

The Value of Supervised Occupational Experience Programs as Perceived by Students

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Since the Smith-Hughes Act of 1917, educators have believed that learning through Supervised Occupational Experience (SOE) programs is a very effective and meaningful way of developing essential occupational competencies. Due to decreasing numbers of vocational agriculture students participating in SOE programs and the increased accountability measures being required to justify extended contracts for vocational agriculture instructors, SOE programs have come under close scrutiny in recent years. As competition for the public education dollars has increased, the need for better utilization of SOE programs has become more important.

Williams (1979) found 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 and values." Zurbrick (1984) stated that vocational agriculture students most often indicated responsibility when asked what experience and values they gained from conducting an SOE program.

This investigation was prompted by an implication for teacher educators as noted by Williams (1979). He indicated a need for additional research to identify benefits other groups perceive students receive from vocational agriculture SOE programs. The other groups noted were the vocational agriculture students, vocational agriculture teachers, parents, school administrators and employers.

Purpose and Objectives

The primary purpose of this research was to document the value of Supervised Occupational Experience programs as perceived by 1981-85 and 1986 vocational agriculture students. The specific objectives were to:

1. Identify selected characteristics of 1981-85 students and 1986 students participating in Supervised Occupational Experience.
2. Determine the perceived benefits received from SOE programs by past students (1981-85 students) and present senior students (1986 students).
3. Determine if there was a difference in the perceived benefits received from SOE between the 1981-85 students and the 1986 senior students.

Methodology

The population for the 1981-85 students originated from a list of vocational agriculture program completers compiled by the Idaho Division of Vocational Education in Boise. The list contained approximately 5000 names stratified by year of graduation. Three hundred names from each year were obtained by using the random number generator in Lotus 1-2-3. Current addresses could only be obtained for 727, thereby decreasing the sample size from 1500 to 727.

To obtain a representative sample of the 1986 senior students, a stratified sample was taken based on the eight FFA Districts in Idaho. Fifty-two schools, proportioned by district and percentage of students, were selected using a stratified procedure. The response rates are shown in Table 1.

Table 1
Percent of Responses to Questionnaires

Group	Number		Percent Return
	Sent	Returned	
1981-85 Students	727	387	53
1986 Students	550	365	66

The investigator designed the survey instrument by modifying surveys used by Williams (1979) in studies conducted in Iowa. This questionnaire was designed in two parts. In Part I the respondents were given a list of 50 benefit statements and were asked to rate them on a 1 to 9 scale. A 1 indicated no benefit from the SOE program, a 5 indicated average benefit, and a 9 indicated much benefit. Part II was designed to collect data on the demographics of the respondents.

A Cronbach's Alpha Reliability Coefficient was computed for the two questionnaires on the dependent variables. The 1981-85 student questionnaire had a reliability coefficient of .98 and the 1986 student questionnaire a .97, better than the minimum alpha level of .80 recommended by Carmines and Zeller (1979). The questionnaire and cover letter were mailed to the addresses compiled. Two follow-up mailings were made to the 1981-85 students, a postcard one week after the initial mailing and a second questionnaire two weeks later. Vocational agriculture instructors administered the questionnaire to their 1986 students. Follow-up phone calls were made to encourage the instructor to administer and return the questionnaires.

All questionnaires received five days after the second mailing (1981-85 students) were considered to be from late respondents. Those received prior to that were from early respondents. Research by Goldhor (1972) has shown that late respondents are often similar to non-respondents; thus, one way to see if the non-respondents are different from the respondents is through late respondents. Late versus early respondents were tested for significant differences using the Mann-Whitney U test. Only one benefit item was significantly different in the 1981-85 students at the 0.05 probability.

The data were analyzed using the Statistical Package for the Social Sciences (SPSS, 1983). The data were classified as ordinal level data, thus nonparametric statistics were used to analyze and evaluate the data. Percentages were used to analyze demographic data. The mean value, rank and standard deviation were computed for each benefit item, and the Mann-Whitney U test was used to test for significant differences between the 1981-85 students and the 1986 students.

