships exist among selected benefits and selected ways parents provide assistance in developing and conducting student SOE programs.

Conclusions

Based on findings of this study, the following conclusions were drawn:

1. Sixty-five percent of all students completed four years of vocational agriculture, nine percent completed three years, 11 percent completed two years, and 15 percent completed one year.
2. Many of the students participated in more than one type of SOE program while enrolled in vocational agriculture. Of the students who participated in SOE programs, 79 percent participated in farming programs, 23 percent participated in agribusiness placement programs, 47 percent participated in school laboratory experience programs and 33 percent participated in exploratory experience programs.
3. Sixty-four percent of the parents felt that farming programs were the most important type of SOE program completed by their sons and daughters. Nine percent felt that farm placement was important, while another 10 percent felt agribusiness placement was the most important type of SOE for their sons and daughters.
4. Thirty-seven percent of the students had entered or planned to enter farming as an occupation, while another 20 percent had aspirations in off-farm agribusiness occupations. Approximately 28 percent planned to enter non-agricultural related occupations according to the parents. Fourteen percent of the parents indicated they did not know the occupational aspirations of their sons and daughters.
5. Eighty-one percent of the parents lived on farms and 77 percent listed farming as their occupation.

6. Fifteen percent of the fathers had completed one to three years of vocational agriculture while enrolled in high school and 23 percent had completed four years.
7. Twenty-two percent of the fathers held FFA degrees awarded by the local FFA chapter. Four percent had recieved FFA degrees awarded by the State Association, while less than one percent held FFA degrees awarded by the National Organization.
8. Seventy-two percent of the fathers were engaged in farming, while another 20 percent were engaged in agribusiness occupations. Only 7.5 percent were engaged in non-agricultural occupations.
9. The chi square analysis revealed that a significant relationship existed between father's years of vocational agriculture completed in high school and student's highest FFA degree.
10. Results of a chi-square analysis revealed that no significant relationship existed between years of vocational agriculture completed by the fathers and years of vocational agriculture completed by the students.
11. A significant relationship was observed between father's occupation and student's highest FFA degree.
12. A chi square analysis disclosed a significant relationship between father's occupation and future occupations of the students.
13. The total sample of parents rated 39 of the 40 items above "average benefit" to the student. The item not rated above

was: "Improving school attendance until graduation."

14. Parents of students who held the Iowa Farmer Degree indicated that SOE was beneficial to their son and daughter on all 40 measures (benefit items).

15. The means for parents of students who had attained the Iowa Farmer Degree were significantly higher than the means for one or more of the other parent groups for 38 of the 40 benefit items.

16. Parents of students who attained the Chapter Farmer Degree rated 37 of the 40 benefit items above average. The benefit items not rated above average were:

    a. Help attain advanced FFA degrees.

    b. Extend education from the school to the community.

    c. Improve school attendance until graduation.

17. The means for parents of students who had attained the Chapter Farmer Degree were significantly higher for 34 of the benefit items than parents of students who had attained the Greenhand Degree.

18. Parents of students who had attained the Greenhand Degree rated 22 of the 40 benefit items above average.

19. The means for parents of students who had attained the Greenhand Degree were significantly higher on 19 of the benefit items than parents of students who had attained no FFA degree.

20. Parents of students who had attained no FFA degree rated 22 of the 40 benefit items above average.

21. Based on the means for benefit items for the total sample of parents, vocational agriculture programs are most beneficial to students in the following ways:

    a. Promote acceptance of responsibility.

    b. Develop self-confidence.

    c. Develop pride in ownership.

    d. Develop independence.

    e. Provide an opportunity to learn on his/her own.

    f. Develop pride in employment.

    g. Encourage the production of animals and crops.

    h. Guild a working relationship with others.

    i. Develop an appreciation for work.

    j. Develop initiative.

    k. Promote student-vocational agriculture teacher relationship.

    l. Develop abilities in cooperation.

    m. Provide an opportunity to plan work.

    n. Promote interest in agricultural studies.

    o. Provide an opportunity to make decisions.

    p. Provide an opportunity to solve problems.

    q. Provide motivation for learning.

    r. Develop citizenship traits.

    s. Encourage the keeping of records.

    t. Provide an opportunity to put plans into action.

    u. Encourage use of approved agricultural practices.

    v. Develop skills needed by people in farming.

w. Provide experience in conducting business.

x. Promote student-parent relationship.

y. Contribute to relationships between school and home.

z. Provide an opportunity to manage money.

aa. Encourage learning while earning money.

bb. Encourage the use of business procedures.

cc. Help maintain a favorable home environment.

dd. Aid in making career choices.

ee. Develop occupational skills needed in an off-farm agricultural occupation.

ff. Provide a way to grow into an agribusiness job.

gg. Help attain advanced FFA degrees.

hh. Provide an opportunity for individualized teaching by the vocational agriculture teacher.

ii. Provide a way to grow into farming.

jj. Contribute to community development.

kk. Identify agricultural problems in farming or agribusiness jobs to be solved in vocational agriculture classes.

ll. Encourage the use of approved procedures for marketing agricultural products.

mm. Extend education from the school to the community.

22. The benefits parents perceive their sons and daughters receiving from their SOE programs varied somewhat with degrees students held in FFA. The greatest benefit identified by parents of students who held the Iowa Farmer Degree was to earn a higher

FFA degree. Parents of students who held the Chapter Farmer Degree place the highest value on promoting the acceptance of responsibility while parents of students who held the Greenhand Degree identified the greatest benefit provided by SOE to be promoting student-vocational agriculture teacher relationship. Parents of students who held no FFA degree while enrolled in vocational agriculture indicated that developing pride in employment was the greatest benefit received from SOE.

23. Results of a factor analysis identified three cluster benefits derived from SOE programs. They were:
    a. Work ethic attitudes.
    b. Agricultural career development.
    c. Human relations skills.
24. A correlation analysis revealed a significant relationship among the benefit clusters.
25. Based on the total sample, parents indicated they provided the most assistance in developing student SOE programs in the following ways:
    a. Providing equipment for SOE.
    b. Providing encouragement for SOE.
    c. Learning skills in agriculture.
    d. Determining interest in agriculture.
    e. Locating a place for SOE.
    f. Financing SOE enterprises and activities.

g. Producing agricultural products.

h. Marketing agricultural products.

26. Parents of the total sample rated eight of the 30 assistance items above average. These eight assistance items were related to providing resources for SOE programs and the development of agricultural skills and knowledge.

27. Results of a one-way analysis of variance revealed that significant differences existed among the parents of students who had attained the Iowa Farmer Degree and one or more of the other groups on 27 of the 30 assistance items. Assistance items where no difference existed among groups were:

    a. Developing a budget for SOE.

    b. Keeping records on SOE.

    c. Summarizing records on SOE.

28. The assistance provided by parents in the development of SOE programs varied somewhat with degrees held by the students as described below:

    a. Parents of Iowa Farmer Degree holders indicated they provided the greatest assistance by providing equipment for SOE.

    b. Parents of Chapter Farmer Degree holders indicated they provided the greatest assistance by providing equipment for SOE.

    c. Parents of Greenhand Degree holders indicated they provided the greatest assistance by providing equipment for SOE.

d. Parents of students with no FFA degree indicated they provided the greatest assistance in learning skills in agriculture.

29. The means were significantly higher for 29 of the 30 assistance items for parents of students who had attained the Iowa Farmer Degree than parents of students who had attained the Chapter Farmer Degree. The one assistance item that was not significantly higher was: "Determining cost of producing crops and animals."

30. The means for parents of students who had attained the Chapter Farmer Degree were significantly higher on all assistance items than for parents of students who had attained the Greenhand Degree.

31. The parents of students who had attained the Greenhand Degree and parents of students who had attained no FFA degree perceived the way they provided assistance in developing and conducting SOE programs similarly for 19 of the 30 assistance items.

32. Parents of students who had attained the Greenhand Degree and parents of students who had attained no FFA degree did not rate any of the assistance items above "average assistance".

33. Results of a factor analysis identified three cluster of assistance relating to developing and conducting SOE programs. They were:

a. Planning SOE programs.

b. Skill development through SOE programs.

c. Finance and arrangements for SOE programs.

34. A correlation analysis revealed a significant relationship between the three benefit clusters derived from student SOE programs and the three assistance clusters related to developing and conducting SOE programs.

Recommendations

The findings of this research revealed that parents perceived SOE programs to be valuable to students and parents perceived themselves as providing assistance in developing and conducting student SOE programs. The following general recommendations, based on the findings of this research, appear valuable to personnel responsible for administration and supervision of local vocational agriculture programs.

1. SOE programs provide many educational benefits for students and should be recognized as an important part of the vocational agriculture program.
2. Many parents of vocational agriculture students had indepth experiences in agricultural occupations. These parents should be activated and utilized in vocational agriculture programs, especially in assisting students with SOE programs.
3. Parents of vocational agriculture students should be oriented to the purpose of vocational agriculture and the function of SOE programs in occupational development of students.
4. Parents should be utilized in assisting vocational agriculture students with SOE programs.

5. Parents of beginning vocational agriculture students should be informed of the potential benefits SOE programs provide for their sons and daughters.
6. Parents of vocational agriculture students should be involved in the development as well as the participation phase of students' SOE programs.
7. Students living on farms should be encouraged to have supervised farming programs for their SOE.
8. Students who have aspirations to farm should be encouraged to develop an SOE program that will help them "grow into farming".
9. The student benefits parents perceived SOE programs as providing should be communicated to personnel responsible for administering and conducting vocational agriculture programs.
10. Materials should be developed to explain to parents of vocational agriculture students ways they can assist their sons and daughters with SOE programs.
11. Curriculum materials developed for teachers to use in teaching SOE should incorporate ways to keep parents informed about and involved with SOE programs of vocational agriculture students.
12. Other research efforts are needed to identify benefits provided students through SOE programs as perceived by students, school administrators, teachers, and agribusiness personnel.
13. Research is needed to identify assistance students perceived they received from parents and teachers in planning and conducting SOE programs.

14. A study should be conducted to determine the long-range benefits derived from vocational agriculture SOE programs.
15. Inservice vocational agriculture teachers should be informed of the benefits parents perceived students receiving from SOE and the assistance parents provided in planning and conducting SOE programs.
16. College students preparing to be teachers of vocational agriculture should be acquainted with the benefits SOE provides vocational agriculture students and the ways parents can assist in developing SOE programs.
17. Alternative types of SOE programs should be provided for students enrolling in vocational agriculture courses that are not necessarily a part of the sequential four-year vocational agriculture program.
18. FFA degrees should be used as motivation for all vocational agriculture students to plan and conduct SOE programs.
19. The vocational agriculture teacher must provide assistance to students in developing SOE programs in areas where parental assistance is limited. These areas may include detail planning for SOE programs, record keeping, and interpreting records.
20. Teachers of vocational agriculture should utilize parents in providing to their sons and daughters in areas where close supervision is needed. Those areas may include making arrangements for facilities, financing and producing and marketing agricultural products.

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APPENDIX A: COVER LETTERS AND MATERIALS USED IN THE IDENTIFICATION OF THE POPULATION

Iowa State University of Science and Technology Ames, Iowa 50010

Department of Agricultural Education
223 Curtiss Hall
Telephone 515-294-5872

Date: June 6, 1977

To: Iowa Vocational Agriculture Teachers

A study entitled Perceived Benefits and Parental Roles in Supervised Occupational Experience (SOE) Programs is underway in the Agricultural Education Department at Iowa State University. It is our hope that the study will provide information about benefits parents think vocational agriculture students receive from SOE and the roles of parents in planning and conducting SOE.

