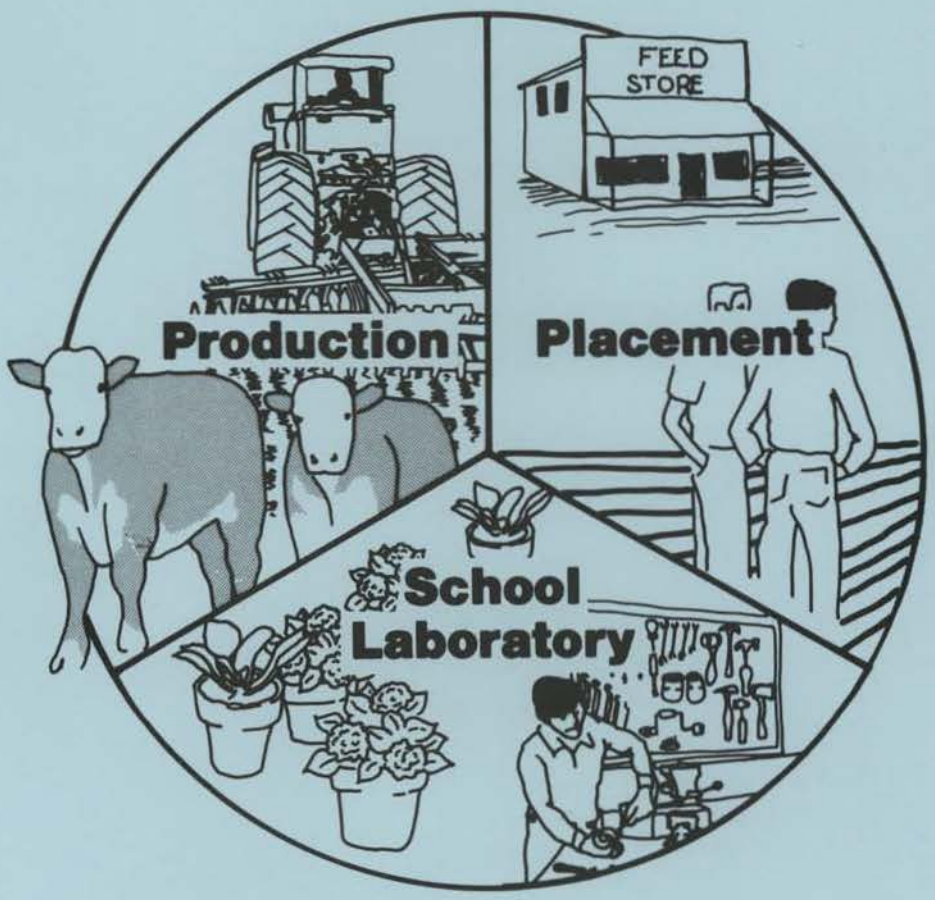
Bulletin No. 705

Supervised Occupational Experience Programs In Vocational Agriculture

Douglas A. Pals and John W. Slocombe



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Introduction

Since the Smith-Hughes Act of 1917, educators have believed that learning through Supervised Occupational Experience (SOE) programs is an effective and meaningful way for students to develop essential occupational competencies. SOE is one of three integral components of a secondary vocational agriculture program. The others are (1) classroom and laboratory instruction and (2) the FFA organization. Classroom activities provide opportunities for students to study and discuss problems related to all phases of agriculture. FFA is a national youth organization designed to develop agricultural leadership, citizenship and cooperation. SOE provides opportunities for students to apply the knowledge and skills learned in the classroom and laboratories to production agriculture and/or agribusiness occupations.

The underlying principle of SOE has always been learning by doing. According to Lee (1980a):

> "Nothing can take the place of learning about the real world by learning in the real world. In vocational agriculture/agribusiness, supervised occupational experience is the vehicle by which the 'real world' learning takes place. . .'Learning by doing' is the trademark of instruction in vocational agriculture/agribusiness."

