Experimental evaluation of an instructional packet on supervised occupational experience placement programs for vocational agriculture

John William Slocombe
Iowa State University

Follow this and additional works at: https://lib.dr.iastate.edu/rtd
Part of the Agricultural Education Commons, and the Other Education Commons

Recommended Citation
https://lib.dr.iastate.edu/rtd/7650

This Dissertation is brought to you for free and open access by the Iowa State University Capstones, Theses and Dissertations at Iowa State University Digital Repository. It has been accepted for inclusion in Retrospective Theses and Dissertations by an authorized administrator of Iowa State University Digital Repository. For more information, please contact digirep@iastate.edu.
INFORMATION TO USERS

This reproduction was made from a copy of a document sent to us for microfilming. While the most advanced technology has been used to photograph and reproduce this document, the quality of the reproduction is heavily dependent upon the quality of the material submitted.

The following explanation of techniques is provided to help clarify markings or notations which may appear on this reproduction.

1. The sign or "target" for pages apparently lacking from the document photographed is "Missing Page(s)". If it was possible to obtain the missing page(s) or section, they are spliced into the film along with adjacent pages. This may have necessitated cutting through an image and duplicating adjacent pages to assure complete continuity.

2. When an image on the film is obliterated with a round black mark, it is an indication of either blurred copy because of movement during exposure, duplicate copy, or copyrighted materials that should not have been filmed. For blurred pages, a good image of the page can be found in the adjacent frame. If copyrighted materials were deleted, a target note will appear listing the pages in the adjacent frame.

3. When a map, drawing or chart, etc., is part of the material being photographed, a definite method of "sectioning" the material has been followed. It is customary to begin filming at the upper left hand corner of a large sheet and to continue from left to right in equal sections with small overlaps. If necessary, sectioning is continued again—beginning below the first row and continuing on until complete.

4. For illustrations that cannot be satisfactorily reproduced by xerographic means, photographic prints can be purchased at additional cost and inserted into your xerographic copy. These prints are available upon request from the Dissertations Customer Services Department.

5. Some pages in any document may have indistinct print. In all cases the best available copy has been filmed.
Slocombe, John William

EXPERIMENTAL EVALUATION OF AN INSTRUCTIONAL PACKET ON SUPERVISED OCCUPATIONAL EXPERIENCE PLACEMENT PROGRAMS FOR VOCATIONAL AGRICULTURE

Iowa State University

Ph.D. 1983

University Microfilms International 300 N. Zeeb Road, Ann Arbor, MI 48106
PLEASE NOTE:

In all cases this material has been filmed in the best possible way from the available copy. Problems encountered with this document have been identified here with a check mark \( \checkmark \).

1. Glossy photographs or pages \( \square \)
2. Colored illustrations, paper or print \( \square \)
3. Photographs with dark background \( \square \)
4. Illustrations are poor copy \( \square \)
5. Pages with black marks, not original copy \( \square \)
6. Print shows through as there is text on both sides of page \( \checkmark \)
7. Indistinct, broken or small print on several pages \( \checkmark \)
8. Print exceeds margin requirements \( \square \)
9. Tightly bound copy with print lost in spine \( \square \)
10. Computer printout pages with indistinct print \( \square \)
11. Page(s) \( \square \) lacking when material received, and not available from school or author.
12. Page(s) \( \square \) seem to be missing in numbering only as text follows.
13. Two pages numbered \( \square \). Text follows.
14. Curling and wrinkled pages \( \square \)
15. Other \( \square \)

University Microfilms International
Experimental evaluation of an instructional packet
on supervised occupational experience placement
programs for vocational agriculture

by

John William Slocombe

A Dissertation Submitted to the
Graduate Faculty in Partial Fulfillment of the
Requirements for the Degree of
DOCTOR OF PHILOSOPHY

Major: Agricultural Education

Approved:
Signature was redacted for privacy.