To make the study a success, we need your help in providing the following information:

1. A list of the students in your school who were seniors in 1977 and who have attained the Iowa Farmer Degree as their highest FFA degree.
2. A list of the students in your school who were seniors in 1977 and who have attained the Chapter Farmer Degree as their highest FFA degree.
3. A list of the students in your school who were seniors in 1977 and who have attained the Greenhand Degree as their highest FFA degree.
4. A list of the students in your school who were seniors in 1977 and who did not attain a FFA degree (including those seniors who were not FFA members).

We also need the names and addresses of the students' parents. Your listings will be combined with listings from other schools and a random sample of parents will be selected to participate in the study.

Enclosed you will find sheets for you to provide the information requested. Also enclosed is a self-addressed envelope for your convenience in mailing the requested information.

Thank you for providing the information. Results of the study will be used with the improvement and advancement of vocational agriculture in mind.

Sincerely,

Willie Rawls
Graduate Research Assistant
Agricultural Education

David L. Williams
Associate Professor
Agricultural Education

NAME OF SCHOOL _____

1. Students who were seniors in 1976-77, enrolled in vocational agriculture, and who have attained the Iowa Farmer Degree as their highest FFA degree, and the names and addresses of their parents:

	Student's name	Parent's name	Mailing address	Town	Zip code
1.					
2.					
3.					
4.					
5.					

2. Students who were seniors in 1976-77, enrolled in vocational agriculture, and who have attained the Chapter Farmer Degree as their highest FFA degree, and the names and addresses of their parents:

1.					
2.					
3.					
4.					
5.					
6.					
7.					
8.					
9.					
10.					

NAME OF SCHOOL _____

3. Students who were seniors in 1976-77, enrolled in vocational agriculture, and who have attained the Greenhand Degree as their highest FFA degree, and the names and addresses of their parents:

	Student's name	Parent's name	Mailing address	Town	Zip code
1.					
2.					
3.					
4.					
5.					

4. Students who were seniors in 1976-77, enrolled in vocational agriculture, and who did not attain a FFA degree during their enrollment in vocational agriculture, and the names and addresses of their parents:

1.					
2.					
3.					
4.					
5.					

Return to: Agricultural Education Department
223 Curtiss Hall
Iowa State University
Ames, Iowa 50011

Iowa State University of Science and Technology Ames, Iowa 50011

Department of Agricultural Education
223 Curtiss Hall
Telephone 515-294-5872

June 27, 1977

To: Iowa Vocational Agriculture Teachers

During the week of June 6, we asked you to provide us with some information about your vocational agriculture students who were seniors in 1976-77. We have not received your response as of this date. This information is needed to conduct a project entitled Perceived Benefits and Parental Roles in Supervised Occupational Experience (SOE) Programs which is underway in the Agricultural Education Department at Iowa State University. It is our hope that the study will provide information about benefits parents think vocational agriculture students receive from SOE and the roles of parents in planning and conducting SOE.

To make the project a success, we need your help in providing the information requested on the enclosed sheets. People you identify will be combined with listings from other schools and a random sample of parents will be selected to participate in the project.

Using your class roster of 1976-77 vocational agriculture seniors, please take a few minutes to give us the information requested. If you have already mailed the information, please disregard this appeal as it has probably arrived by now.

Thank you for providing the information. Results of the study will be used for the improvement and advancement of vocational agriculture in Iowa.

Sincerely,

Willie Rawls
Graduate Research Assistant
Agricultural Education

David L. Williams
Associate Professor
Agricultural Education

Enclosures: information sheets
jas

Iowa State University of Science and Technology Ames, Iowa 50010

Department of Agricultural Education
223 Curtiss Hall
Telephone 515-294-5872

August 18, 1977

To: Iowa Vocational Agriculture Teachers

During the week of June 6 and again June 27, we asked you to provide us with some information about your vocational agriculture students who were seniors in 1976-77. We have not received your response as of this date. This information is needed to conduct a project entitled Perceived Benefits and Parental Roles in Supervised Occupational Experience (SOE) Programs which is underway in the Agricultural Education Department at Iowa State University. It is our hope that the study will provide information about benefits parents think vocational agriculture students receive from SOE and the roles of parents in planning and conducting SOE.

To make the project a success, we need your help in providing the information requested on the enclosed sheets. People you identify will be combined with listings from other schools and random sample of parents will be selected to participate in the project.

Using your class roster of 1976-77 vocational agriculture seniors, please take a few minutes to give us the information requested. If you have already mailed the information, please disregard this appeal as it has probably arrived by now.

Enclosed you will find sheets for you to provide the information requested. Also enclosed is a self-addressed envelope for your convenience in mailing the requested information. No postage is needed.

Thank you for providing the information. Results of the study will be used for the improvement and advancement of vocational agriculture in Iowa.

Sincerely,

Willie Rawls
Graduate Research Assistant
Agricultural Education

David L. Williams
Associate Professor
Agricultural Education

Enclosures

Iowa State University of Science and Technology Ames, Iowa 50011

Department of Agricultural Education
223 Curtiss Hall
Telephone 515-294-5872

Vocational agriculture teachers generally agree that supervised occupational experience (SOE) is an important part of vocational agriculture. Students have told us they think SOE is important in developing occupational skills needed in agricultural occupations. Now, we want to ask parents of vocational agriculture students what they think about SOE. More specifically, vocational agriculture teachers and others need to know the benefits parents think their sons/daughters receive from SOE and the roles of parents in developing SOE programs for students. In doing this we want to be sure that parents from every Iowa high school with vocational agriculture have the potential opportunity to be included in this activity. TO DO THIS WE NEED YOUR HELP.

We are making one last attempt to obtain all the names and addresses of the 1977 Iowa vocational agriculture seniors and their parents so we can contact a sample of them to ask their opinions about SOE. You can help by providing the information requested on the enclosed forms and returning them to us. If for some reason you cannot supply the information, we will understand. However, we thought that the lack of a response to our earlier request may have just been an oversight.

Thank you for this special assistance. We'll keep you informed on parents' opinions about SOE.

Sincerely,

David L. Williams
Associate Professor

Willie Rawls
Graduate Research Assistant

DW:ma

APPENDIX B: COVER LETTER AND NAMES AND ADDRESSES OF PARTICIPANTS INVOLVED IN FIELD TESTING OF INSTRUMENT

Iowa State University of Science and Technology Ames, Iowa 50010

Department of Agricultural Education
223 Curtiss Hall
Telephone 515-294-5872

Date: August 25, 1977

To: Selected Parents of Former Vocational Agriculture Students

From: Willie J. Rawls
Graduate Research Assistant
Agricultural Education

David L. Williams
Associate Professor
Agricultural Education

The Agricultural Education Department at Iowa State University works with local Iowa high schools to improve vocational agriculture education. We are currently asking selected parents of former vocational agriculture students to give their opinions about the benefits students receive from their vocationsl agriculture supervised occupationsl experience (SOE) programs and the ways parents can help their sons/daughters in selecting, planning and conducting their SOE programs.

You were randomly selected from all parents of vocational agriculture students who graduated from Iowa high schools in 1977 to participate in this survey. Therefore, your cooperation in completing the enclosed survey is very important.

Vocationsl agriculture SOE consists of all those planned agricultural experiences obtained by the student outside of regular class activities for which supervision is provided by the vocational agriculture teacher, parents, employers and/or others. SOE programs maybe referred to by some as home projects, farming programs, work experience programs, FFA projects or agricultural experience programs.

We request that both parents (mother and father) work together to give a single response to each item on the survey. Please read the informed consent statement at the top of the survey and sign your name. You may call 515/ 294-5872 if you have questions concerning your participation in the survey. Remember, we are interested in your opinion. The completed survey can be folded and returned by mail. No postage is necessary.

Thank you for your help.

Enclosure: Survey Form

Names and Addresses of Participants Involved in Field Testing of Instrument

Mr. and Mrs. Wendell Hopkins
Route 4 Box 14
Jefferson, Iowa
Son - Craig

Mr. and Mrs. Richard Sandage
Route 1 Box 135
Scranton, Iowa
Son - Jeff

Mr. and Mrs. Bob Ziel
Route 2
Boone, Iowa
Son - Eric

Mr. and Mrs. Eugene Buechler
Route 1
Boone, Iowa
Son - Dan

APPENDIX C: QUESTIONNAIRE

IOWA STATE UNIVERSITY
Ames, Iowa

Parents' Perceptions of Vocational Agriculture Supervised Occupational Experience Programs

Informed Consent of Participants

I voluntarily agree to participate in this study of parents' perceptions of vocational agriculture supervised occupational experience programs which is being conducted by the Department of Agricultural Education, Iowa State University.

I understand that the purpose of this study is to improve vocational agriculture education, and that my only responsibility is to complete this questionnaire. I further understand that the information which I provide will be held in confidence, and that my responses will be combined with other responses and reported only in group summary form.

_____ _____

(Date) Signature of Participant

PART I

Directions: Please answer the following questions by completing the blanks or where there are brackets ( ), mark an "X" by the response which best describes your situation.

1. Where do you live?
   ( ) on a farm
   ( ) in a rural area, but not on a farm
   ( ) in a town or city
2. How many years of high school vocational agriculture did you (father) complete?
   ( ) none
   ( ) one year
   ( ) two years
   ( ) three years
   ( ) four years
3. What was the highest FFA degree you (father) received?
   ( ) None
   ( ) American Farmer Degree
   ( ) Iowa Farmer Degree
   ( ) Chapter Farmer Degree
   ( ) Greenhand Degree
4. What is your (father's) present occupation?

   _____
5. How long have you (father) been in your present occupation? _____ years.
6. How many years was _____ (name of son/daughter) enrolled in vocational agriculture _____ (years).
7. What kind of supervised occupational experience did your son/daughter have as part of his/her vocational agriculture program? (Check all that apply)
   ( ) raising animals and/or crops
   ( ) working on a farm other than home farm
   ( ) working in an off-farm agricultural business
   ( ) working with projects carried out by using school land, greenhouses, shop, or other school facilities. (Experiences that occur outside of normal classroom and shop activities)
   ( ) interviewing and observing people working in agriculture
   ( ) other (describe) _____
   ( ) none (did not have a supervised occupational experience program)

8. (Answer this question if you checked more than one kind of experience for question 7.) Indicate the one kind of SOE you consider to be the major one for your son/daughter.
   ( ) raising animals and/or crops
   ( ) working on a farm other than home farm
   ( ) working in an off-farm agricultural business
   ( ) working with projects carried out using school land, greenhouse, shop or other school facilities
   ( ) interviewing and observing people working in agriculture
   ( ) other (describe) _____

9. What occupation (job) does _____ (name of son/daughter) plan to enter upon completion of high school or college? _____.

PART II

Directions: Each of the statements below describes a benefit high school students may or may not derive from their vocational agriculture supervised occupational experience (SOE) programs. (See cover letter for definition of SOE). Respond to each statement in terms of how beneficial you feel SOE was to your son/daughter. If you feel SOE was of no benefit, write "1" on the line in front of the statements. If you feel SOE was of much benefit, write "99" on the line. **Use any number from 1 to 99 to indicate how beneficial you feel SOE was to your son/daughter.** Please respond to each statement.