Lee also noted (1980b) that "our profession is fearful that this element is slipping away and without it we would lose one of the pillars on which vocational education in agriculture/agribusiness has been built." Thus, every student in vocational agriculture should conduct an SOE program; not because the legislature says so, but because it is a sound educational program (Scarborough 1966).

The Agricultural Education community has struggled over the years to keep Supervised Occupational Experience programs relevant. Although we can point to many examples of how the variety of SOE programs has increased, the literature indicates that SOE may have failed to adapt to the needs of students and employers. Miller (1981) wrote:

> "We have changed the names of SOE over the years from home projects to SFP (Supervised Farming Program) to supervised practices to 'SOE'... But for far too many, SOE has remained a home project... We have failed to keep up with the times as far as SOE is concerned."

Traditionally, students have met the SOE requirement by carrying a Supervised Farming Program (livestock or crop project) or by work experience in production- or agribusiness-related occupations. In recent years, more and more students from an urban environment have been enrolling in vocational agriculture. These urban students have been unable to participate in a Supervised Farming Program and often have been too young to find employment opportunities, or lacked available work sites. The financial situation of the rural sector has caused individuals to be less willing to assist the educational program by having their business serve as a work site.

Hylton (1984) stated there was little disagreement that urban students desire careers in agriculture. He wrote about a local high school administrator from an urban area who addressed an agriculture teachers conference by stating, "Our agriculture department is surrounded by homes, apartments and businesses — no open spaces, small pastures or ranches."

This paints the picture that SOE programs cannot remain exclusively traditional, but instead must become non-traditional if this component of vocational agriculture is to survive.

Current Status of SOE Programs in Idaho

In March 1985, the University of Idaho Department of Agricultural and Extension Education surveyed all Idaho vocational agriculture instructors and students to determine the quality and quantity of SOE programs being conducted in Idaho. Questionnaires were returned by 38 vocational agriculture instructors and 1,198 vocational agriculture students. The information presented in this section summarizes the data collected.

Approximately 40 percent of the students responding were sophomores (10th grade), 33 percent were juniors (11th grade) and 26.5 percent were seniors (12th grade). Almost 73 percent of the students classified their residence as rural, and only 2.5 percent said they lived in a city larger than 30,000 population. As a group, the students reported that 47.7 percent of their family income was from non-agriculture sources, while 30.7 percent came from production agriculture and 21.6 percent from non-farm agriculture.

Eighty percent of the students indicated they conducted an SOE program within the past 12 months. Livestock programs were the most popular types of

SOE programs conducted, led by beef cattle (256), followed by horse (107), swine (96), dairy cattle (73) and sheep (71). Only 52 SOE programs involved cereal or forage crops.

Fig. 1 shows the factors that influenced students to conduct an SOE program. Each item was independent, and a dichotomous (yes/no) response was used. Students indicated the most influential factor was to earn money (68.2 percent).

The students were asked to identify people who were most influential to them in conducting an SOE program. As expected, the most influential person was the vocational agriculture instructor followed closely by their parents (Fig. 2).

Students were also asked to indicate the factors that influenced the type of SOE program they conducted in vocational agriculture. Facilities (47.8 percent) and past experience (42.8 percent) were the two most frequent responses (Table 1).

When asked to identify experiences and values gained by conducting an SOE program, over 65 percent of the students indicated responsibility was the most valuable experience gained. More than 60 percent also indicated making money, work experience and record keeping were important benefits (Table 2).

The survey revealed that 28.4 percent of students had received no SOE visitations by the vocational agriculture instructor in the previous 12 months. However, 42.7 percent had received 1 to 3 SOE visitations annually by the instructor and 28.9 percent had received 4 or more annual visitations.

The students credited the vocational agriculture instructor with being most helpful in record keeping and in teaching students about SOE programs (Table 3). They believed the instructor was least helpful in the planning, supervision and evaluation phases of their SOE programs.