In Charge of Major Work
Signature was redacted for privacy.

For the Major Department
Signature was redacted for privacy.

For the Graduate College

Iowa State University
Ames, Iowa
1983
# TABLE OF CONTENTS

<table>
<thead>
<tr>
<th>CHAPTER I. INTRODUCTION</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Statement of the Problem</td>
<td>3</td>
</tr>
<tr>
<td>Purpose of the Study</td>
<td>4</td>
</tr>
<tr>
<td>Need for the Study</td>
<td>5</td>
</tr>
<tr>
<td>Background of the Study</td>
<td>7</td>
</tr>
<tr>
<td>Definition of Terms</td>
<td>8</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>CHAPTER II. REVIEW OF LITERATURE</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Review of Literature on SOE Placement Programs in Vocational Agriculture</td>
<td>10</td>
</tr>
<tr>
<td>Summary of SOE placement literature review</td>
<td>25</td>
</tr>
<tr>
<td>Review of Literature on Evaluation of Vocational Agriculture Instructional Materials</td>
<td>26</td>
</tr>
<tr>
<td>Summary of instructional materials literature review</td>
<td>31</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>CHAPTER III. DESIGN AND METHODOLOGY</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Design</td>
<td>33</td>
</tr>
<tr>
<td>Population</td>
<td>34</td>
</tr>
<tr>
<td>Selection of Sample</td>
<td>36</td>
</tr>
<tr>
<td>Description of Treatment Levels</td>
<td>37</td>
</tr>
<tr>
<td>Control group</td>
<td>38</td>
</tr>
<tr>
<td>Experimental group</td>
<td>38</td>
</tr>
<tr>
<td>Instructional packet</td>
<td>39</td>
</tr>
<tr>
<td>Monitoring of treatment</td>
<td>41</td>
</tr>
<tr>
<td>Instrumentation</td>
<td>43</td>
</tr>
</tbody>
</table>

| Student instrument - Preparing for supervised occupational experience placement | 43   |
### Part I - Supervised Occupational Experience

<table>
<thead>
<tr>
<th>Placement Program Knowledge Inventory</th>
<th>43</th>
</tr>
</thead>
<tbody>
<tr>
<td>Placement Program Attitude Inventory</td>
<td>44</td>
</tr>
<tr>
<td>Placement Program Planning Inventory</td>
<td>47</td>
</tr>
<tr>
<td>Part IV - Student Data Questionnaire</td>
<td>48</td>
</tr>
</tbody>
</table>

### Teacher Instruments

<table>
<thead>
<tr>
<th>Teacher/school demographic data</th>
<th>49</th>
</tr>
</thead>
<tbody>
<tr>
<td>Preparing for supervised occupational experience placement programs-instructional packet evaluation</td>
<td>49</td>
</tr>
</tbody>
</table>

### Collection of Data

<table>
<thead>
<tr>
<th>Analysis of Data</th>
<th>50</th>
</tr>
</thead>
</table>

### Data Modification Procedures

| Modification of SOE placement program knowledge inventory data | 51 |
| Modification of SOE placement program attitude inventory data | 52 |
| Modification of SOE placement program planning inventory data | 52 |
| Modification of data from student and teacher questionnaires | 52 |

### Descriptive Analyses

| Analyses of background variables | 53 |
| Analyses of dependent variable data gathering instruments | 53 |

### Inferential Analyses

| Summary of Research Procedures | 55 |

### CHAPTER IV. FINDINGS AND DISCUSSION

| 57 |
Student and Teacher Characteristics 58

Student characteristics 58
Teacher and school characteristics 71
Summary of analyses of student and teacher variables 77

Teacher Evaluation of Instructional Packet 78

Instrument Characteristics 82

SOE placement program knowledge inventory 82
SOE placement program attitude inventory 83
SOE placement program planning inventory 85
Summary of instrument characteristics 85

