

Vocational Agriculture Teacher Characteristics and  
Their Relationship to Perceptions of SOE Importance,  
Attitudes Toward Supervision, and Quality of  
Supervised Occupational Experience Programs

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The supervised occupational experience program (SOEP) has been recognized by agricultural educators as an inseparable component of the vocational agriculture program since the inception of the Smith-Hughes Act of 1917. Vocational agriculture has undergone many changes through the years but its advocates have always maintained that the concept of learning by doing is central to the program.

Recent studies in agricultural education continue to document benefits of the SOEP. Rawls (1978) found that parents believed students derived three major benefits from SOE: i.e., work attitude, occupational development, and human relations skills. Morton (1978) found a positive relationship between achievement test scores and quality scores of occupational experience programs.

It is apparent that there is general agreement that a strong SOEP is needed. A key point in having strong occupational experience programs is that there must be strong supervision by teachers of vocational agriculture.

A review of the literature revealed that supervision is essential for the success of experience programs in vocational agriculture (Deyoe, 1943; Binkley & Tulloch, 1981; Williams, 1977; Phipps, 1980). Binkley (1955) pointed out that the most successful SOE programs were associated with teachers who were actively involved in supervisory activities. Furthermore, Knebel (1955) found that teachers in above average departments made more supervisory visits than those in below average departments. Hence, one would conclude that supervision is very important.

Yet in the early 1980s, there was widespread concern that the quality of SOEP's was declining. The commitment to them was lessening, and the attitude of teachers toward SOEP and its supervision was deteriorating.

Binkley (1977) toured vocational agriculture departments in 12 states in 1975 and expressed concern that SOE programs may have decreased to a low level of quality. In the same vein, Miller (1980) reported that vocational agriculture teachers in North Carolina expected only 58% of their students to have a SOE program. Miller also

found that less time in 1977 was devoted to SOE supervision than in 1972 and that 42% of the teachers reported they did not make visits to students on a regular basis. Iverson (1980) studied graduates in 10 southern states and discovered that 40% did not have a SOE project during each year they were enrolled in vocational agriculture.

The authors could find no data regarding the vitality of the SOE programs in supervisory Areas I and II of Texas, home of the senior author. Hence, the authors sought to determine the status of perceptions of vocational agriculture teachers in Areas I and II of Texas regarding how important they believed SOE programs were and their attitudes toward supervision of such programs. These two areas of Texas were selected solely because of the interest of the authors in knowing the status of SOE programs among these teachers.

### Objectives

The specific objectives of this investigation were to:

1. Describe selected demographic characteristics of vocational agriculture teachers who participated in this study.
2. Determine the teachers' perceived importance of the SOE program.
3. Determine the teachers' attitudes toward supervision of SOE programs.
4. Determine the relationship between selected teacher characteristics and teachers' views of importance of SOE, and attitudes toward SOE program supervision.

### Methods and Procedure

#### Population and Sample

The target population for the study consisted of all production vocational agriculture teachers in Areas I and II of Texas (N = 249). From this population, a random sample of 100 teachers was drawn.

#### Design

This was a descriptive correlation study. Data were collected to describe teachers' perceived level of importance of the SOE program and their attitudes toward its supervision. It seemed logical that certain factors might account for some of the variance in attitudes about SOE and how important teachers believed it to be.

Thus, relationships were investigated concerning teachers' ratings of importance of SOE and their attitudes toward supervision and selected teacher characteristics. Likewise, relationships between importance scores and attitudes and quality of SOE programs were examined.

### Instrumentation

The researchers developed the instruments to measure teacher characteristics, quality of SOE programs, and teachers' attitudes toward supervising the SOE program using approved practices as recommended by Donald (1960), Dillman (1978), and Edwards (1957). The instrument used to measure attitudes toward SOE drew on the earlier work of Byers (1972).