Vocational Agriculture Instructors

For students to carry out SOE programs successfully, their vocational agriculture instructor must provide guidance and encouragement. If this is to occur, the teacher must be provided adequate support by the school. The survey showed that 97.4 percent of the vocational agriculture instructors were provided extended employment contracts and over 76 percent were reimbursed for expenses incurred while making SOE visitations (Table 4). Less than 20 percent were provided school release time for conducting SOE visitations.

The vocational agriculture instructors were asked how much time they spent teaching students about SOE programs and how much emphasis they gave to SOE in assigning grades. On the average, they indicated they spent slightly over 10 class periods annually teaching freshmen students about SOE programs and a total of approximately 12.5 class periods to

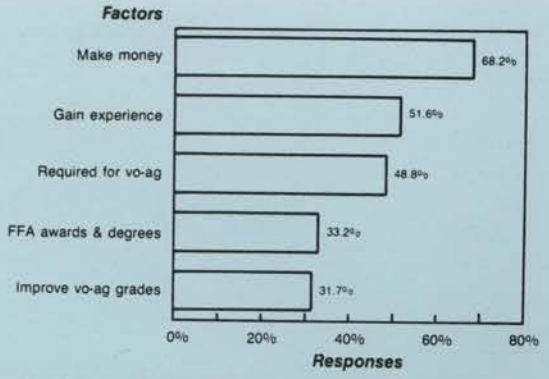

Fig. 1. Factors influencing vo-ag students to conduct SOE programs.

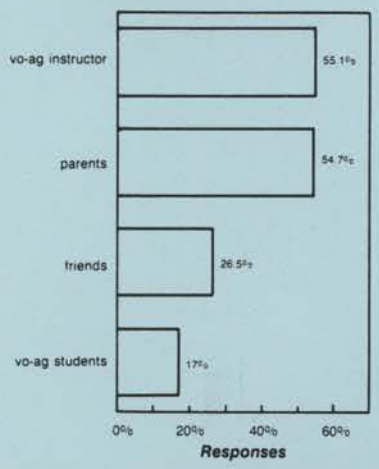

Fig. 2. People influencing vo-ag students to conduct an SOE program.

Table 1. Factors influencing type of SOE program conducted by vocational agriculture student.

Factor	Yes	Percent*
Facilities	573	47.8
Past experiences	513	42.8
Career goals and future plans	390	32.6
Investment (money) required	359	30.0
Family desire	253	21.1
Vo-ag instructor	228	19.0
Vo-ag class project	214	17.9
Market price	194	16.2

*N = 1,198

Table 2. Experiences and values gained through SOE programs.

Experience/value	Yes	Percent*
Responsibility	784	65.4
Made money	752	62.8
Work experience	748	62.4
Record keeping	723	60.4
Money management	680	56.8
Used approved practices	624	52.1
Decision making	616	51.4
Developed reputation as worker	573	47.8
Owned enterprise	466	38.9
Secured job	428	35.7
Receiving awards	302	25.2

*N = 1,198

Table 3. Help received from vocational agriculture instructor with SOE program.

Method	Yes	Percent*
Record keeping	642	53.6
Classroom instruction on SOE	610	50.9
Goal setting	322	26.9
SOE program evaluation	300	25.0
Supervised SOE	274	22.9
Planning SOE	255	21.3
No help provided	109	9.1

*N = 1,198

Table 4. Provided by school districts for SOE program supervision.

Item	Year	Percent*
Extended contract	37	97.4
Reimbursement of expenses	29	76.3
Vehicle	9	23.7
Release time	7	18.4
Extra duty pay	1	2.6

*N = 38

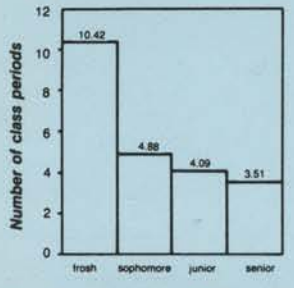

Fig. 3. Amount of class time spent by instructors to teach students how to plan SOE programs.

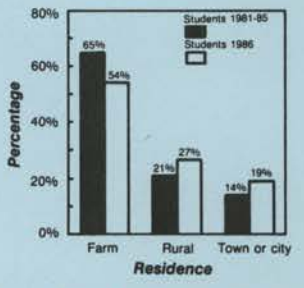

Fig. 4. Student's residence while in school.

