

## Scope of Supervised Occupational Experience

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Concern over supervised occupational experience (SOE) programs has been widespread in this country. No fewer than five articles have appeared in *The Journal of the American Association of Teacher Educators in Agriculture* in the past four years dealing with SOE, its benefits, status, and relationship with selected factors. A national workshop on SOE was held in the summer of 1982 with the expressed purpose of enhancing SOE. In the Western Region of AATEA, six states have conducted extensive research studies on SOE programs within the past two years.

Some of the studies recently conducted in the Western Region indicate that as many as 36% of the students in California (Leising, Wolfrom, & Zilbert; 1982), 10.7% in Colorado (McCall, 1982) and 19% in Utah (Long & Dunham 1982) had no SOE program in operation. It is apparent from these findings that the percentage of students involved in SOE programs varies widely from state to state. The findings answer the question of participation but fail to provide any indication of scope of the SOE programs. Scope of the SOE program may be more important in determining the value derived from such an experience than is the percent participation.

### Objectives

While the research study was designed to address multiple objectives, the article was limited to the following specific objectives:

1. To measure the scope of SOE programs conducted by students in vocational agriculture with a numeric index value.
2. To determine relationship between selected factors and the scope of SOE programs.

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This article based upon the results of an Agricultural Experiment Station study on SOE programs conducted in Arizona (Project No. ARZT-101728-S-08-231).

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## Methodology

A 33% stratified random sample of vocational agriculture programs in Arizona was utilized in conducting this study. All high schools conducting vocational agriculture programs in the state of Arizona during school year 1981-82 were placed in one of three mutually exclusive categories based upon the perceived nature of the community served by the school. Schools located in metropolitan areas were placed in the category of "urban"; those located in small communities serving a largely rural area were classified as "rural." The third and smallest category was that of "reservation" which included schools located on or serving primarily students located on an Indian reservation. The reason for selection of these three categories was the result of an often expressed concern as to how the school location influenced the opportunities to conduct supervised occupational experience programs. Of the 54 secondary schools offering vocational agriculture programs in Arizona during school year 1981-82, 21 were classified as urban, 26 as rural, and seven as reservation. Thus, the sample consisted of seven urban high schools, nine rural high schools, and two reservation schools.

Three different questionnaires were used in conducting the overall study. These included: (a) student questionnaire, (b) teacher questionnaire, and (c) department instrument. Only the data collected on the department instrument and selected items on the student questionnaire were used in preparing this article.

## Findings

In order to provide some indication of the scope or completeness of an individual's SOE program, it was necessary to devise a system for measuring scope. Consequently, an SOE program index was developed to provide a means of quantifying in a simple numeric value the scope of a student's individual supervised occupational experience program.

### Measuring Scope

The formula used to determine the index value is based upon a "total SOE" concept encompassing "improvement projects" and "supplementary skills" in addition to the "primary experience." The primary experience may include either ownership or placement or a combination of both. The placement is quantified in hours worked with standards of 100 hours for first year students and increasing to 300 hours for fourth year students. Ownership experience programs, of a production nature, are measured in "units." Table 1 summarizes the standards for ownership and placement type experiences for each year in vocational agriculture as used in the State of Arizona.

Table 1

*SOE Program Standard for Vocational Agriculture by Years for Each Primary Type of Program Required to Equal a Primary Index Value of 1.00*

Year in program	Ownership		Placement
	Production	Agribusiness	
First	1 Production unit	100 Hours	100 Hours
Second	1½ Production units	150 Hours	150 Hours
Third	2 Production units	200 Hours	200 Hours
Fourth	3 Production units	300 Hours	300 Hours
Fifth	5 Production units	500 Hours	500 Hours

The formula devised for calculating the student's SOE program index is as follows:

$$\text{SOE Index (overall)} = (\text{Primary Index}) (.6) + (\text{Improvement Index}) (.25) + (\text{Supplementary Skill Index}) (.15)$$

The constants in the formula provide for the relative emphasis on each of the three components of the "total SOE program." It also encourages a student to plan and conduct a total SOE program.

A student who conducted a program meeting minimum requirements in all three components would have an overall SOE index of 1.0. As an example a first year student who worked 100 hours in placement, had three improvement projects, and developed 10 supplementary skills would have an overall index value of 1.0.  $\text{SOE index} = \left(\frac{100}{100}\right) (.6) + (3) (.25) + \left(\frac{10}{10}\right) (.15) = 1.0$

The only portion of the formula which changes in accordance with the student's years in vocational agriculture is the primary index. A student whose SOE consisted of 100 hours of placement would receive a primary index of 1.00 ( $\frac{100}{100}$ ) if a first year student and .67 ( $\frac{100}{150}$ ), .50 ( $\frac{100}{200}$ ), or .33 ( $\frac{100}{300}$ ) if a second, third, or fourth year student, respectively. The index value for improvement projects and supplementary skills is based upon the number of such undertakings as shown in Table 2.