When responding to the statements below, please use the following scale:

1	10	20	30	40	50	60	70	80	99
no benefit					**average benefit**				**much benefit**

The Vocational Agriculture Supervised Occupational Experience Program of My Son/Daughter:

_____ 1. Extended education from the school to the community
_____ 2. Encouraged use of approved agricultural practices
_____ 3. Developed occupational skills needed in an off-farm agricultural occupation
_____ 4. Promoted student-vocational agriculture teacher relationship
_____ 5. Promoted student-parent relationship
_____ 6. Promoted interest in agricultural studies
_____ 7. Provided experience in conducting business
_____ 8. Built a working relationship with other students
_____ 9. Provided a way to grow into farming
_____ 10. Provided an opportunity to manage money
_____ 11. Provided motivation for learning
_____ 12. Developed pride in ownership
_____ 13. Developed pride in employment
_____ 14. Contributed to community development
_____ 15. Provided an opportunity to learn on his /her own
_____ 16. Provided an opportunity for individualized teaching by the vocational agriculture teacher
_____ 17. Identified agricultural problems in farming or agribusiness jobs to be solved in vocational agriculture classes
_____ 18. Helped attain advanced FFA degrees
_____ 19. Promoted the acceptance of responsibility
_____ 20. Developed independence
_____ 21. Developed self-confidence
_____ 22. Aided in making career choices
_____ 23. Improved school attendance until graduation
_____ 24. Encouraged learning while earning money
_____ 25. Developed citizenship traits
_____ 26. Developed an appreciation for work
_____ 27. Developed abilities in cooperation
_____ 28. Provided an opportunity to plan work

_____ 29. Encouraged the use of business procedures

_____ 30. Provided an opportunity to make decisions

_____ 31. Provided an opportunity to solve problems

_____ 32. Provided an opportunity to put plans into action

_____ 33. Developed skills needed by people in farming

_____ 34. Encouraged the production of animals and crops

_____ 35. Encouraged the use of approved procedures for marketing agricultural products.

_____ 36. Helped maintain a favorable home environment

_____ 37. Encouraged the keeping of records.

_____ 38. Contributed to relationships between school and home

_____ 39. Developed initiative

_____ 40. Provided a way to grow into an agribusiness job

PART III

Directions: Using the 1 to 99 scale below, please indicate how much assistance you gave your son/daughter in selecting, planning and conducting his/her supervised occupational experience (SOE) program (see cover letter for definition of SOE). If you feel you gave no assistance, write "1" on the line in front of the statement. If you feel you gave much assistance, write "99" on the line. **Use any number from 1 to 99 to indicate the amount of assistance you gave your son/daughter.** Please respond to each statement.

When responding to the statements below, please use the following scale.

1	10	20	30	40	50	60	70	80	99
no assistance					**average assistance**				**much assistance**

Assistance I Gave My Son/Daughter in:

_____ 1. Determining interest in agriculture

_____ 2. Selecting crops for SOE

_____ 3. Selecting animals for SOE

_____ 4. Selecting supplies for SOE

_____ 5. Financing SOE enterprises and activities

_____ 6. Providing equipment for SOE

_____ 7. Determining the size of SOE

_____ 8. Providing encouragement for SOE

_____ 9. Locating a place for SOE

_____ 10. Keeping records on SOE

_____ 11. Summarizing records on SOE

_____ 12. Interpreting results of records for SOE

_____ 13. Developing detailed plans for SOE

_____ 14. Setting goals for SOE

_____ 15. Setting educational goals in agriculture

_____ 16. Identifying agricultural experiences to obtain

_____ 17. Learning skills in agriculture

_____ 18. Producing agricultural products

_____ 19. Marketing agricultural products

_____ 20. Developing a budget for SOE

_____ 21. Determine cost of producing crops and animals

_____ 22. Developing an agreement for SOE

_____ 23. Making decisions related to SOE

_____ 24. Selecting approved practices for SOE

_____ 25. Expanding SOE

_____ 26. Making business arrangements for SOE

_____ 27. Evaluating the SOE program

_____ 28. Selecting improvement projects relating to SOE

_____ 29. Identifying agricultural skills to be developed through SOE

_____ 30. Making long-range plans for SOE

NOTE: Thank you for your help by completing this questionnaire. Please fold, tape or staple closed and return by mail. No stamp is needed.

First Class
Permit No. 675
Ames, Iowa

Business Reply Mail
No Postage Stamp Necessary if Mailed in the United States

Postage will be paid by

Iowa State University
ISU Mail Center
Ames, Iowa 50011

P-185-7

APPENDIX D: COVER LETTERS FOR QUESTIONNAIRE

Iowa State University of Science and Technology Ames, Iowa 50011

Department of Agricultural Education
223 Curtiss Hall
Telephone 515-294-5872

October 28, 1977

To: Parents of Former Vocational Agriculture Students

The primary purpose of the Agricultural Education Department at Iowa State University is to prepare vocational agriculture teachers. The department also works with local Iowa high schools to improve vocational agriculture education. We are currently asking selected parents of former vocational agriculture students to give their opinions about the benefits their sons/daughters received from their vocational agriculture supervised occupational experience (SOE) programs and the ways parents assisted their sons/daughters in selecting, planning, and conducting their SOE programs.

You were randomly selected from all parents of vocational agriculture students who graduated from Iowa high schools in 1977 to participate in this survey. Therefore, your cooperation in completing and returning the enclosed survey is very important.

SOE is a part of vocational agriculture that consists of all those planned agriculture experiences obtained by the student outside of regular class activities for which supervision is provided by the vocational agriculture teacher, parents, or other adults. SOE programs may be referred to by some as home projects, farming programs, work experience programs, FFA projects or agriculture experience programs.

We request that both parents (mother and father) work together to give a single response to each item on the survey. Please read the informed consent statement at the top of the survey and sign your name. You may call 515/294-5872 if you have any questions concerning your participation in the survey. Remember we are interested in your opinion. It will help us improve vocational agriculture programs. The completed survey can be folded and returned by mail. No postage is necessary.

Thank you for your help.

Sincerely,

Willie Rawls
Research Assistant

David L. Williams
Associate Professor

DW:ma

Enclosure: Survey Form

Iowa State University of Science and Technology Ames, Iowa 50011

Department of Agricultural Education
223 Curtiss Hall
Telephone 515-294-5872

November 15, 1977

To: Parents of Former Vocational Agriculture Students

During the week of October 28, 1977, you received from the Department of Agricultural Education at Iowa State University a brown survey form enclosed with a yellow cover letter requesting your cooperation in completing the survey.

As of this date we have not received a reply from you. If you have already mailed your survey, please disregard this request, as it has probably arrived by now.

You were randomly selected from all parents of vocational agriculture students who graduated from Iowa high schools in 1977 to participate in this survey. Therefore, your cooperation in completing and returning the survey is very important.

We request that both parents (mother and father) work together to give a single response to each item on the survey. Please read the informed consent statement at the top of the survey and sign your name. You may call 515/294-5872 if you have any questions concerning your participation in the survey. Remember we are interested in your opinion. It will help us improve vocational agriculture programs in Iowa. The completed survey can be folded and returned by mail. No postage is necessary.

As was stated in the cover letter, SOE may be referred to as home projects, farming programs, work experience programs, FFA projects, or agriculture experience programs.

Thank you for your help.

Sincerely,

Willie Rawls
Research Assistant

David L. Williams
Associate Professor

ma

Iowa State University of Science and Technology Ames, Iowa 50011

Department of Agricultural Education
223 Curtiss Hall
Telephone 515-294-5872

December 2, 1977

To: Parents of Former Vocational Agriculture Students

During the weeks of October 28 and November 15, you should have received a brown questionnaire and a letter asking you to complete and return a questionnaire entitled, "Parents' Perceptions of Vocational Agriculture Supervised Occupational Experience Programs". If you have not returned the first questionnaire or have misplaced it, I am enclosing a second questionnaire for you to complete and return.

As mentioned in prior letters, you were selected from all parents of vocational agriculture students who graduated from Iowa high schools in 1977 to participate in this survey. Therefore, your cooperation in completing and returning the enclosed survey is very important and will be appreciated.

Supervised Occupational Experience (SOE) is a part of vocational agriculture that consists of all those planned agriculture experiences obtained by the student outside of regular class activities for which supervision is provided by the vocational agriculture teacher, parents, or other adults. SOE programs may be referred to by some as home projects, farming programs, work experience programs, FFA projects or agriculture experience programs.

We request that both parents (mother and father) work together to give a single response to each item on the survey. Please read the informed consent statement at the top of the questionnaire and sign your name. You may call 515/294-5872 if you have any questions concerning your participation in the survey. Remember, we are interested in your opinion. It will help us improve vocational agriculture programs. The completed survey can be folded and returned by mail. No postage is necessary.

Thank you for your help.

Sincerely,

Willie Rawls
Research Assistant

David L. Williams
Associate Professor

DW:ma

Enclosure: Survey Form

Iowa State University of Science and Technology Ames, Iowa 50011

Department of Agricultural Education
223 Curtiss Hall
Telephone 515-294-5872

December 19, 1977

TO: Parents of Former Vocational Agriculture Students

Please help!

On three occasions, October 28, November 15, and again on December 2, you should have received a brown questionnaire along with a yellow cover letter asking you to complete and return a questionnaire entitled, "Parents' Perceptions of Vocational Agriculture Supervised Occupational Experience Programs". If you have not responded or have misplaced them, I am enclosing another questionnaire for you to complete and return.

As mentioned in prior letters, you were selected from all parents of vocational agriculture students who graduated from Iowa high schools in 1977 to participate in this survey. Therefore, your cooperation in completing and returning the enclosed survey is very important and will be appreciated.

Supervised Occupational Experience (SOE) is a part of vocational agriculture that consists of all those planned agriculture experiences obtained by the student outside of regular class activities for which supervision is provided by the vocational agriculture teacher, parents, or other adults. SOE programs may be referred to by some as home projects, farming programs, work experience programs, FFA projects or agriculture experience programs.

We request that both parents (mother and father) work together to give a single response to each item on the survey. Please read the informed consent statement at the top of the questionnaire and sign your name. You may call 515/294-5872 if you have any questions concerning your participation in the survey. Remember, we are interested in your opinion. It will help us improve vocational agriculture programs in Iowa. The completed survey can be folded and returned by mail. No postage is necessary.

Thank you for your help and have a Merry Christmas and a Happy New Year.

Sincerely,

Willie Rawls
Research Assistant

David L. Williams
Associate Professor

Enclosure: Survey Form

P.S. If for some reason you feel that you cannot complete the questionnaire, so state and return the blank questionnaire.

Iowa State University of Science and Technology Ames, Iowa 50011

Department of Agricultural Education
223 Curtiss Hall
Telephone 515-294-5872

January 23, 1978

To: Parents of Former Vocational Agriculture Students

You will probably remember that you received a copy of the enclosed questionnaire in earlier mailings. However, we have not received your response as of this date. We realize that you may have been preoccupied with fall, winter and holiday activities at the time of our previous requests which prevented you from completing and returning the questionnaires. We are making a last request for you to complete and return the enclosed questionnaire.

Your cooperation in completing and returning the enclosed questionnaire is very important and will be appreciated. We need your opinion. Your opinion along with other parents of former vocational agriculture students will be combined in an attempt to improve vocational agriculture programs in Iowa.