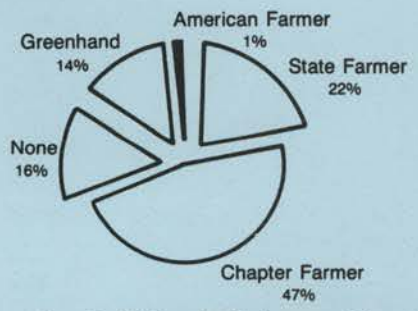

Fig. 5. Highest FFA degree achieved by students in 1981-86 (N = 736).

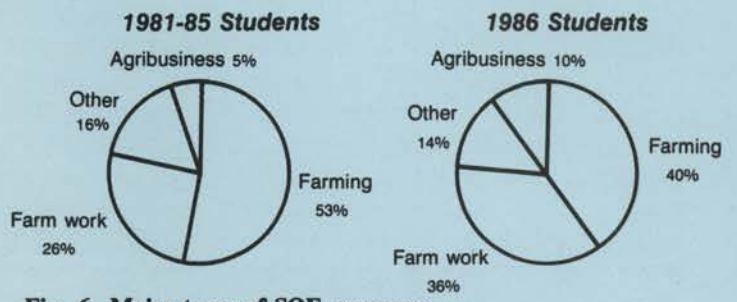

Fig. 6. Major types of SOE programs.

teach SOE in the sophomore, junior and senior classes (Fig. 3). Over 70 percent of the instructors said they based 10 percent or less of the student's grade on his or her SOE program. Fewer than 5 percent of the instructors based 20 percent or more of grades on SOE performance.

Benefits of SOE

Supervised Occupational Experience programs have always been perceived as being beneficial to students enrolled in vocational agriculture. Williams (1979) reported that "SOE programs were beneficial to students, not only in the development of knowledge and skills, but also in the development of desirable occupational and educational attitudes." Zurbrick (1984) stated that vocational agriculture students most often indicated "responsibility" when asked what experience and value they gained from conducting an SOE program.

Research conducted by Williams (1979) also identified "parents" as an important factor in vocational agriculture SOE programs. Rawls (1980) reported that parents felt students derived three major benefits from SOE. These benefits were work attitudes, occupational development and human relations skills. Writing in 1982, Rawls also indicated he found that, "Parents of vocational agriculture students recognize the educational and occupational benefits derived from SOE programs and will generally support them..."

The instructor's role in guiding and encouraging students to carry out effective SOE programs is recognized as being important. Some authors assert the student's SOE program will be no better than the teacher of vocational agriculture guiding that experience. In addition to the vocational agriculture instructor, the student's SOE placement program experience also depends greatly on the employer. The next two sections summarize the benefits of SOE as perceived by students, parents, employers and vocational agriculture instructors.

Value of SOE As Perceived by Students

The data in this section were compiled from questionnaire responses received from 387 students who completed the vocational agriculture program between 1981 and 1985 and 365 students who were seniors in 1986. Only 14 percent of these respondents were female, 86 percent male. More than 80 percent lived on farms or in a rural area while in school (Fig. 4).

Nearly 78 percent of these students had completed 4 years of vocational agriculture, and 47 percent had earned the Chapter Farmer degree while about 22 percent had earned the State Farmer degree (Fig. 5).

These students were asked to indicate their major type of SOE. Almost 53 percent of the 1981-85 students reported farming (raising livestock or crops) and

26 percent indicated farm work (Fig. 6). Only 40 percent of the 1986 students indicated farming, while 36 percent were doing farm work. Agribusiness SOE programs increased from 5 percent of all programs in 1981-85 to 10 percent by 1986. The decrease in production-type programs could be explained by the difficult times agriculture has faced in recent years and the increased number of urban students enrolled in vocational agriculture.