Comparison of Treatment Groups 86

Comparison of SOE placement program knowledge scores 86
Comparison of SOE placement program attitude scores 87
Comparison of SOE placement program planning scores 88
Summary of tests of hypotheses 89

Comparison of Dependent Variables to Selected Independent Variables 89

Summary of comparison between dependent and independent variables 97

Correlational Analyses of Variables 97

Relations between independent variables 98
Relations between dependent variables 100
Relations between independent and dependent variables 101
Summary of correlational analyses 103

CHAPTER V. SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS 105

Summary 105
Conclusions 108
# Recommendations for further research

## REFERENCES

## ACKNOWLEDGEMENTS

### APPENDIX A: CORRESPONDENCE

<table>
<thead>
<tr>
<th>Description</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Letter to Superintendents of Randomly Selected Schools</td>
<td>125</td>
</tr>
<tr>
<td>Superintendent Response Postcard</td>
<td>126</td>
</tr>
<tr>
<td>Letter to Potential Control Treatment Group Teachers</td>
<td>127</td>
</tr>
<tr>
<td>Letter to Potential Experimental Treatment Group Teachers</td>
<td>129</td>
</tr>
<tr>
<td>Teacher Response Postcard</td>
<td>131</td>
</tr>
<tr>
<td>Telephone Correspondence to Control Schools</td>
<td>132</td>
</tr>
<tr>
<td>Information Sheet for Control Schools</td>
<td>134</td>
</tr>
<tr>
<td>Telephone Correspondence for Experimental Schools</td>
<td>135</td>
</tr>
<tr>
<td>Information Sheet for Experimental Schools</td>
<td>137</td>
</tr>
<tr>
<td>Informational Letter to Control Teachers</td>
<td>138</td>
</tr>
<tr>
<td>Informational Letter to Experimental Teachers</td>
<td>140</td>
</tr>
<tr>
<td>Letter to Control Treatment Group Teachers with Directions for Posttest</td>
<td>141</td>
</tr>
<tr>
<td>Letter to Experimental Treatment Group Teachers with Directions for Posttest</td>
<td>143</td>
</tr>
</tbody>
</table>