Supervised Occupational Experience (SOE) is a part of the vocational agriculture program that consist of all those planned agriculture experiences obtained by the student outside of regular class activities for which supervision is provided by the vocational agriculture teacher, parents, or other adults. SOE programs may be referred to as home projects, work experience programs, FFA projects or agriculture experience programs.

We request that both parents (mother and father) work together to give a single response to each item on the questionnaire and sign your name. You may call 515/294-5872 if you have any questions concerning your participation in completing the questionnaire. Remember, we are interested in your opinion. The completed questionnaire can be folded and returned by mail. No postage is necessary.

Thank you for your help!

Sincerely,

Willie Rawls
Research assistant

David L. Williams
Associate Professor

DW:ma

Enclosure: Questionnaire

P.S. Please complete and return by January 30, 1978 if possible. If for some reason you feel that you cannot complete the questionnaire, so state and return the blank questionnaire.

APPENDIX E: CODE SHEET

Parents' Perception of Vocational Agriculture Supervised Occupational Experience Programs

Willie James Rawls

Code Sheet

Card 1

Column	Part I, Item Demographic Data	Coded Values (Rows)
1		1 = Card one
2, 3, 4,	Respondent number	Actual number Example: 100 101 102 203 Other
5	FFA degree of student	1 = No FFA degree 2 = Greenhand degree 3 = Chapter Farmer degree 4 = Iowa Farmer degree
6	Respondent place of residence	1 = On farm 2 = Off farm 3 = Town 0 = No response
7	Respondent (Fathers) years of high school vo-ag completed	1 = None 2 = One year 3 = Two years 4 = Three years 5 = Four years 0 = No response
8	Respondent (Fathers) highest FFA degree received	1 = None 2 = Greenhand degree 3 = Chapter Farmer degree 4 = Iowa Farmer degree 5 = American Farmer degree 0 = No response
9	Respondent (Fathers) occupation	1 = Farmer 2 = Agribusiness 3 = Non-ag related 4 = Unemployed or deceased 0 = NO response

10, 11	Respondent (Father) number os years in occupation	01 - 50 years 00 - No response
12	Years son or daughter completed high school vo-ag	1 - 4 years 0 - No response
		Not CK CK
13, 14, 15, 16, 17, 18, 19	Kind of SOE of son or daughter	1 - 2 = SOEANCRP 1 - 2 = SOEFMWORK 1 - 2 = SOEOFF-FM 1 - 2 = SOESCHPRJ 1 - 2 = SOEINTER 1 - 2 = SOEOTHER 1 - 2 = NOSOE 0 - No response
20		Check more than one 1 = Does not apply 2 = 2 3 = 3 4 = 4 5 = 5 6 = 6 7 = 7 0 = No response
21	Kind of SOE of major importance	1 = ANCRP 2 = WRKONFARM 3 = OFF-FARM 4 = SCHPRJ 5 = INTER 6 = OTHER 0 = No response
22	Future occupation of son or daughter	1 = Agriculture 2 = Agribusiness 3 = Non-ag related 4 = Don't know 0 = No response
		Actual number (example)
23, 24	Part II, Item 1	11
25, 26	2	99
27, 28	3	50
29, 30	4	00 No response
31, 32	5	
33, 34	6	
35, 36	7	
37, 38	8	
39, 40	9	
41, 42	10	
43, 44	11	
45, 46	12	
47, 48	13	
49, 50	14	
51, 52	15	
53, 54	16	
55, 56	17	

57, 58	18
59, 60	19
61, 62	20
63, 64	21
65, 66	22
67, 68	23
69, 70	24
71, 72	25
73, 74	26
75, 76	27
77, 78	28

Card 2	Part II Continue	
Column	Item	Coded Value (Rows)
1	Card number	2 = Card two
2, 3, 4,	Respondent number	Actual number (example)
		100
		101
		102
		203
		other
5, 6		29
7, 8		30
9, 10		31
11, 12		32
13, 14		33
15, 16		34
17, 18		35
19, 20		36
21, 22		37
23, 24		38
25, 26		39
27, 28		40
29, 30	Part III,	41
31, 32		42
33, 34		43
35, 36		44
37, 38		45
39, 40		46
41, 42		47
43, 44		48
45, 46		49
47, 48		50
49, 50		51
51, 52		52
53, 54		53
55, 56		54
57, 58		55
59, 60		56
61, 62		57
63, 64		58
65, 66		59
67, 68		60
69, 70		61

71, 72	62
73, 74	63
75, 76	64
77, 78	65
79, 80	66

Card 3 Part III Continue

Column	Item	Coded Value (Rows)
1	Card number	3 = Card three
2, 3, 4,	Respondent number	Actual number (example)
		100
		101
		102
		203
		Other
	Part III, Continue	
5, 6	67	
7, 8	68	
9, 10	69	
11, 12	70	

APPENDIX F: TABLES

Table F-1. Means, standard deviations, and F-ratios for benefit derived from students' SOE as perceived by parents grouped according to place of residence

Benefit[a]	Group 1[b]		Group 2[b]		F-ratio
	Rank	Mean S.D.	Rank	Mean S.D.	
Promoted the acceptance of responsibility	1	578.14 102.33	3	556.87 108.55	1.82
Developed self-confidence	4	571.41 98.54	4	556.14 114.66	0.97
Developed pride in ownership	3	571.67 108.15	6	538.96 122.28	3.75*
Developed independence	5	566.50 100.32	5	551.19 112.29	0.96
Provided an opportunity to learn on his/her own	6	559.60 91.70	2	563.38 114.72	0.07
Developed pride in employment	10	557.06 109.64	1	568.79 114.33	0.48
Encouraged the production of animals and crops	2	574.04 107.59	32	490.40 122.67	24.18*
Built a working relationship with other students	9	557.42 98.49	7	548.89 96.42	0.33
Developed an appreciation for work	12	555.68 91.62	8	542.77 107.15	0.80

Developed initiative	11	556.44 99.89	12	538.40 117.21	1.29
Promoted student-vocational agriculture teacher relationship	8	558.17 110.01	16	528.31 130.88	2.91
Developed abilities in cooperation	14	553.72 91.27	14	530.19 96.86	2.75
Provided an opportunity to plan work	15	552.73 94.69	15	529.50 90.81	2.59
Promoted interest in agricultural skills	7	558.91 109.65	26	503.08 116.52	10.55**
Provided an opportunity to make decisions	16	550.30 89.30	9	542.21 106.52	0.32
Provided an opportunity to solve problems	19	549.69 88.37	11	538.50 102.12	0.64
Provided motivation for learning	21	548.63 105.67	10	539.63 108.51	0.29
Developed citizenship traits	20	549.07 101.45	19	523.17 103.66	2.73

[a]Benefits derived from SOE are listed in rank order for the total sample.

[b]Group 1 = parents of vocational agriculture stndents who lived on farms (N = 230); Group 2 = parents of vocational agriculture students who did not live on farms (N = 53).

*Significant at the .05 level of probability.

**Significant at the .01 level of probability.

Table F-1. Continued

Benefit[a]	Group 1 Rank	Group 1 Mean / S.D.	Group 2 Rank	Group 2 Mean / S.D.	F-ratio
Encouraged the keeping of records	13	554.49 / 118.38	29	501.24 / 122.62	8.30**
Provided an opportunity to put plans into action	22	547.20 / 87.07	18	527.87 / 103.45	1.93
Encouraged the use of approved agricultural practices	18	550.03 / 95.67	35	487.85 / 117.88	16.36**
Developed skills needed by people in farming	17	551.50 / 95.11	37	482.83 / 119.71	19.89**
Provided experience in conducting business	23	539.85 / 108.16	20	520.49 / 113.08	1.36
Promoted student-parent relationship	24	539.43 / 104.81	22	516.42 / 119.95	1.93
Contributed to relationships between school and home	25	538.67 / 96.12	25	509.81 / 111.48	3.59*
Provided an opportunity to manage money	27	533.72 / 114.69	17	525.90 / 121.60	0.20
Encouraged learning while earning money	29	532.04 / 112.42	13	531.42 / 123.07	0.00

Encouraged the use of business procedures	26	534.49 98.56	21	517.46 109.28	1.21
Helped maintain a favorable home environment	28	532.31 99.99	23	515.14 99.28	1.23
Aided in making career choices	30	531.96 111.88	24	514.63 126.35	0.96
Developed occupational skills needed in an off-farm agricultural occupation	32	524.41 109.83	30	498.01 125.62	2.32
Provided a way to grow into an agribusiness job	33	523.48 114.89	31	496.70 146.15	1.99
Helped attain advanced FFA degrees	31	530.09 144.81	40	436.52 158.16	16.46**
Provided an opportunity for individualized teaching by the vocational agriculture teacher	36	517.10 106.23	33	490.38 119.62	2.56
Provided a way to grow into farming	34	523.85 115.00	39	456.29 116.66	14.55**
Contributed to community development	37	512.18 107.09	27	501.29 114.84	0.43
Identified agricultural problems in farming or agribusiness jobs to be solved in vocational agriculture classes	38	510.98 101.81	27	501.25 115.64	0.37

Table F-1. Continued

Benefit[a]	Group 1[b] Rank	Group 1[b] Mean / S.D.	Group 2[b] Rank	Group 2[b] Mean / S.D.	F-ratio
Encouraged the use of approved procedures for marketing agricultural products	35	517.51 / 105.18	38	473.52 / 111.50	7.22**
Extended education from the school to the community	39	510.35 / 107.51	34	488.92 / 108.26	1.64
Improved school attendance until graduation	40	491.86 / 130.89	36	483.37 / 124.22	0.18

Table F-2. Means, standard deviations and F-ratios for benefits derived from SOE as perceived by parents grouped according to father's years of vocational agriculture completed

Benefit[a]	Group 1[b] Rank	Group 1[b] Mean / S.D.	Group 2[b] Rank	Group 2[b] Mean / S.D.	Group 3[b] Rank	Group 3[b] Mean / S.D.	F-ratio
Promoted the acceptance of responsibility	1	565.27 / 108.30	1	573.00 / 103.02	1	598.92 / 89.48	2.51
Developed self-confidence	3	558.72 / 109.02	2	570.15 / 102.55	3	591.15 / 77.91	2.43 (3>1)
Developed pride in ownership	2	559.31 / 117.42	16	545.15 / 117.97	2	591.38 / 87.72	2.73
Developed independence	5	554.20 / 108.78	5	558.44 / 107.87	4	589.45 / 80.63	2.85* (3>1)
Provided an opportunity to learn on his/her own	7	553.40 / 103.06	3	562.49 / 90.31	7	575.88 / 81.98	1.30
Encouraged the production of animals and crops	4	554.35 / 112.96	8	551.15 / 122.63	5	582.38 / 107.11	1.60
Developed pride in employment	8	550.13 / 113.17	7	554.07 / 90.94	6	579.02 / 113.01	1.65
Built a working relationship with other students	6	553.56 / 101.09	10	545.05 / 113.14	13	567.35 / 81.19	0.74
Developed initiative	11	546.35 / 112.49	6	557.00 / 87.72	10	569.32 / 91.16	1.16

Developed an appreciation for work	10	548.06 99.60	22	539.20 92.49	9	572.00 82.30	1.98
Promoted student-vocational agriculture teacher relationship	9	548.63 120.23	21	541.34 101.89	12	568.52 110.11	0.92
Developed abilities in cooperation	16	541.65 101.32	20	541.65 79.79	8	573.33 75.96	2.91
Promoted interest in agricultural studies	14	543.53 117.79	12	547.17 119.66	14	564.36 96.50	0.80
Provided an opportunity to make decisions	12	545.30 98.77	11	547.25 81.82	20	558.34 84.68	0.46
Provided an opportunity to plan work	13	544.53 105.49	19	542.67 82.85	16	562.23 71.87	0.90
Provided an opportunity to solve problems	13	543.13 99.10	14	546.00 80.32	17	561.34 77.52	0.93
Provided motivation for learning	17	540.90 116.30	28	533.32 102.96	11	569.14 87.55	1.97

[a]Benefits derived from SOE are ranked for the total sample.