Students in both years were asked to rate 50 possible benefits of SOE programs. Rankings are shown in Table 5. The five greatest benefits perceived by the 1981-85 students and 1986 students combined were (1) opportunity to learn on own, (2) promote acceptance of responsibility, (3) develop independence, (4) pride in ownership and (5) learn to appreciate work. The high ratings placed on these five benefits suggest that SOE programs are useful not only in developing knowledge and skills from information learned in the classroom, but that they can affect the behavior of students. In fact, many of the benefits ranked in the top third in Table 5 are the type that affect the behavior of students, i.e. attitudes, values and human relations skills. These observations were very similar to those reported by Williams (1979).

Students ranked benefits related to the home, school and community in the bottom third of their lists. Also ranked in the lower third were such career-type activities as (1) develop skills for agribusiness, (2) identify career opportunities, (3) aid in making career choices, (4) seek a college education, (5) allow to grow into farming and (6) allow to grow into agriculture.

Although the students ranked these types of activities lower on their list of benefits, they still recognized them as benefits of SOE programs.

Value of SOE as Perceived By Parents, Employers and Vocational Agriculture Instructors

Parents of SOE students, employers and vocational agriculture instructors were similarly asked to rate 30 benefits statements relevant to SOE.

About half (52 percent) of the fathers but only 2 percent of the mothers had been enrolled in vocational agriculture when they were in high school. Over 80 percent of the vocational agriculture instructors who responded were teaching in programs that had less than 70 students enrolled. They averaged just over 12 years of teaching experience. Over 61 percent of the employers of the SOE students were involved directly in production agriculture.

Table 6 shows the rankings of the 30 benefit statements by the three groups and also as a combined ranking.

The five greatest benefits received from SOE programs as perceived by the combined groups were: (1) promoted acceptance of responsibility, (2) developed self-confidence, (3) provided opportunity to learn on own, (4) developed independence and (5) learned to work with others.

All five of these benefit items are related to the attitudes, values and human relations abilities of the students. In the combined rating column, 8 of the top 10 benefit items were associated with student behavior. This is in agreement with Rawls' 1980 report that the parents felt students derived three major benefits from SOE work attitudes, occupational development and human relations skills.

Items rated lowest by the vocational agriculture students' parents all related to careers. The five lowest benefit items rated by parents were (1) learned to identify problems in farming, (2) helped prepare for agriculture occupation, (3) encouraged the use of approved business procedures, (4) aided in choosing an occupation and (5) provided a way to grow into agribusiness. These ratings might indicate that parents think their child's SOE is not related to what they see their children doing for lifelong work.

Instructors rated "helped learn extra things not taught in vo-ag class," "provided opportunity to make decisions," "provided individualized instruction" and "learned to communicate effectively" among their top five benefit items. Because instructors should understand the purpose of the three components of vocational agriculture (classroom, SOE and FFA) more completely, they may have felt "developed self-confidence," "developed independence" and "learned to work with others" as more a function of the FFA component, whereas the parents and employers may have viewed these benefits as resulting from the total vocational agriculture program, rather than only one component.

The items rated lowest by the instructors were: "encouraged to seek a college education," "developed citizenship traits," "learned to identify strengths and weaknesses," "learned to use time efficiently" and "aided in choosing an occupation." Although these would be seen as benefits of the vocational agriculture program, the fact that the instructors ranked these five benefit items lowest might indicate they view them as not necessarily resulting from the SOE component. Only one of these aided in choosing an occupation was also rated in the bottom five by parents.

Parents placed less relative importance on money earned from SOE than did employers and instructors. One explanation might be that parents think they are providing the financial resources for their children, and they see SOE more as an opportunity to affect the behavior of their child than as a money-earning opportunity. The employer group agreed with the parents on the first five benefit items except for "helped earn money while in school," which they ranked number one.

A Mann-Whitney U test was used to determine significant differences in group responses to the 30 like-benefit items. Of the 30 items, 27 have a significant difference among the three groups at the 0.05 level of probability. This indicates that parents, instructors and employers view the benefits of SOE differently. One possible explanation would be that vocational agriculture instructors are doing a less than adequate job in effectively educating the parents and employers in the SOE program philosophy and procedures.