Faculty in agricultural education at The Ohio State University established the content validity of the instruments. The instruments were pilot tested with a randomly selected group of 30 vocational agriculture teachers from Areas I and II of Texas. These were teachers who were not used in the final study. The pilot test showed the reliability (Cronbach's Alpha) was  $r = .91$  for the attitudes toward the supervision section. Once revisions, based on the pilot test, were made, the instrument was used for data collection.

### Data Collection

The questionnaire was mailed to the teachers on November 4, 1982, and postcard reminders were mailed on November 18, 1982. On December 2, 1982, a second instrument package was mailed to teachers who had not responded. This procedure produced a 90% return. A total of 10 non-respondents were followed up by telephone. There were no statistically significant differences between respondents and non-respondents.

## Findings

### Characteristics of the Respondents

Forty-six percent of the teachers taught in single teacher departments, and 43% taught in two teacher departments. The average number of years of teaching vocational agriculture was 11.6. Fifty-eight percent of the teachers held B.S. degrees, and 42% held master's degrees. The average age was 36 years.

### Perceived Importance of SOE Program

The instrument measuring perceived importance of SOE programs consisted of 22 statements which were scored on a four-point

Likert-type scale. The highest possible score was 88; the lowest 22. The mean item score was 3.3 and the overall mean was 74.5.

Attitudes Toward Supervision of SOE Programs

Forty-one statements were scored on a four-point Likert-type scale. Thus, the highest overall score possible was 164; the lowest possible was 41. The overall item mean was 3.2 and the overall mean was 134.

Relationship Between Characteristics of Teachers and Importance and Attitude Scores

Characteristics of teachers were divided into three categories: professional activity characteristics, personological characteristics, and departmental characteristics. As can be seen in Table 1, the relationships between both importance and attitude scores and profes-

Table 1

*Relationship of Professional Activity Characteristics to Importance of SOE Programs and Attitudes Toward Supervision*

| Professional activity characteristics<br>(n = 87)                          | Importance |      | Attitudes |      |
|--|------------|------|-----------|------|
|  | r          | p    | r         | p    |
| 1. Membership in TVATA <sup>a</sup>  | .13        | .115 | .07       | .246 |
| 2. Membership in VATA <sup>a</sup>   | .02        | .429 | .03       | .389 |
| 3. Membership in AVA <sup>a</sup>  | .15        | .080 | .07       | .263 |
| 4. Other professional organizations <sup>a</sup>                           | .03        | .401 | .08       | .233 |
| 5. Subscription to <u>The Agricultural Education Magazine</u> <sup>d</sup> | .02        | .438 | .03       | .388 |
| 6. Attendance at district meetings <sup>b</sup>                            | .10        | .248 | .01       | .364 |
| 7. Attendance at state teacher conference <sup>a</sup>                     | .25*       | .009 | .20*      | .030 |
| 8. Attendance at state FFA convention <sup>a</sup>                         | .03        | .398 | .01       | .452 |
| 9. Participation in leadership <sup>a</sup>                                | .01        | .461 | .12       | .139 |
| 10. Participation in judging <sup>a</sup>                                  | .09        | .191 | .04       | .358 |
| 11. Adult education programs <sup>c</sup>                                  | .07        | .274 | .02       | .403 |

<sup>a</sup>no = 1; yes = 2. <sup>b</sup>none = 1; one = 1; two = 2; three = 3. <sup>c</sup>none = 1; other adult program = 2; young farmer chapter = 3.

\*p < .05

sional characteristics were generally negligible. The only characteristics with any sizeable magnitude or correlation (low and positive) was attendance at state teachers' conferences. Note, however, that all but three of the respondents attended conferences.

Likewise, as can be seen in Table 2, personological characteristics of teachers were negligibly related to importance and attitude scores. There was a significant low positive correlation between having vocational agriculture prior to teaching and teachers' attitudes toward supervision of occupational experience programs.