[b]Group 1 = parents of students who completed no vocational agriculture; Group 2 = parents of students who completed from one to three yearw of vocational agriculture; Group 3 = parents of students who completed four years of vocational agriculture.

*Significant at the .05 level of probability.

Table F-2. Continued

Benefit[a]	Group 1[b] Rank	Group 1[b] Mean / S.D.	Group 2[b] Rank	Group 2[b] Mean / S.D.	Group 3[b] Rank	Group 3[b] Mean / S.D.	F-ratio
Developed citizenship traits	19	537.33 / 109.12	10	549.00 / 107.17	18	561.22 / 81.41	1.30
Encouraged the keeping of records	21	553.80 / 124.64	4	560.08 / 127.84	15	562.40 / 110.37	1.65
Provided an opportunity to put plans into action	18	539.74 / 94.93	13	546.50 / 91.12	24	554.29 / 81.46	0.61
Encouraged use of approved agricultural practices	22	533.76 / 103.72	23	539.10 / 114.15	21	557.63 / 89.92	1.29
Developed skills needed by people in farming	20	536.69 / 106.03	24	537.76 / 111.49	26	550.84 / 85.74	0.47
Promoted student--parent relationship	23	532.14 / 118.23	18	543.02 / 97.63	30	543.48 / 85.24	0.35
Provided experience in conducting business	24	531.98 / 116.69	9	550.44 / 100.27	31	543.14 / 89.29	0.60
Contributed to relationships between school and home	25	528.34 / 104.27	27	533.38 / 99.35	28	547.45 / 93.14	0.82
Provided an opportunity to manage money	26	522.63 / 125.21	25	537.63 / 93.59	22	556.83 / 97.74	2.14

Encouraged learning while earning money	26	523.65 118.32	26	533.80 104.39	25	553.56 109.15	1.62
Encouraged the use of business procedures	30	520.66 102.94	15	545.40 95.16	23	555.28 87.09	3.42* (3>1)
Aided in making career choices	29	522.56 118.48	29	530.39 110.23	27	549.22 106.73	1.32
Helped maintain a favorable home environment	27	523.59 112.95	30	528.83 93.96	29	545.00 66.05	1.02
Developed occupational skills needed in an off-farm agricultural occupation	31	517.60 120.28	31	521.44 101.91	39	521.35 104.32	0.04
Provided a way to grow into an agribusiness job	32	514.40 126.42	32	517.20 132.84	34	530.28 98.29	0.40
Provided a way to grow into farming	36	504.44 124.59	33	514.15 113.29	32	534.70 99.92	1.57
Helped attain advanced FFA degrees	37	503.70 157.37	37	497.75 144.70	19	561.08 128.38	3.73*
Provided an opportunity for individualized teaching by the vocational agriculture teacher	33	510.42 112.94	38	496.78 117.02	36	528.79 98.04	1.17
Identified agricultural problems in farming or agribusiness jobs to be solved in vocational agriculture classes	35	504.99 112.50	36	501.46 89.57	37	528.24 88.14	1.35

Table F-2. Continued

Benefit[a]	Group 1[b] Rank	Group 1[b] Mean / S.D.	Group 2[b] Rank	Group 2[b] Mean / S.D.	Group 3[b] Rank	Group 3[b] Mean / S.D.	F-ratio
Encouraged the use of approved procedures for marketing agricultural products	34	505.11 / 115.95	34	502.67 / 106.40	38	527.11 / 81.66	1.09
Contributed to community development	39	500.31 / 118.58	35	502.29 / 102.43	33	532.77 / 77.80	2.19
Extended education from the school to the community	38	503.04 / 112.59	39	492.71 / 103.78	35	530.14 / 96.59	1.96
Improved school attendance until graduation	40	488.21 / 128.88	40	479.00 / 133.25	40	503.64 / 129.50	0.51

Table F-3. Means, standard deviations and F-ratios for benefits derived from students' SOE as perceived by father's occupation

Benefit[a]	Group 1[b] Rank	Group 1[b] Mean / S.D.	Group 2[b] Rank	Group 2[b] Mean / S.D.	Group 3[b] Rank	Group 3[b] Mean / S.D.	F-ratio
Promoted the acceptance of responsibility	1	579.00 / 105.40	16	564.75 / 101.12	3	561.35 / 99.06	0.74
Developed self-confidence	4	569.39 / 98.78	2	581.35 / 121.16	2	562.14 / 106.74	0.28
Developed pride in ownership	3	571.38 / 108.59	9	568.00 / 103.19	7	546.39 / 122.84	1.13
Developed independence	5	563.76 / 101.87	6	575.20 / 107.68	5	560.19 / 105.75	0.16
Provided an opportunity to learn on his/her own	6	559.49 / 94.64	13	565.71 / 102.33	4	561.35 / 101.94	0.04
Encouraged the production of animals and crops	2	571.45 / 110.77	29	549.52 / 112.61	26	515.51 / 122.96	5.32** (1>3)[c]
Developed pride in employment	8	556.48 / 110.95	5	578.10 / 104.72	1	564.64 / 110.92	0.43
Built a working relationship with other students	9	556.07 / 102.45	15	564.28 / 83.97	6	552.09 / 88.03	0.12
Developed initiative	10	555.18 / 98.69	14	564.81 / 121.26	8	546.04 / 107.90	0.30

Developed an appreciation for work	11	555.09 92.04	21	557.76 87.36	11	540.88 106.12	0.97
Promoted student-vocational agriculture teacher relationship	14	553.07 109.52	3	581.29 121.98	9	545.57 124.24	0.77
Developed abilities in cooperation	13	553.27 91.92	12	566.24 89.06	17	530.21 95.40	1.73
Promoted interest in agricultural studies	7	558.58 110.87	25	555.38 112.36	29	510.31 88.13	4.07* (1>3)
Provided an opportunity to make decisions	17	549.10 91.95	8	569.14 112.36	13	540.29 88.13	0.74
Provided an opportunity to plan work	15	552.41 95.27	30	547.52 93.32	14	535.64 91.71	0.69
Provided an opportunity to solve problems	18	548.05 90.58	17	561.90 102.70	12	540.87 89.73	0.41
Provided motivation for learning	21	546.35 108.79	7	569.67 122.42	10	541.54 100.90	0.54
Developed citizenship traits	19	547.86 101.05	22	447.00 92.54	19	527.51 109.80	1.02

[a]Benefits derived from SOE are ranked for the total sample.

[b]Group 1 = fathers of students who were employed as farmers (N = 208); Group 2 = fathers of students who were employed in agribusiness (N = 21); Group 3 = fathers of students who were employed in non-agricultural related occupations (N = 57).

*Significant at the .05 level of probability.

**Significant at the .01 level of probability.

Table F-3. Continued

Benefit[a]	Group 1[b] Rank	Group 1[b] Mean / S.D.	Group 2[b] Rank	Group 2[b] Mean / S.D.	Group 3[b] Rank	Group 3[b] Mean / S.D.	F-ratio
Encouraged the keeping of records	12	554.89 / 118.23	20	558.90 / 112.98	32	506.30 / 122.10	1.02
Provided an opportunity to put plans into action	20	546.43 / 89.58	27	552.90 / 92.31	16	530.96 / 93.89	0.74
Encouraged use of approved agricultural practices	22	544.48 / 95.95	24	555.42 / 118.35	27	512.19 / 117.48	2.49
Developed skills needed by people in farming	16	549.53 / 96.38	31	539.90 / 104.79	35	498.20 / 119.74	5.41** (1>3)
Promoted student-parent relationship	25	535.34 / 104.47	1	583.52 / 115.67	22	519.35 / 112.77	2.73
Provided experience in conducting business	24	536.01 / 108.98	26	554.81 / 113.34	15	534.77 / 104.55	0.30
Contributed to relationships between school and home	23	536.85 / 97.67	28	550.57 / 107.56	24	517.94 / 97.88	1.10
Provided an opportunity to manage money	27	531.77 / 114.78	18	560.00 / 130.64	18	528.84 / 110.19	0.63
Encouraged learning while earning money	29	530.86 / 115.39	19	559.85 / 115.69	20	527.32 / 110.67	0.65
Encouraged the use of business procedures	26	532.81 / 101.01	23	556.48 / 103.27	25	516.31 / 98.77	1.29

Aided in making career choices	30	526.07 112.56	4	578.30 109.35	21	525.09 117.82	1.98
Helped maintain a favorable home environment	28	530.91 102.62	11	567.00 89.75	30	507.80 89.28	2.81
Developed occupational skills needed in an off-farm agricultural occupation	32	521.28 111.26	37	516.23 129.60	23	518.96 111.46	0.02
Provided a way to grow into an agribusiness job	34	518.11 115.97	10	567.95 123.47	33	505.17 133.92	2.09
Provided a way to grow into farming	33	520.74 119.44	39	503.90 110.21	38	484.43 109.42	2.18
Helped attain advanced FFA degrees	31	525.19 148.09	40	497.67 151.76	40	477.83 157.98	2.20
Provided an opportunity for individualized teaching by the vocational agriculture teacher	35	515.18 108.55	34	522.19 86.46	34	501.86 115.44	0.41
Identified agricultural problems in farming or agribusiness jobs to be solved in vocational agriculture classes	39	508.98 103.38	35	520.00 97.70	31	506.46 112.45	0.13
Encouraged the use of approved procedures for marketing agricultural products	36	514.98 106.30	32	527.62 89.42	39	481.55 116.21	2.43
Contributed to community development	37	510.15 109.29	38	508.38 78.27	28	510.59 117.33	0.00

Table F-3. Continued

Benefit[a]	Group 1[b]		Group 2[b]		Group 3[b]		F-ratio
	Rank	Mean S.D.	Rank	Mean S.D.	Rank	Mean S.D.	
Extended education from the school to the community	38	509.14 109.29	33	522.57 112.39	36	494.62 96.79	0.63
Improved school attendance until graduation	40	487.29 133.85	36	519.80 131.81	37	494.53 109.44	0.69

Table F-4. Factor scores for benefits students derived from SOE as perceived by parents

Item no.[a]	Factor 1	Factor 2	Factor 3	Factor 4
1	0.30	0.38	0.46	0.38
2	0.28	0.69	0.27	0.14
3	0.30	0.23	0.45	0.09
4	0.17	0.44	0.47	0.41
5	0.31	0.39	0.48	0.37
6	0.27	0.62	0.26	0.36
7	0.50	0.43	0.17	0.41
8	0.37	0.19	0.28	0.55
9	0.25	0.57	0.19	0.45
10	0.43	0.38	0.29	0.48
11	0.50	0.38	0.39	0.36
12	0.54	0.33	0.25	0.43
13	0.69	0.12	0.30	0.35
14	0.38	0.26	0.51	0.49
15	0.63	0.31	0.28	0.35
16	0.24	0.47	0.42	0.40
17	0.42	0.44	0.32	0.36
18	0.25	0.52	0.23	0.36
19	0.74	0.40	0.10	0.27
20	0.77	0.34	0.29	0.21
21	0.78	0.37	0.28	0.22
22	0.50	0.31	0.44	0.16
23	0.27	0.17	0.53	0.22
24	0.48	0.33	0.44	0.33
25	0.55	0.34	0.48	0.36
26	0.69	0.29	0.42	0.21
27	0.63	0.24	0.51	0.31
28	0.61	0.36	0.51	0.15
29	0.49	0.46	0.32	0.32
30	0.57	0.51	0.46	0.15
31	0.59	0.47	0.49	0.13
32	0.56	0.49	0.42	0.15
33	0.33	0.69	0.30	0.10
34	0.28	0.78	0.19	0.18
35	0.28	0.67	0.31	0.17
36	0.44	0.31	0.59	0.33
37	0.30	0.50	0.42	0.27
38	0.27	0.36	0.68	0.24
39	0.53	0.40	0.56	0.23
40	0.39	0.39	0.46	0.21

[a]Benefit items on instrument.