The different perceptions of parents, instructors and employers can be illustrated by three of the benefit items.

The benefit item "encouraged the keeping of records" was rated significantly higher by instructors than by the parents and employers; the parents' rating was significantly higher than that of the employers. The instructors and parents perceived the record keeping as being a skill much more closely related to SOE than did the employers.

Instructors rated "helped in making vocational agriculture practical" significantly higher than did parents and employers, perhaps because instructors see SOE as the practical application of what is learned in the classroom. The parents and employers may not see this connection as clearly, or indeed, this claim by

Table 5. Students' ranking of SOE benefits.

Item	1981-85 students	1986 students	Combined students	Item	1981-85 students	1986 students	Combined students
	Rank	Rank	Rank		Rank	Rank	Rank
Opportunity to learn on own	2[a]	1	1	Increase participation in FFA	19	34[b]	27*
Promote acceptance of responsibility	1	2	2*	Learn to respect others' opinions	27[b]	23	28[b]
Develop independence	5	3	3	Develop a good relationship with instructor	22	30	28[b]*
Pride in ownership	4	6	4	Develop citizenship traits	23[b]	33	29
Learn to appreciate work	3	7	5	Develop skills for agribusiness	29	26[b]	30
Opportunity to make decisions	9[b]	5	6	Emphasize financial security	34	22	31[b]*
Ability to recognize talents	6	8	7	Identify career opportunities in ag	30[b]	26[b]	31[b]
Develop good habits	7	9	8	Increase participation in county fair	24	40	32*
Opportunity to put plans into action	8	14	9	Identify strengths and weaknesses	31	27	33
Encourage learning while earning	18[b]	4	10*	Aid in making career choices	32	31	34
Pride in employment	11	10	11	Increase chances of earning FFA degrees and awards	30[b]	38	35
Develop self confidence	12	11	12	Learn to identify problems in farming	35	32	36
Provide opportunity to plan work	14	13	13	Seek a college education	36	36	37
Develop initiative	17	12	14[b]	Allow to grow into farming	37	39	38
Ability to cooperate with other	13	16	14[b]	Allow to grow into agribusiness	41	37	39*
Provide opportunity to solve problems	16	19	15	Develop a good relationship between school and home	33	44	40
Learn to establish goals	20[b]	15	16	Extend education to community	40	42	41
Develop interest in agriculture	10	24	17*	Maintain a good home environment	39	45	42[b]
Learn to keep records	9[b]	34[b]	18*	Learn to communicate well	38	46	42[b]
Develop skills for farming	23[b]	17	19	Develop a better relationship to parent	42	43	43
Encourage working relationships w/other students	18[b]	25	20	Effectively apply for a job	44	41	44*
Provide individualized instruction	20[b]	28	21*	Improve school attendance	43	47	45*
Make vo-ag class practical	15	35	22*	Complete a successful 4-H project	45	48	46
Learn to use time well	26	18	23				
Ability to make management decisions	25	21	24				
Motivation to learn	21	29	25				
Develop ability to manage money	28	20	26				

[a]Rank determined by mean scores
[b]Tie in rank
*Significant difference identified using the Mann-Whitney U-test, $p < 0.05$.
1981-85 students: N = 384; 1986 students: N = 365.

vocational agriculturalists may not be a valid one.

The three groups rated "provided individualized instruction" significantly different. The instructors ranked it fifth, while the employers rated it last. The parents' rating also was significantly higher than that of employers. One explanation could be that employers do not view on-site visitation as individualized instruction. It may mean that vocational agriculture instructors are not making adequate numbers of supervisory visits or more explanation of the SOE program to parents and employers is needed.

Non-traditional SOE Programs For the 1990's

The agricultural education community has struggled over the years to keep the SOE program relevant. Several studies have confirmed that SOE programs are not being fully implemented into the vocational agriculture curriculum. In his summary of these studies, Zurbrick (1984) reported that 80.6 percent of students in Arizona had an SOE, 95.4 percent in Colorado, 81.4 percent in New Mexico and 71.5 percent in Nevada.