Findings

Characteristics of Respondents

The data in Table 2 compare 1981-85 students and 1986 students on selected characteristics. The two groups were similar in several ways. Over three-fourths (77.6%) of the students had completed four years of vocational agriculture. Both groups were made up of 86.2% male students. The 1986 students reported a 10% decrease in the number living on farms when compared to the 1981-85 students, suggesting that even in a rural state like Idaho more and more vocational agriculture students are coming from small acreages or urban homes.

The 1986 students' cumulative grade point averages were lower than the 1981-85 students which might indicate that the 1981-85 students who had the lower grade point averages did not respond to the questionnaire. However, the comparison of the early versus late respondents did not detect a difference in the grade point averages.

Twenty-six percent of the 1981-85 students reported they had earned the Idaho State Farmer Degree while 18% of the 1986 students had earned this degree; however, the 1986 students still had another opportunity to apply for the degree. It could also be argued that the State Farmer Degree recipients might be more inclined to return the questionnaire, thus affecting the percentage.

When students were asked to indicate their major type of SOE, 50.8% of the 1981-85 students reported farming (raising livestock or crops) and 24.6% indicated farm work. Only 39.6% of the 1986 students indicated farming while 36% responded farm work. The 1986 students had a 5% increase in the number involved in agribusiness SOE programs when compared to the 1981-85 students. 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.

Value of SOE

There were 50 benefit statements that both the 1981-85 and 1986 student groups rated. The rank order, mean values, standard deviations and Mann-Whitney U Test are presented in Table 3. All of the benefits had means of 5.00 (average benefit) and above except for one, Complete a successful 4-H project (4.48). The 1986 students rated Improve school attendance just below 5.00 (4.94).

Table 2

Characteristics of Vocational Agriculture Students

Characteristic	1981-85 Students (%)	1986 Students (%)	Combined (%)
<u>Number of Years in Vo-Ag</u>			
Four	77.1	78.1	77.6
Three	16.6	14.8	15.7
Two	3.3	3.0	3.2
One	3.0	4.1	3.6

(table continues)

Characteristic	1981-85 Students (%)	1986 Students (%)	Combined (%)
<u>Residence While in School</u>			
Farm	64.6	54.5	59.6
Rural	21.4	26.2	23.8
Town or City	14.0	19.3	16.7
<u>Gender</u>			
Male	85.6	86.7	86.2
Female	14.2	13.3	13.7
<u>Cumulative GPA</u>			
3.50-4.00	22.7	19.4	21.1
3.00-3.49	36.6	26.4	31.5
2.50-2.99	31.3	36.2	33.7
2.00-2.49	4.7	13.8	10.8
below 2.00	1.3	4.2	2.7
<u>Highest FFA Degree</u>			
American Farmer	1.9	.8	1.4
State Farmer	26.5	17.5	22.0
Chapter Farmer	42.5	50.4	46.5
Greenhand	15.5	11.8	13.7
None	13.5	18.1	15.8
<u>Major Type of SOE</u>			
Farming (Livestock or Crops)	50.8	39.6	45.2
Farm Work	24.6	36.4	31.0
Agribusiness	5.3	10.1	7.7
Other	14.9	13.9	14.4
<u>Current Status</u>			
(Respondents could check more than one; therefore, the following are reported as N.)			
Employed (full-time)	157		
Self-Employed	46		
University	91		
Community College	37		
Unemployed	12		
Other	61		
<u>Types of Activities</u>			
FFA	344	266	
Sports	273	329	
Music	114	96	
Drama	57	55	
Student Government	112	118	
4-H	77	77	
Other	63	78	