Table F-5. Factor composites for benefits students derive from SOE as perceived by parents

Factor	Eigenvalue	Percent of variance	Cumulative percent
1	24.14	89.5	89.5
2	1.33	4.9	94.4
3	0.83	3.1	97.5
4	0.68	2.5	100.0

Table F-6. Means, standard deviations and F-ratios for assistance provided students in developing SOE as perceived by parents grouped according to place of residence

Assistance[a]	Group 1[b] Rank	Group 1[b] Mean / S.D.	Group 2[b] Rank	Group 2[b] Mean / S.D.	F-ratio
Providing equipment for SOE	1	578.15 / 138.72	15	405.29 / 151.06	62.51**
Providing encouragement for SOE	3	546.23 / 124.36	1	489.12 / 151.39	8.08**
Learning skills in agriculture	2	549.03 / 102.04	3	437.71 / 130.92	44.32**
Determining interest in agriculture	4	538.01 / 108.71	2	475.71 / 141.57	12.13**
Locating a place for SOE	8	528.26 / 141.58	4	427.92 / 160.70	19.86**
Financing SOE enterprises and activities	6	531.71 / 141.07	13	409.45 / 144.42	30.98**
Producing agricultural products	5	534.50 / 118.21	24	386.72 / 136.84	60.26**
Marketing agricultural products	7	529.35 / 116.37	28	383.37 / 134.49	61.77**
Selecting supplies for SOE	10	506.70 / 126.79	6	418.67 / 148.03	18.82**

Selecting animals for SOE	9	510.57 133.83	27	383.41 137.78	35.95**
Determine cost of producing crops and animals	11	503.63 116.53	25	385.78 124.03	41.55**
Determining the size of SOE	12	500.49 131.75	23	387.69 131.80	30.45**
Identifying agricultural experiences to obtain	13	492.42 107.98	9	415.20 135.10	19.25**
Setting educational goals in agriculture	14	490.44 118.79	5	423.29 134.25	12.65**
Developing an agreement for SOE	15	478.41 127.89	18	400.80 134.05	15.05**
Setting goals for SOE	19	467.02 120.58	10	412.88 137.24	7.95**
Identifying agricultural skills to be developed through SOE	18	467.08 109.29	22	493.16 143.75	17.24**
Making decisions related to SOE	16	474.63 112.40	7	418.63 132.53	9.64**
Selecting approved practices for SOE	17	473.46 120.52	16	404.94 144.49	12.48**

[a]Assistance provided students in developing SOE are ranked for the total sample.

[b]Group 1 = parents of students who lived on farms (N = 230); Group 2 = parents of students who did not live on farms (N = 53).

**Significant at the .01 level of probability.

Table F-6. Continued

Assistance[a]	Group 1[b] Rank	Group 1[b] Mean / S.D.	Group 2[b] Rank	Group 2[b] Mean / S.D.	F-ratios
Making long-range plans for SOE	23	457.22 / 121.67	8	415.25 / 147.98	4.56**
Selecting improvement projects relating to SOE	21	461.46 / 117.53	21	392.73 / 134.78	13.46**
Making business arrangements for SOE	22	458.82 / 124.63	17	401.59 / 133.29	8.54**
Expanding SOE	24	455.27 / 120.59	19	395.96 / 143.16	9.35**
Evaluating the SOE program	25	452.02 / 115.93	14	406.63 / 139.05	5.88*
Selecting crops for SOE	20	463.87 / 144.56	31	342.41 / 113.73	31.51**
Developing detailed plans for SOE	29	448.46 / 120.05	20	395.96 / 131.04	7.67**
Developing a budget for SOE	26	451.31 / 123.60	32	380.14 / 122.11	13.84**
Interpreting results of records for SOE	28	449.20 / 123.10	26	383.74 / 129.90	11.50**

Keeping records on SOE	27	450.08 129.94	30	378.55 129.05	12.62**
Summarizing records on SOE	30	441.54 121.67	29	382.90 127.94	9.47**

*Significant at the .05 level of probability.

Table F-7. Means, standard deviations and F-ratios for parental assistance provided in developing and conducting students' SOE by father's years of high school vocational agriculture completed

Assistance[a]	Group 1[b]		Group 2[b]		Group 3[b]		F-ratio
	Rank	Mean S.D.	Rank	Mean S.D.	Rank	Mean S.D.	
Providing equipment for SOE	1	536.68 165.29	1	556.45 132.61	1	580.09 132.88	1.90
Providing encouragement for SOE	3	529.96 133.90	2	534.25 142.15	2	558.46 112.95	1.13
Learning skills in agriculture	4	528.30 118.86	4	513.65 128.96	3	548.95 97.96	1.26
Determining interest in agriculture	2	531.01 121.16	10	476.20 116.45	3	555.20 95.42	5.95** (1,3>2)
Locating a place for SOE	6	504.02 154.85	3	525.05 161.73	8	523.69 120.40	0.59
Financing SOE enterprises and activities	5	517.13 162.72	5	496.27 144.95	11	505.45 116.71	0.37
Producing agricultural products	7	503.30 142.31	6	494.97 131.40	5	535.46 110.88	1.59
Marketing agricultural products	8	502.79 136.21	11	475.88 139.83	6	528.62 111.77	2.06
Selecting animals for SOE	10	481.83 149.45	9	477.95 138.85	7	526.28 118.02	2.51

Selecting supplies for SOE	9	485.37 143.35	13	470.35 128.41	9	520.32 111.65	2.17
Determine cost of producing crops and animals	11	477.93 126.09	8	483.63 137.86	13	500.78 116.35	0.77
Selecting crops for SOE	23	439.41 150.57	30	398.67 141.32	19	484.14 132.91	4.44** (3>2)
Determining the size of SOE	13	474.24 145.90	7	489.85 150.35	12	502.38 103.02	1.01
Setting educational goals in agriculture	12	476.12 127.20	12	473.17 117.61	14	498.61 113.28	0.86
Identifying agricultural experiences to obtain	14	473.25 121.31	14	455.70 117.61	10	508.08 101.79	3.00* (3>2)
Developing an agreement for SOE	17	457.98 135.93	15	454.22 143.95	15	493.34 113.17	1.86
Making decisions related to SOE	15	460.34 121.49	18	447.47 115.57	16	486.48 113.64	1.62

[a]Assistance provided students in developing SOE are ranked for the total sample.

[b]Group 1 = parents of students who did hot take vocational agriculture in high school (N = 168); Group 2 = Parents of students who completed 1 to 3 years of vocational agriculture in high school (N = 41); Group 3 = parents of students who completed 4 years of vocational agriculture in high school (N = 66).

*Significant at the .05 level of probability.

**Significant at the .01 level of probability.

Table F-7. Continued

Assistance[a]	Group 1[b] Rank	Group 1[b] Mean / S.D.	Group 2[b] Rank	Group 2[b] Mean / S.D.	Group 3[b] Rank	Group 3[b] Mean / S.D.	F-ratio
Selecting approved practices for SOE	16	459.95 / 133.48	19	441.70 / 124.62	18	484.97 / 112.22	1.57
Setting goals for SOE	18	454.59 / 132.17	17	448.88 / 118.91	23	479.33 / 107.76	1.08
Identifying agricultural skills to be developed through SOE	19	443.29 / 123.41	16	451.58 / 106.89	20	482.41 / 117.15	2.47 (3>1)[c]
Selecting improvement projects related to SOE	21	440.79 / 125.58	20	440.88 / 116.01	26	475.57 / 123.66	1.95
Making long-range plans for SOE	25	438.64 / 131.42	23	431.85 / 131.43	17	486.18 / 114.53	3.67*
Making business arrangements for SOE	24	438.96 / 129.08	21	437.92 / 141.74	22	479.46 / 115.94	2.49
Expanding SOE	20	441.01 / 129.01	29	412.40 / 118.64	21	480.38 / 121.46	3.91* (3>2)[c]
Evaluating the SOE program	22	434.83 / 136.27	22	436.95 / 133.73	25	476.23 / 121.08	2.79 (3>1)[c]
Keeping records on SOE	27	433.12 / 136.27	28	425.22 / 133.73	27	464.05 / 121.08	1.54

Developing a budget for SOE	26	434.28 129.00	24	431.83 131.01	30	457.12 116.83	0.84
Interpreting results of records for SOE	29	427.52 129.18	27	425.27 129.88	24	476.69 112.44	3.80*
Developing detailed plans for SOE	28	431.90 130.74	26	426.02 125.93	28	462.86 105.18	1.68
Summarizing records for SOE	30	425.72 127.48	25	426.13 127.57	29	457.29 113.28	1.58

Table F-8. Means, standard deviations and F-ratios for parental assistance provided in developing and conducting students' SOE by father's occupation

Assistance[a]	Group 1[b] Rank	Group 1[b] Mean / S.D.	Group 2[b] Rank	Group 2[b] Mean / S.D.	Group 3[b] Rank	Group 3[b] Mean / S.D.	F-ratio
Providing equipment for SOE	1	576.71 / 137.12	7	472.45 / 184.82	3	459.94 / 173.03	15.85** (1>2,3)[c]
Providing encouragement for SOE	3	551.18 / 124.48	1	545.67 / 115.84	1	473.89 / 146.77	7.79** (1>3)[c]
Learning skills in agriculture	2	553.84 / 98.19	12	464.10 / 116.33	4	453.74 / 135.32	22.16** (1>3,2)[c]
Determining interest in agriculture	4	540.21 / 108.43	2	521.47 / 124.74	2	473.77 / 132.36	7.16** (1>3)[c]
Locating a place for SOE	8	527.32 / 139.61	3	506.70 / 174.68	5	445.54 / 164.72	6.56** (1>3)[c]
Financing SOE enterprises and activities	6	534.34 / 137.16	17	457.55 / 172.67	7	438.78 / 155.85	10.87** (1>2,3)[c]
Producing agricultural products	5	535.17 / 117.36	11	464.52 / 125.03	15	414.27 / 152.00	20.57** (1>3,2)[c]
Determine cost of producing crops and animals	10	508.08 / 114.97	25	420.33 / 131.82	21	407.24 / 129.40	18.24** (1>3,2)[c]
Marketing agricultural products	7	527.66 / 116.54	6	476.86 / 149.59	13	418.76 / 147.59	16.46** (1>3,2)[c]

Selecting animals for SOE	9	511.39 131.95	15	459.65 165.20	19	407.38 147.43	12.26** (1>3)[c]
Selecting supplies for SOE	11	505.31 128.90	8	469.38 150.02	6	442.43 142.73	5.01** (1>3)[c]
Selecting crops for SOE	18	469.40 143.37	30	362.60 115.12	30	369.94 136.67	14.13** (1>3,2)[c]
Determining the size of SOE	12	499.98 134.54	23	430.95 123.53	11	420.65 140.91	8.72** (1>3)[c]
Setting educational goals in agriculture	13	495.42 119.81	10	465.57 123.20	9	421.02 123.57	8.09** (1>3)[c]
Identifying agricultural experiences to obtain	13	494.67 108.72	9	469.33 108.45	12	419.00 132.81	9.44** (1>3)[c]
Developing an agreement for SOE	15	478.65 127.26	5	481.15 125.73	22 23	407.13 138.09	6.69**
Making decisions related to SOE	16	474.97 112.60	14	459.95 138.49	8	429.76 123.72	3.21** (1>3)[c]

[a]Assistance provided students in developing SOE are ranked for the total sample.