Iverson and Brown (1979) found that nearly two-thirds of the vocational graduates in the South had not had occupational experience programs in any of the 3 years they were enrolled. Dunham and Long (1984) reported that only 80.3 percent of the vocational agriculture students in Utah had SOE programs. Leising (1982) found that only 64.2 percent of California vocational agriculture students had participated in an SOE program sometime during high school.

Our own studies of the status and benefits of SOE in Idaho indicated that vocational agriculture in Idaho must be changed to include alternative ways for students to satisfy the SOE requirements if SOE was to survive.

The large number of students not participating in

Table 6. Comparison of like benefits by respondent type.

Benefit statements	Groups combined	Parents[a]	Instructors[b]	Employers[c]	Sig. Diff.
	Rank	Rank	Rank	Rank	
Promoted acceptance of responsibility	1	1	2	2	
Developed self-confidence	2	2	11*	3	I>P[d]
Provided opportunity to learn on own	3	4	3	9	I, E>P
Developed independence	4	5	10*	4	E>P
Learn to work with others	5	3	19*	5	E>P
Developed initiative	6*	7	9	6	I>P
Provided opportunity to make decisions	6*	6	4	12	I>P>E
Developed an appreciation for work	7	8	11*	7	E>P
Provided opportunity to solve problems	8	9	6	11	P>I
Helped learn extra things not taught in vo-ag class	9	13	1	8	
Developed acceptable work and personal habits	10*	11	10*	13	I>P
Developed citizenship traits	10*	10	23	15	E>I,P
Provided motivation to learn	11	14	17*	14	
Encouraged the keeping of records	12	12	14*	27	I>P>E
Learned to use time efficiently	13*	17	21	10	I>P>E
Helped to make vocational agriculture practical	13*	15	8	20	I>P>E
Learned to identify strengths and weaknesses	14	16	22	17	I>P>E
Helped earn money while in school	15	25	7	1	I>P>E
Encouraged to seek a college education	16	18	24	16	E>I
Helped set educational goals	17*	21	18	22	P>E
Provided individualized instruction	17*	19	5*	30	I>P,E
Helped set career goals	18	22	14*	18	I>P
Allowed to look in-depth at area of ag interest	19*	23	17*	21	I>P,E
Developed the ability to manage money	19*	24	12	25	I>E
Learned to communicate effectively	20	20	5*	28	E>I>P
Helped prepare for agriculture occupation	21	27	16	23	P,E>I
Learned to identify problems in farming	22	26	13	29	I,E>P
Encouraged the use of approved business procedures	23	28	15	26	I>P,E
Aided in choosing an occupation	24	29	20	19	I>P,E
Provided a way to grow into agribusiness	25	30	19*	24	I>P,E

*tie in rank of mean score
[a]N = 551
[b]N = 65
[c]N = 95
[d]Individual comparisons run with the nonparametric Mann-Whitney test, significance set at 0.05 or less.
P = parents
I = instructors
E = employers

SOE might be an indication that SOE is no longer relevant. To implement a non-traditional SOE concept into the Idaho vocational agriculture programs, a pilot test was conducted during the second semester of the 1986-87 school year. The pilot test involved 10 vocational agriculture programs in Idaho. Five were selected to serve as the treatment schools and five as the control schools. A total of 176 students made up the treatment group; 109 students, the control group. Nearly 60 percent of the students involved in the pilot test were freshmen (9th grade), 36.5 percent were sophomores (10th grade) and almost 4 percent were juniors (11th grade). About 78 percent were 15 or 16 years of age, and 85.6 percent were male.

This alternate method for students completing their SOE requirements was adapted from a similar program in Texas, which allowed students to complete agricultural related competencies without actually being employed or earning a wage. All students kept an SOE record book. The system is based on students recording hours they have spent learning to do competencies related to agriculture. These competencies can be completed in agricultural management, agricultural mechanics, animal science, forestry, horticulture, leadership, plant science and soil science. The vocational agriculture instructor may allow related activities if he or she so desires. Students could eventually earn FFA degrees and awards based on the competencies they have completed.