**Table 2**

*Number of Improvement Projects and Supplementary Skills Required for a 1.00 Index Value*

Index value	Improvement projects	Supplementary skills
1.00	3	10

**Table 3**

*Mean Index Values for Various Aspects of SOE Programs Overall and Classified by the Home Location of Students Conducting Them in the Sample Schools*

Indices	Home Location			Overall
	Rural	Town	City	
Placement index	4.39	5.22	2.36	4.10
Ownership production index	2.76	2.08	.52	2.12
Ownership agribusiness index	5.87	1.60	2.83	3.71
Improvement project index	2.08	1.58	1.95	1.93
Supplementary skills index	1.06	.97	1.16	1.06
SOE index	1.88	1.49	.90	1.61

### SOE Indexes

The mean SOE program indices for all students in the sampled schools in the areas of placement, ownership (production and agribusiness), improvement projects, supplementary skills, and the overall SOE is shown in Table 3. The mean index value for placement is much higher than for ownership. This is perhaps a reflection of the disparity between the standards shown in Table 1 for placement and ownership. A doubling of the placement standard would tend to place it on a par with "ownership, production" index values. It should also be pointed out that the index values shown in Table 3 were means derived from those students actually involved with that particular experience.

The index value for both supplementary skills and improvement projects exhibited considerable variation between schools. This perhaps has more to do with the terminology used by the teachers than with actual differences in the scope of these two components. It is obvious from the percentage of students conducting a complete SOE program that some schools are not utilizing the total SOE program concept. See Table 3.

### Factors Influencing Scope of SOE Programs

#### Home Location

The location of a student's home is often thought to be influential in determining the scope and nature of the SOE program. The student's SOE indices in the sample schools were analyzed based upon home location and mean index values calculated for each of the size SOE program aspects. Table 3 contains the mean index values. The results tend to indicate a lower scope for (a) placement; (b) ownership/production; and (c) SOE index for students living in cities compared to either rural or town students. On the other hand, the index values for improvement projects and supplementary skills are essentially the same regardless of home location. The only mean index value significantly below 1.00 was for city students conducting "ownership/production" occupational experience programs. This is an indication of the small scope of such programs and may suggest the inappropriateness of such undertakings for city students.

#### Grade Level

The question of increasing participation and scope of SOE programs as students progress through the vocational agriculture program is answered in part by the data in Table 4. Some teachers have discussed the desirability of not requiring or expecting students to participate in SOE programs as first year students. Judging from the data in Table 4, this practice is apparently not in general use among the sample schools. Participation seems to remain relatively static across the three grade levels included in this study. The same can also be said for the SOE index. The higher mean index for the 10th grade students was the result of a few individuals with extremely high values.

It should also be pointed out that grade level does not directly equate with the length of time the student has been enrolled in vocational agriculture programs. Some of the 10th, 11th, and 12th grade students are actually enrolled in their first year of vocational agriculture. This fact might influence the values reported in Table 4 if year of enrollment is correlated with participation and scope of the programs as measured by the SOE index.

Table 4

*Measures of SOE Programs Participation and Scope Classified by Grade Levels in Sample Schools*

Grade	Conducting SOEP		SOEP Index	
	No.	%	Mean	Median
9	160	81.2	1.34	.81
10	158	84.9	2.04	.91
11	<u>118</u>	<u>75.2</u>	<u>1.30</u>	<u>.81</u>
Total	436	80.7	1.54	.81

### Conclusions

The following conclusions were drawn:

1. The percentage of SOE program participation by students enrolled in vocational agriculture does not vary by grade levels in Arizona.
2. The location of a student's home influences, in some cases, the scope of a student's SOE programs. The influence seems to be greatest for city students conducting "ownership/production" type of experience programs.
3. Current standards for scope of SOE programs which increase with the student's experience in vocational agriculture are realistic in terms of actual practices.
4. Standards currently in use for "ownership/production" type SOE programs are not on a par with those used for "placement" experiences.

### Implications

The findings and conclusions reported have implications for everyone concerned with providing supervised occupational experience for students in vocational agriculture. Vocational agriculture teachers need to be made aware of the total SOE concept and of the standards for such programs. Serious consideration needs to be given by the state supervisory staff in vocational agriculture to increasing placement standards. Such standards could be doubled to bring the index values in line with the current "ownership/production" standards and maintain overall mean SOE index values above 1.00.

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