[b]Group 1 = parents of students who were employed as farmers (N =204); Group 2 = parents of students who were employed in agribusiness (N = 21); Group 3 = parents of students of vocational agriculture who were employed in non-agricultural related occupations (N = 56).

[c]Group means differed significantly at the .05 level when tested by the Scheffé procedure.

**Significant at the .01 level of probability.

Table F-8. Continued

Assistance[a]	Group 1[b] Rank	Group 1[b] Mean / S.D.	Group 2[b] Rank	Group 2[b] Mean / S.D.	Group 3[b] Rank	Group 3[b] Mean / S.D.	F-ratio
Selecting approved practices for SOE	17	471.65 / 123.10	16	459.62 / 144.65	10	420.87 / 133.52	3.42* (1>2,3)[c]
Setting goals for SOE	19	468.22 / 121.87	19	451.70 / 149.28	14	416.50 / 123.65	3.10* (1>3)[c]
Identifying agricultural skills to be developed through SOE	20	462.87 / 117.59	18	452.24 / 129.14	17	411.81 / 134.90	3.96* (1>2,3)[c]
Selecting improvement projects relating to SOE	21	460.50 / 117.59	20	449.67 / 129.14	18	408.31 / 134.90	3.89* (1>2,3)[c]
Making long-range plans for SOE	22	457.56 / 124.78	13	460.90 / 133.47	20	407.38 / 133.23	3.38
Expanding SOE	24	455.66 / 120.14	22	442.48 / 137.10	25	405.36 / 140.60	3.36* (1>3)[c]
Evaluating the SOE program	25	452.13 / 115.53	21	448.10 / 142.47	16	412.13 / 131.50	2.27
Keeping records on SOE	26	451.50 / 130.91	29	385.10 / 131.79	24	405.96 / 129.62	4.40** (1>3,2)[c]
Developing a budget for SOE	27	451.35 / 124.62	27	400.48 / 127.65	22 23	407.13 / 124.11	3.74

Interpreting results of records for SOE	29	450.40 124.39	26	407.19 126.69	28	297.87 128.90	4.31** (1>3)[c]
Developing detailed plans for SOE	28	451.17 122.02	24	424.70 139.65	29	396.65 116.47	4.36** (1>3)[c]
Summarizing records for SOE	30	443.66 121.24	28	391.39 128.91	27	401.09 128.85	3.72*

*Significant at the .05 level of probability.

Table F-9. Factor scores for assistance provided in developing student SOE as perceived by parents

Item no.[a]	Factor 1	Factor 2	Factor 3	Factor 4
1	0.30	0.62	0.34	0.14
2	0.20	0.39	0.35	0.25
3	0.36	0.50	0.41	0.13
4	0.40	0.44	0.49	0.12
5	0.37	0.29	0.56	0.11
6	0.20	0.34	0.72	0.15
7	0.38	0.29	0.68	0.25
8	0.38	0.38	0.58	0.14
9	0.38	0.26	0.66	0.03
10	0.63	0.22	0.31	0.39
11	0.74	0.20	0.26	0.41
12	0.72	0.27	0.20	0.37
13	0.74	0.29	0.28	0.16
14	0.65	0.40	0.29	0.02
15	0.45	0.60	0.21	0.10
16	0.44	0.63	0.20	0.03
17	0.17	0.73	0.29	0.09
18	0.20	0.80	0.29	0.25
19	0.28	0.77	0.23	0.23
20	0.66	0.38	0.18	0.32
21	0.40	0.54	0.25	0.41
22	0.65	0.32	0.42	0.04
23	0.65	0.31	0.44	0.04
24	0.73	0.27	0.47	0.06
25	0.80	0.23	0.31	0.05
26	0.77	0.22	0.35	0.08
27	0.82	0.34	0.17	0.03
28	0.78	0.38	0.27	0.00
29	0.68	0.38	0.27	0.11
30	0.76	0.25	0.25	0.01

[a]Assistance items on instrument.

Table F-10. Factor composites or assistance provided in developing students' SOE as perceived by parents

Factor	Eigenvalue	Percent of variance	Cumulative percent
1	17.40	83.4	83.4
2	1.82	8.7	92.2
3	0.93	4.5	96.6
4	0.71	3.4	100.0

Table F-11. Intercorrelation coefficients for factor 1 benefits

B FACT 1[a]	7	11	12	15	13	19	20	21
7								
11	.60							
12	.63	.69						
15	.66	.74	.69					
13	.57	.63	.73	.68				
19	.69	.69	.68	.72	.69			
20	.65	.67	.69	.73	.71	.88		
21	.69	.73	.74	.73	.74	.85	.91	
22	.54	.64	.55	.57	.57	.64	.68	.71
24	.63	.61	.61	.63	.64	.67	.67	.68
25	.67	.69	.69	.69	.67	.76	.79	.79
26	.66	.67	.65	.72	.73	.79	.80	.80
27	.66	.71	.71	.72	.74	.75	.76	.79
28	.62	.74	.68	.71	.65	.72	.75	.76
30	.71	.70	.63	.68	.63	.72	.77	.78
31	.64	.71	.63	.68	.63	.72	.77	.78
32	.67	.70	.64	.68	.57	.71	.73	.76

[a]B FACT 1 = benefit variable on instrument.

22	24	25	26	27	28	30	31	32
.60								
.68	.75							
.63	.68	.81						
.66	.73	.83	.87					
.64	.68	.74	.80	.80				
.66	.69	.74	.74	.78	.77			
.68	.72	.73	.77	.80	.76	.91		
.63	.62	.72	.72	.76	.79	.86	.85	

Table F-12. Intercorrelation coefficients for factor 2 benefits

B FACT 2[a]	2	6	9	16	18	33	34	35	37
2									
6	.70****								
9	.59	.60							
16	.51	.63	.53						
18	.48	.56	.61	.50					
33	.66	.67	.60	.55	.59				
34	.73	.65	.64	.57	.64	.73			
35	.69	.64	.61	.58	.56	.66	.72		
37	.56	.62	.54	.55	.60	.59	.64	.63	

[a]B FACT 2 = benefit variable on instrument.

****Significant at .001 level of probability.

Table F-13. Intercorrelation coefficients for factor 3 benefits

B FACT 3[a]	1	3	5	23	36	38
1						
3	.48					
5	.60	.41				
23	.46	.32	.46			
36	.61	.53	.73	.61		
38	.58	.46	.68	.63	.74	

[a]B FACT 3 = benefit variable on instrument.

Table F-14. Intercorrelation coefficients for factor 1 assistance

A FACT 1[a]	10	11	12	13	14	20	22	23
10								
11	.90							
12	.77	.83						
13	.67	.76	.80					
14	.64	.71	.70	.77				
20	.69	.74	.79		.70			
22	.65	.68	.71	.74	.65	.64		
23	.66	.70	.66	.72	.70	.66	.78	
24	.68	.76	.71	.78	.79	.69	.80	.83
25	.68	.75	.73	.80	.77	.72	.76	.75
26	.67	.75	.73	.80	.71	.71	.78	.76
27	.67	.69	.73	.75	.74	.72	.77	.74
28	.65	.68	.63	.66	.66	.63	.75	.72
29	.70	.76	.73	.66	.67	.72	.72	.75
30	.60	.66	.72	.73	.72	.74	.72	.72

[a]A FACT 1 = assistance variable on instrument.

24	25	26	27	28	29	30
.89						
.82	.85					
.75	.78	.76				
.78	.80	.77	.73			
.75	.72	.77	.80	.82		
.80	.83	.77	.80	.76	.76	

Table F-15. Intercorrelation coefficients for factor 2 assistance

A FACT 2[a]	15	16	17	18	19	21	1	3
15								
16	.74							
17	.59	.57						
18	.56	.60	.74					
19	.56	.62	.69	.91				
21	.51	.48	.61	.71	.69			
1	.65	.58	.56	.45	.56	.44		
3	.60	.54	.54	.61	.62	.56	.60	

[a]A FACT 2 = assistance variable number on instrument.

Table F-16. Intercorrelation coefficients for factor 3 assistance

A FACT 3[a]	5	6	7	8	9
5					
6	.69				
7	.64	.73			
8	.58	.65	.59		
9	.54	.68	.72	.72	

[a]A FACT 3 = assistance variable number on instrument.

Table F-17. Coefficients of correlation for benefit factor 1 and assistance factor 1

B FACT 1[a]	A FACT 1[b]				
	10	11	12	13	14
7	.27****	.28****	.25****	.31****	.30****
11	.19****	.20****	.20****	.25****	.29****
12	.28****	.27****	.26****	.30****	.30****
15	.17***	.16***	.20***	.25****	.25****
13	.14**	.13*	.13**	.16***	.22****
19	.20****	.22****	.21****	.26****	.32****
20	.17***	.17***	.22****	.25****	.32****
21	.23****	.21****	.28****	.33****	.33****
22	.22****	.24****	.28****	.33****	.32****
24	.21****	.16***	.20****	.25****	.27****
25	.19****	.16***	.21****	.26****	.31****
26	.13*	.16***	.21****	.26****	.31****
27	.17***	.20****	.24****	.31****	.37****
28	.15**	.17***	.20****	.28****	.36****
30	.24****	.25****	.26****	.34****	.37****
31	.24****	.25****	.26****	.34****	.35****
32	.21****	.22****	.22****	.30****	.33****

[a]B FACT 1 = benefit variable number or instrument.

[b]A FACT 1 = assistance variable number or instrument.

*Significant at .05 level of probability.