When attitudes of students in the treatment and control groups were compared, results showed that adding the non-traditional SOE concept into the vocational agriculture program slightly improved students' attitudes toward SOE. This suggests that the non-traditional SOE concept could be used by vocational agriculture instructors as an alternative to traditional SOE. The vocational agriculture instructors who conducted the treatment group indicated the non-traditional SOE concept was beneficial; however, it needs some revisions.

These revisions were made during the 1987-88 school year and the concept was approved at the Summer State Division of Vocational Education Conference in August 1988. The Idaho SOEP Planning and Accounting Book was revised to accommodate the addition of the non-traditional SOE concept. A teacher's guide was developed to instruct the teachers on how to teach this concept to their students.

Conclusions

A survey of Idaho vocational agriculture students in 1985 showed that 80 percent had conducted an SOE program within the previous 12 months. This figure is comparable to Arizona (80.6 percent), New Mexico (81.4 percent), Nevada (71.5 percent) and Utah (80.3 percent), and better than California (64.2 percent). Vocational agriculture students in Idaho are predominantly rural.

Vocational agriculture instructors in 1985 indicated strong support by their school district for SOE programs. Over 97 percent (97.4 percent) were provided with extended employment.

Vocational agriculture students perceived that SOE programs benefited them most in development of behavioral attitudes, values and human relations skills.

Parents, employers and vocational agriculture instructors rated SOE as beneficial to vocational agriculture students. However, the three groups had significantly different ratings for 27 of 30 listed benefit items. This might indicate that the SOE story is not being told to parents and employers very effectively by vocational agriculture instructors.

A pilot study of a non-traditional SOE concept in 1987 indicated this non-traditional approach slightly improved student attitudes toward SOE. Gains were not significant, however. Vocational agriculture instructors and students indicated the non-traditional SOE concept was beneficial, although it needed revisions. Revisions were made and implemented in August 1988.

Recommendations

1. Another follow-up on the status of SOE in Idaho vocational agriculture programs should be conducted in 1990 to assess the effect of the curriculum changes in vocational agriculture.
2. Teachers of vocational agriculture, agricultural teacher educators and state supervisors should continue to place emphasis on the importance of SOE to the vocational agriculture program.
3. More emphasis should be given to making the SOE program relevant to vocational agriculture students who come from cities and larger towns.
4. Vocational agriculture instructors should educate parents and employers on the philosophy and procedures of SOE.
5. Further research needs to be conducted to identify how students, parents and employers perceive the classroom, laboratory and FFA components of vocational agriculture in relation to the benefits derived by students.
6. More research needs to be conducted to develop a reliable instrument to measure student attitudes toward SOE.

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SERVING THE STATE

Teaching . . . Research . . . Service . . . this is the three-fold charge of the College of Agriculture at your state Land-Grant Institution, the University of Idaho. To fulfill this charge, the College extends its faculty and resources to all parts of the state.

Service . . . The Cooperative Extension System has offices in 42 of Idaho's 44 counties under the leadership of men and women specially trained to work with agriculture, home economics and youth. The educational programs of these College of Agriculture faculty members are supported cooperatively by county, state and federal funding.

Research . . . Agricultural Research scientists are located at the campus in Moscow, at Research and Extension Centers near Aberdeen, Caldwell, Parma, Tetonia and Twin Falls and at the U.S. Sheep Experiment Station, Dubois and the USDA/ARS Soil and Water Laboratory at Kimberly. Their work includes research on every major agricultural program in Idaho and on economic activities that apply to the state as a whole.

Teaching . . . Centers of College of Agriculture teaching are the University classrooms and laboratories where agriculture students can earn bachelor of science degrees in any of 20 major fields, or work for master's and Ph.D. degrees in their specialties. And beyond these are a variety of workshops and training sessions developed throughout the state for adults and youth by College of Agriculture faculty.