Table 2

*Relationship of Personological Characteristics to Importance of SOE Programs and Attitudes Toward Supervision*

| Personological characteristics<br>(n = 87)                          | Importance       |      | Attitudes         |      |
|---|------------------|------|-------------------|------|
|   | r                | p    | r                 | p    |
| 1. Level of formal education <sup>a</sup>                           | .09              | .195 | -.03              | .383 |
| 2. Age  | .06 <sup>b</sup> | .286 | -.03 <sup>b</sup> | .407 |
| 3. Teaching experience  | .11 <sup>b</sup> | .162 | .05 <sup>b</sup>  | .331 |
| 4. Length of contract <sup>c</sup>                                  | .05              | .330 | .08               | .219 |
| 5. Vocational agriculture experience prior to teaching <sup>d</sup> | .12              | .121 | .27*              | .006 |
| 6. Employment other than teaching <sup>d</sup>                      | .02              | .415 | .05               | .314 |

<sup>a</sup>B.S. = 1; M.S. = 2. <sup>b</sup>Pearson Product-Moment Correlation Coefficients; all other correlation coefficients are point biserial.

<sup>c</sup>11 month = 1; 12 month = 2. <sup>d</sup>no = 1; yes = 2.

\* $p < .05$

Generally departmental characteristics were also negligibly related to importance and attitude scores (see Table 3). There was low positive association between number of teachers and students in the department and percentage of students in FFA and importance scores. There was a low positive relationship between reimbursement for travel and attitude toward supervision.

Table 3

*Relationship of Departmental Characteristics to Importance of SOE Programs and Attitudes Toward Supervision*

| Departmental characteristics<br>(n = 87)                | Importance        |      | Attitudes        |      |
|---|-------------------|------|------------------|------|
|   | r                 | p    | r                | p    |
| 1. Number of teachers in department                     | .19* <sup>a</sup> | .035 | .07 <sup>a</sup> | .252 |
| 2. Number of students in department                     | .18* <sup>a</sup> | .045 | .14 <sup>a</sup> | .105 |
| 3. Percentage of students in FFA <sup>b</sup>           | .20*              | .028 | .13              | .107 |
| 4. Class periods available for supervision <sup>c</sup> | .15               | .083 | .10              | .174 |
| 5. Administrative support <sup>d</sup>                  | .01               | .467 | -.01             | .450 |
| 6. Reimbursement for travel <sup>e</sup>                | .03               | .368 | .21*             | .024 |
| 7. Utilization of SOE point guide system <sup>f</sup>   | .08               | .206 | .04              | .368 |

<sup>a</sup>Pearson Product-Moment Correlation Coefficients; all other correlations are point biserial coefficients.

<sup>b</sup>90% = 1; 90-94% = 2; 95-99% = 3; 100% = 4.

<sup>c</sup>none = 0; one = 1; two = 2; three = 3; four = 4.

<sup>d</sup>no = 1; yes = 2.

<sup>e</sup>< adequate = 1; adequate = 2; > adequate = 3.

<sup>f</sup>11 categories--less than 10% = 1; 100% = 11.

\*p < .05

### Quality of SOE Programs

Using a formula developed by the authors, (see Figure 1) a quality score for each department's SOE program was calculated. Quality scores ranged from 14 to 42. The mean quality of SOEP score was 29.3 with a standard deviation of 4.6. Sixty-three percent of the scores were between 27 and 32.

The data which were used to derive the quality of SOEP scores revealed some interesting findings. Fifty-eight percent of the departments had 100% of the students with SOE programs in 1981-82; 2.2% of the schools had fewer than 70% of their students with SOE programs. The average number of visits per grading period was 2.6, and 75% of the teachers reported visiting every student at least once in the preceding 12 months. The median number of visits for students per year was 7.7.

Figure 1

*Formula for Calculating Quality of SOE Programs*

$$Q = \frac{I}{100} + O + P_1 + (\frac{1}{2}P_2) + R + F + V_1 + V_2 + V_3$$

Q = Quality of SOE program.

I = Average student net income.

O = Opportunity to have a SOEP.

P<sub>1</sub> = Percent of students with SOEP in 1981-82.

P<sub>2</sub> = Percent of students with summer SOEP in 1982.

R = Whether teacher required SOEP in 1981-82.

F = Whether teacher planned to require SOEP in 1982-83.