**Significant at .01 level of probability.

***Significant at .005 level of probability.

****Significant at .001 level of probability.

20	22	23	24	25
.30****	.40****	.37****	.35****	.36****
.23****	.32****	.33****	.27****	.27****
.32****	.37****	.38****	.29****	.28****
.20****	.30****	.31****	.24****	.25****
.15***	.26****	.25****	.17***	.16***
.25****	.40****	.38****	.32****	.28****
.25****	.37****	.35****	.26****	.26****
.27****	.37****	.32****	.28****	.27****
.28****	.33****	.35****	.29****	.27****
.20****	.31****	.27****	.21****	.28****
.28****	.34****	.32****	.25****	.24****
.20****	.30****	.33****	.24****	.26****
.20****	.30****	.35****	.39****	.33****
.28****	.34****	.38****	.30****	.33****
.28****	.33****	.38****	.30****	.30****
.30****	.36****	.37****	.34****	.35****
.31****	.36****	.37****	.31****	.31****
.27****	.34****	.33****	.32****	.33****

Table F-17. Continued

B FACT 1[a]	A FACT 1[b]				
	26	27	28	29	30
7	.35****	.37****	.38****	.30****	.31****
11	.20****	.30****	.29****	.25****	.28****
12	.26****	.34****	.32****	.32****	.26****
15	.21****	.31****	.29****	.24****	.25****
13	.16***	.24****	.21****	.15**	.21****
19	.26****	.31****	.31****	.26****	.30****
20	.23****	.33****	.27****	.26****	.32****
21	.25****	.31****	.26****	.25****	.31****
22	.33****	.40****	.31****	.31****	.34****
24	.25****	.30****	.26****	.25****	.28****
25	.20****	.31****	.24****	.25****	.31****
26	.21****	.31****	.25****	.24****	.27****
27	.25****	.37****	.30****	.30****	.33****
28	.21****	.33****	.27****	.25****	.31****
29	.29****	.39****	.34****	.30****	.37****
30	.29****	.38****	.30****	.30****	.37****
31	.30****	.36****	.33****	.29****	.30****

Table F-18. Coefficients of correlation for benefit factor 1 and assistance factor 2

B FACT 1[a]	A FACT 2[b]			
	15	16	17	18
7	.39****	.27****	.28****	.24****
11	.33****	.36****	.27****	.23****
12	.42****	.38****	.41****	.38****
15	.35****	.40****	.30****	.21****
13	.27****	.23****	.26****	.20****
19	.39****	.35****	.35****	.27****
20	.42****	.36****	.34****	.28****
21	.39****	.33****	.32****	.28****
22	.43****	.40****	.29****	.25****
24	.32****	.34****	.19****	.23****
25	.42****	.36****	.24****	.29****
26	.40****	.38****	.32****	.27****
27	.39****	.42****	.34****	.32****
28	.45****	.41****	.37****	.33****
30	.42****	.37****	.29****	.28****
31	.44****	.36****	.32****	.29****
32	.42****	.34****	.32****	.28****

[a]B FACT 1 = benefit variable number on instrument.

[b]A FACT 2 = assistance variable number on instrument.

**Significant at .05 level of probability.

***Significant at .005 level of probability.

****Significant at .001 level of probability.

19	21	1	3
.24****	.19****	.36****	.25****
.26****	.15**	.35****	.24****
.39****	.29****	.41****	.36****
.24****	.17***	.35****	.27****
.16***	.08****	.27****	.17***
.28****	.16***	.40****	.24****
.27****	.20****	.40****	.26****
.26****	.21****	.41****	.28****
.19****	.15**	.37****	.31****
.28****	.18***	.32****	.25****
.25****	.16***	.36****	.25****
.31****	.19****	.40****	.32****
.33****	.23****	.40****	.24****
.27****	.24****	.42****	.27****
.26****	.23****	.43****	.28****
.27****	.21****	.43****	.26****

Table F-19. Coefficients of correlation for benefit factor 1 and assistance factor 3

B FACT 1[a]	A FACT 3[b]				
	5	6	7	8	9
7	.30****	.32****	.22****	.45****	.35****
11	.24****	.28****	.22****	.37****	.25****
12	.30****	.36****	.25****	.43****	.34****
15	.15***	.21****	.14**	.38****	.22****
13	.12*	.18****	.13*	.33****	.21****
19	.27****	.31****	.20****	.47****	.31****
20	.22****	.27****	.17***	.45****	.30****
21	.27****	.28****	.21****	.35****	.27****
22	.25****	.28****	.21****	.35****	.27****
24	.17***	.22***	.15***	.33****	.24****
25	.24****	.28****	.19****	.40****	.29****
26	.17***	.25****	.17***	.38****	.19****
27	.21****	.28****	.23****	.44****	.25****
28	.23****	.26****	.21****	.40****	.26****
30	.26****	.28****	.22****	.42****	.28****

31	.24****	.25****	.20****	.43****	.28****
32	.26****	.27****	.23****	.43****	.33****

[a]B FACT 1 = benefit variable number on instrument.

[b]A FACT 3 = assistance variable number on instrument.

*Significant at .05 level of probability.

**Significant at .01 level of probability.

***Significant at .005 level of probability.

****Significant at .001 level of probability.

Table F-20. Coefficients of correlation for benefit factor 2 and assistance factor 1

B FACT 2[a]	A FACT 1[b]				
	10	11	12	13	14
2	.27****	.25****	.33****	.31****	.33****
6	.24****	.23****	.27****	.30****	.32****
9	.38****	.34****	.35****	.31****	.34****
16	.30****	.28****	.32****	.34****	.32****
18	.29****	.27****	.29****	.34****	.33****
33	.21****	.20****	.24****	.24****	.23****
34	.27****	.25****	.32****	.29****	.29****
35	.28****	.26****	.35****	.32****	.30****
37	.19****	.19****	.20***	.28****	.31****

[a]B FACT 2 = benefit variable number on instrument.

[b]A FACT 1 = assistance variable on instrument.

***Significant at .005 level of probability.

****Significant at .001 level of probability.

20	22	23	24	25
.32****	.35****	.31****	.31****	.26****
.31****	.37****	.33****	.32****	.26****
.42****	.46****	.42****	.40****	.39****
.36****	.40****	.40****	.36****	.36****
.31****	.42****	.40****	.34****	.35****
.26****	.34****	.34****	.28****	.28****
.34****	.37****	.36****	.34****	.34****
.31****	.32****	.33****	.29****	.36****
.34****	.38****	.37****	.31****	.28****

Table F-20. Continued

B FACT 2[a]	A FACT 1[b]				
	26	27	28	29	30
2	.28****	.34****	.29****	.37****	.29****
6	.25****	.32****	.28****	.33****	.27****
9	.35****	.39****	.40****	.39****	.35****
16	.34****	.39****	.40****	.35****	.32****
18	.30****	.35****	.35****	.33****	.31****
33	.24****	.29****	.26****	.33****	.29****
34	.32****	.35****	.35****	.39****	.32****
35	.27****	.40****	.35****	.38****	.37****
37	.23****	.30****	.28****	.21****	.28****

Table F-21. Coefficients of correlation for benefit factor 2 and assistance factor 2

B FACT 2[a]	A FACT 2[b]			
	15	16	17	18
2	.42****	.41****	.46****	.38****
6	.45****	.42****	.41****	.38****
9	.45****	.42****	.39****	.43****
16	.39****	.43****	.24****	.29****
18	.37****	.31****	.33****	.39****
33	.37****	.36****	.41****	.41****
34	.46****	.38****	.39****	.40****
35	.40****	.45****	.29****	.35****
37	.41****	.35****	.28****	.34****

[a]B FACT 2 = benefit variable number on instrument.

[b]A FACT 2 = assistance variable on instrument.

****Significant at .001 level of probability.

19	21	1	3
.37****	.30****	.41****	.38****
.35****	.30****	.45****	.35****
.42****	.38****	.38****	.37****
.28****	.29****	.37****	.31****
.36****	.28****	.39****	.40****
.36****	.32****	.44****	.32****
.38****	.37****	.48****	.41****
.34****	.37****	.37****	.40****
.34****	.30****	.34****	.26****

Table F-22. Coefficients of correlation for benefit factor 2 and assistance factor 3

B FACT 2[a]	A FACT 3[b]				
	5	6	7	8	9
2	.26****	.35****	.28****	.45****	.36****
6	.32****	.41****	.45****	.45****	.35****
9	.38****	.46****	.31****	.45****	.36****
16	.35****	.25****	.29****	.36****	.35****
18	.33****	.41****	.31****	.39****	.41****
33	.29****	.36****	.22****	.40****	.34****
34	.32****	.40****	.29****	.46****	.42****
35	.30****	.28****	.25****	.37****	.32****
37	.29****	.36****	.26****	.31****	.28****

[a]B FACT 2 = benefit variable number on instrument.

[b]A FACT 3 = assistance variable number on instrument.

****Significant at .001 level of probability.

Table F-23. Coefficients of correlation for benefit factor 3 and assistance factor 1

B FACT 3[a]	A FACT 1[b]				
	10	11	12	13	14
1	.23****	.23****	.31****	.33****	.31****
3	.10*	.10*	.15***	.23****	.27****
5	.24****	.21****	.27****	.35****	.36****
23	.21****	.20****	.23****	.30****	.28****
36	.25****	.25****	.31****	.36****	.43****
38	.31****	.30****	.33****	.39****	.44****

[a]B FACT 3 = benefit variable number on instrument.

[b]A FACT 1 = assistance variable number on instrument.

*Significant at .05 level of probability.

***Significant at .005 level of probability.

****Significant at .001 level of probability.

22	23	24	25
.32****	.33****	.27****	.35****
.23****	.27****	.19****	.21****
.36****	.33****	.33****	.34****
.27****	.28****	.25****	.35****
.43****	.42****	.38****	.37****
.44****	.39****	.38****	.40****

Table F-23. Continued

B FACT 3[a]	A FACT 1[b]				
	26	27	28	29	30
1	.30****	.37****	.35****	.31****	.31****
3	.20****	.25****	.20****	.18****	.18****
5	.29****	.38****	.34****	.35****	.37****
23	.26****	.33****	.29****	.27****	.30****
36	.32****	.42****	.34****	.37****	.45****
38	.33****	.45****	.35****	.31****	.38****

Table F-24. Coefficients of correlation for benefit factor 3 and assistance factor 2

B FACT 3[a]	A FACT 2[b]			
	15	16	17	18
1	.41****	.35****	.32****	.27****
3	.31****	.31****	.30****	.27****
5	.42****	.40****	.29****	.31****
23	.38****	.35****	.22****	.27****
36	.46****	.44****	.32****	.37****
38	.44****	.47****	.28****	.33****

[a]B FACT 3 = benefit variable number on instrument.

[b]A FACT 2 = assistance variable number on instrument.

****Significant at .001 level of probability.

19	21	1	3
.28****	.24****	.34****	.32****
.23****	.19****	.28****	.22****
.30****	.23****	.39****	.34****
.24****	.19****	.33****	.25****
.34****	.27****	.42****	.34****
.35****	.31****	.39****	.28****

Table F-25. Coefficients of correlation for benefit factor 3 and assistance factor 3

B FACT 3[a]	A FACT 3[b]				
	5	6	7	8	9
1	.23****	.24****	.19****	.36****	.23****
3	.12*	.10*	.13*	.31****	.22****
5	.30****	.32****	.28****	.42****	.38****
23	.15**	.13*	.17***	.20****	.18****
36	.26****	.26****	.31****	.44****	.38****
38	.31****	.30****	.34****	.37****	.35****

[a]B FACT 3 = benefit variable number on instrument.

[b]A FACT 3 = assistance variable number on instrument.

*Significant at .05 level of probability.

**Significant at .01 level of probability.

***Significant at .005 level of probability.

****Significant at .001 level of probability.