Table 3

Students' Rankings, Means and Standard Deviations of SOE Benefits

Item	Students 1981-85 N = 384			Students 1986 N = 365			Students Combined		
	Rank ^a	Mean ^b	SD	Rank ^a	Mean ^b	SD	Rank ^a	Mean ^b	SD
Opportunity to learn on own	2	7.61	1.66	1	7.45	1.76	1	7.53	1.71
Promote acceptance of responsibility	1	7.62	1.64	2	7.31	1.80	2	7.47	1.73*
Develop independence	5	7.16	1.77	3	7.17	1.71	3	7.16	1.74
Pride in ownership	4	7.21	1.78	6	7.04	1.88	4	7.13	1.83
Learn to appreciate work	3	7.22	1.80	7	7.01	1.85	5	7.12	1.82
Opportunity to make decisions	9†	7.06	1.82	5	7.12	1.73	6	7.10	1.78
Ability to recognize talents	6	7.12	1.96	8	6.99	2.06	7	7.05	2.01
Develop good habits	7	7.11	1.84	9	6.97	2.06	8	7.04	1.95
Opportunity to put plans in action	8	7.07	1.87	14	6.88	1.88	9	6.98	1.88
Encourage learning while earning	18†	6.80	2.17	4	7.15	1.97	10	6.97	2.08*
Pride in employment	11	6.97	1.94	10	6.95	1.92	11	6.96	1.93
Develop self confidence	12	6.95	1.96	11	6.93	1.81	12	6.94	1.89
Provide opportunity to plan work	14	6.92	1.92	13	6.90	1.83	13	6.91	1.87
Develop initiative	17	6.85	1.81	12	6.91	1.69	14†	6.88	1.75
Ability to cooperate with others	13	6.94	1.95	16	6.83	1.97	14†	6.88	1.96
Provide opportunity to solve problems	16	6.86	1.94	19	6.76	1.86	15	6.81	1.90
Learn to establish goals	20†	6.73	2.01	15	6.86	1.81	16	6.80	1.91
Develop interest in agriculture	10	6.99	2.01	24	6.60	1.96	17	6.79	1.99*
Learn to keep records	9†	7.06	2.09	34†	6.38	2.28	18	6.72	2.21*
Develop skills for farming	23†	6.61	2.23	17	6.80	2.19	19	6.71	2.21
Encourage working relationships with other students	18†	6.80	1.95	25	6.59	2.09	20	6.70	2.02
Provide individualized instruction	20†	6.73	2.33	28	6.52	2.10	21	6.63	2.22*
Make vo-ag class practical	15	6.88	2.06	35	6.37	2.29	22	6.62	2.20*
Learn to use time well	26	6.45	2.10	18	6.77	1.91	23	6.61	2.02
Ability to make management decisions	25	6.47	2.18	21	6.73	1.92	24	6.60	2.06

(table continues)

Item	Students 1981-85 N = 384			Students 1986 N = 365			Students Combined		
	Rank ^a	Mean ^b	SD	Rank ^a	Mean ^b	SD	Rank ^a	Mean ^b	SD
Motivate to learn	21	6.68	1.78	29	6.50	1.87	25	6.59	1.83
Develop ability to manage money	28	6.42	2.16	20	6.74	1.99	26	6.58	2.08
Increase participation in FFA	19	6.78	2.24	34†	6.38	2.39	27	6.57	2.32*
Learn to respect others' opinions	27	6.44	2.12	23	6.62	1.94	28†	6.53	2.01
Develop a good relationship with instructor	22	6.63	2.36	30	6.43	2.16	28†	6.53	2.26*
Develop citizenship traits	23†	6.61	2.07	33	6.39	2.16	29	6.50	2.11
Develop skills for agribusiness	29	6.27	2.28	26†	6.54	2.09	30	6.41	2.19
Emphasize financial security	34	6.12	2.20	22	6.67	2.05	31†	6.40	2.14*
Identify career opportunities in ag	30†	6.26	2.30	26†	6.54	2.21	31†	6.40	2.56
Increase participation in county fair	24	6.59	2.83	40	6.20	2.76	32	6.39	2.80*
Identify strengths and weaknesses	31	6.23	2.14	27	6.53	1.99	33	6.38	2.07
Aid in making career choices	32	6.20	2.24	31	6.41	2.19	34	6.31	2.22
Increase chances of earning FFA degrees and awards	30†	6.26	2.58	38	6.30	2.39	35	6.26	2.49
Learn to identify problems in farming	35	6.10	2.32	32	6.40	2.01	36	6.25	2.18
Seek a college education	36	6.09	2.50	36	6.35	2.47	37	6.22	2.49
Allow to grow into farming	37	5.99	2.35	39	6.22	2.25	38	6.11	2.30
Allow to grow into agribusiness	41	5.81	2.41	37	6.32	2.03	39	6.07	2.32*
Develop a good relationship between school and home	33	6.14	2.22	44	5.87	2.26	40	6.01	2.24
Extend education to community	40	5.85	2.33	42	5.91	2.29	41	5.88	2.31
Maintain a good home environment	39	5.87	2.28	45	5.86	2.27	42†	5.87	2.27
Learn to communicate well	38	5.90	2.40	46	5.84	2.34	42†	5.87	2.37
Develop a better relationship to parent	42	5.72	2.41	43	5.88	2.28	43	5.80	2.34
Effectively apply for a job	44	5.13	2.51	41	5.93	2.44	44	5.53	2.51*
Improve school attendance	43	5.41	2.67	47	4.94	2.76	45	5.17	2.72*
Complete a successful 4-H project	45	4.52	3.21	48	4.43	3.12	46	4.48	3.16

^aRank determined by mean scores. ^bMeans on a 1 to 9 scale.