V<sub>1</sub> = Number of visits per student per grading period.

V<sub>2</sub> = Number of visits per student per year.

V<sub>3</sub> = Percentage of students who received at least one visit in past year.

Relationship Between Teacher Characteristics and Quality of SOE Programs

A low to moderate relationship existed between both importance scores and attitudes toward supervision of occupational experience programs. The importance score had  $r = .32$  ( $p < .01$ ), while the attitude score had  $r = .23$  ( $p < .05$ ).

Conclusions

1. Teachers in Areas I and II of Texas believe SOE is an integral part of vocational agriculture and that production agriculture students should have supervised occupational experience programs.

2. Teachers in Areas I and II of Texas support the concept of supervising occupational experience programs. Furthermore, the extent to which they are supervising occupational experience programs

is better than that reported in other recent studies from different parts of the country.

3. Quality differs among SOE programs and can be determined by the formula used in this study. It is positively related to the teacher's view of importance of occupational experience and their attitude toward supervision of SOE programs.

4. Characteristics of teachers which were examined in this study do not begin to explain the variance in teachers' views of importance of SOE programs, attitudes toward supervision, nor quality of programs.

#### Recommendations

1. This study needs to be replicated in other areas of the country to determine if teachers nationwide have as favorable an attitude toward the importance of SOE programs and the supervision of these programs as teachers in Areas I and II of Texas.

2. Further work needs to be done in the profession to develop an agreed upon measure of quality of SOE programs.

3. Further study is needed to determine why the findings of this study are contrary to results reported in other parts of the country. What are the factors in Areas I and II of Texas that are contributing to the favorable results regarding SOEP practices?

#### References

- Binkley, H. R. (1955). *Evaluation of the supervised farming practices used by teachers in developing supervised farming programs with high school students in vocational agriculture in Kentucky.*
- Binkley, H. R. (1977). *Supervised experience programs in agriculture - a must - and standards for them. Agricultural Education Magazine, 49(10), 219-220.*
- Binkley, H. R., & Tulloch, R. W. (1981). *Teaching vocational agriculture/agribusiness.* Danville, IL: Interstate.
- Byers, C. W. (1972). *Relationship of selected variables to the supervision provided students of vocational agriculture by their teachers.* Unpublished doctoral dissertation, The Ohio State University, Columbus.
- Deyoe, G. P. (1943). *Supervised farming in agriculture.* Danville, IL: Interstate.
- Dillman, D. A. (1978). *Mail and telephone surveys.* New York: John Wiley and Sons.

- Donald, M. N. (1960). Implications of non-response for the interpretation of mailed questionnaire data. *Public Opinion Quarterly*, 24(1), 99-144.
- Edwards, A. L. (1957). *Techniques of attitude scale construction*. New York: Appleton-Century-Crofts, Inc.
- Iverson, M. (1980). The role of vocational agriculture in the occupational success of graduates--a southern region study. *The Journal of the American Association of Teacher Educators in Agriculture*. 21(2), 11-20, 47.
- Knebel, E. N. (1955). *Analysis of factors contributing to effective programs of vocational agriculture*. Unpublished doctoral dissertation, Oklahoma State University, Stillwater.
- Miller, T. R. (1980). The changing status of supervised occupational experience in vocational agriculture in North Carolina. *The Journal of the American Association of Teacher Educators in Agriculture*, 21(1), 13-18.
- Morton, H. R. (1978). *Relationship between the quality of supervised occupational experience programs and achievement of students in vocational agriculture*. Unpublished doctoral dissertation, The Ohio State University, Columbus.
- Phipps, L. J. (1980) *Handbook on agricultural education in public schools*. Danville, IL: Interstate.
- Rawls, W. J. (1978) *Parental perceptions of vocational agriculture supervised occupational experience programs in Iowa*. Unpublished doctoral dissertation, Iowa State University, Ames.
- Williams, D. L. (1977). *A study of SOE programs of Iowa vocational agriculture students*. Ames: Iowa State University, (Project 2150).