*Significant difference identified using the Mann-Whitney U Test, $p < 0.05$.

†Tie in rank.

The five greatest benefits received from SOE programs perceived by the combined groups were: (a) opportunity to learn on own, (b) promote acceptance of responsibility, (c) develop independence, (d) pride in ownership, (e) learn to appreciate work. The high ratings placed on the five benefits listed above suggest that the benefits obtained from SOE can affect the behavior of students and are not only useful in developing knowledge and skills from information learned in the classroom. In fact, many of the benefits ranked in the top third are the type that affect the behavior of students, i.e., attitudes, values and human relation skills. These observations were very similar to those reported by Williams (1979). All students combined rated the benefit Develop skills for farming (6.71) higher than Develop skills for agribusiness (6.41); this may indicate that Idaho programs emphasize production agriculture more than agribusiness.

Significant differences in mean scores were observed between the two groups for 13 of the 50 benefit items. In 9 of those 13 items that were significantly different, the mean was greater for the 1981-85 students. The items rated significantly higher by the 1981-85 students were those more easily recognized after a student left high school and had the opportunity to reflect. Some of these were: (a) promote acceptance of responsibility, (b) develop interest in agriculture, (c) learn to keep records, (d) make vo-ag class practical, and (e) develop a good relationship with instructor. The 1986 students probably disliked keeping records while the experience of the 1981-85 students in the real world reinforced the importance of records. This could be one reason why the 1981-85 students rated this benefit significantly higher. On the other hand, the 1986 students rated Effectively apply for a job significantly higher than the 1981-85 students.

It was observed that the students in this study ranked the benefits related to the home, school and community in the bottom third of the benefits. This was the same observation reported in the State Farmer and Chapter Farmer Degree recipients in the Williams (1979) study. Career type activities were also ranked in the lower third of the benefits. These included: (a) develop skills for agribusiness, (b) identify career opportunities in agriculture, (c) aid in making career choices, (d) seek a college education, (e) allow to grow into farming, and (f) allow to grow into agribusiness. The fact that these items still had an above-average rating reinforces that these types of activities are still recognized as benefits of SOE programs. They were not rated as highly as those benefits which affect the students' attitudes, values and behaviors.

Summary

A high percentage (86.2%) of the students in the study were male. Over three-fourths of the students had completed four years of vocational agriculture. The percentage of students living on farms had decreased from the 1981-85 students to the 1986 students.

Fifty-one percent of the 1981-85 students managed production-oriented SOE programs compared to 40% of the 1986 students. The data indicated a slight increase in the number of agribusiness SOE programs with the 1986 students.

The 50 benefit items were rated similarly by the 1981-85 and 1986 student groups. Almost all of the 50 benefits were rated as having average benefit (5.00) or higher by the two groups of students. SOE programs were perceived to benefit the students most in development of behavioral attitudes, values and human relations skills. The 1981-85 students rated the benefits (a) promote acceptance of responsibility, (b) develop interest in agriculture, (c) learn to keep records, (d) make vo-ag class practical, and (e) develop a good relationship with instructor significantly higher than did the 1986 students.

Recommendations

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. The data of this study reinforce the work of Williams (1979) in Iowa almost 10 years ago.

There needs to be additional follow-up research conducted on students who have graduated from vocational agriculture and how they perceive the value of SOE. These data indicated that the 1981-85 students perceived a higher benefit than did the 1986 students from several items.

More emphasis must be given to making the SOE program relevant to the vocational agriculture students who come from the city or urban area. Data from this study indicated the percentage of students on farms is continuing to decrease. More SOE research and SOE curriculum materials development is needed for the non-traditional student in vocational agriculture.

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