### APPENDIX B: SCHOOLS AND VOCATIONAL AGRICULTURE TEACHERS PARTICIPATING IN THE STUDY

### APPENDIX C: INSTRUCTIONAL UNIT OUTLINE AND REFERENCE PROVIDED TO CONTROL GROUP TEACHERS

<table>
<thead>
<tr>
<th>Description</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>APPENDIX A: CORRESPONDENCE</td>
<td>124</td>
</tr>
<tr>
<td>Letter to Superintendents of Randomly Selected Schools</td>
<td>125</td>
</tr>
<tr>
<td>Superintendent Response Postcard</td>
<td>126</td>
</tr>
<tr>
<td>Letter to Potential Control Treatment Group Teachers</td>
<td>127</td>
</tr>
<tr>
<td>Letter to Potential Experimental Treatment Group Teachers</td>
<td>129</td>
</tr>
<tr>
<td>Teacher Response Postcard</td>
<td>131</td>
</tr>
<tr>
<td>Telephone Correspondence to Control Schools</td>
<td>132</td>
</tr>
<tr>
<td>Information Sheet for Control Schools</td>
<td>134</td>
</tr>
<tr>
<td>Telephone Correspondence for Experimental Schools</td>
<td>135</td>
</tr>
<tr>
<td>Information Sheet for Experimental Schools</td>
<td>137</td>
</tr>
<tr>
<td>Informational Letter to Control Teachers</td>
<td>138</td>
</tr>
<tr>
<td>Informational Letter to Experimental Teachers</td>
<td>140</td>
</tr>
<tr>
<td>Letter to Control Treatment Group Teachers with Directions for Posttest</td>
<td>141</td>
</tr>
<tr>
<td>Letter to Experimental Treatment Group Teachers with Directions for Posttest</td>
<td>143</td>
</tr>
<tr>
<td>APPENDIX B: SCHOOLS AND VOCATIONAL AGRICULTURE TEACHERS PARTICIPATING IN THE STUDY</td>
<td>145</td>
</tr>
<tr>
<td>APPENDIX C: INSTRUCTIONAL UNIT OUTLINE AND REFERENCE PROVIDED TO CONTROL GROUP TEACHERS</td>
<td>149</td>
</tr>
<tr>
<td>Appendix</td>
<td>Title</td>
</tr>
<tr>
<td>----------</td>
<td>-------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>D</td>
<td>A Sample of Instructional Materials Provided to Experimental Group Teachers</td>
</tr>
<tr>
<td>E</td>
<td>Monitoring of Treatment</td>
</tr>
<tr>
<td>F</td>
<td>Instruments for Data Collection</td>
</tr>
<tr>
<td></td>
<td>Preparing for Supervised Occupational Experience Placement</td>
</tr>
<tr>
<td></td>
<td>Teacher/School Demographic Data</td>
</tr>
<tr>
<td></td>
<td>Preparing for Supervised Occupational Experience Placement Programs - Instructional Packet Evaluation</td>
</tr>
<tr>
<td>G</td>
<td>Items and Weighted Values Used in Developing SOE Placement Program Planning Instrument</td>
</tr>
<tr>
<td>H</td>
<td>Item Analyses of Individual Items on SOE Placement Program Knowledge Inventory, and SOE Placement Program Attitude Inventory</td>
</tr>
</tbody>
</table>
**LIST OF TABLES**

<table>
<thead>
<tr>
<th>Table</th>
<th>Description</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Table 1</td>
<td>Residence location by treatment group</td>
<td>60</td>
</tr>
<tr>
<td>Table 2</td>
<td>Type of present SOE by treatment group</td>
<td>61</td>
</tr>
<tr>
<td>Table 3</td>
<td>High school grade classification by treatment group</td>
<td>63</td>
</tr>
<tr>
<td>Table 4</td>
<td>Years of vocational agriculture by treatment group</td>
<td>64</td>
</tr>
<tr>
<td>Table 5</td>
<td>Years of FFA membership by treatment group</td>
<td>65</td>
</tr>
<tr>
<td>Table 6</td>
<td>Preferred employment experience before graduating from high school by treatment group</td>
<td>67</td>
</tr>
<tr>
<td>Table 7</td>
<td>Occupational plans by treatment group</td>
<td>69</td>
</tr>
<tr>
<td>Table 8</td>
<td>Plans to attend a vocational school, college, or university after high school graduation by treatment group</td>
<td>70</td>
</tr>
<tr>
<td>Table 9</td>
<td>Comparison of teacher professional characteristics by treatment group</td>
<td>72</td>
</tr>
<tr>
<td>Table 10</td>
<td>Comparison of teacher situational characteristics by treatment group</td>
<td>75</td>
</tr>
<tr>
<td>Table 11</td>
<td>Evaluation of instructional packet by experimental group teachers</td>
<td>80</td>
</tr>
<tr>
<td>Table 12</td>
<td>Value of instructional packet components by problem area</td>
<td>81</td>
</tr>
<tr>
<td>Table 13</td>
<td>Descriptive summary of SOE placement program knowledge inventory</td>
<td>82</td>
</tr>
<tr>
<td>Table 14</td>
<td>Summary of SOE placement program attitude inventory characteristics</td>
<td>84</td>
</tr>
<tr>
<td>Table 15</td>
<td>Summary of SOE placement program planning inventory</td>
<td>85</td>
</tr>
<tr>
<td>Table 16</td>
<td>T-test of SOE placement program knowledge score</td>
<td>87</td>
</tr>
<tr>
<td>Table 17.</td>
<td>T-test of SOE placement program attitude score</td>
<td>88</td>
</tr>
<tr>
<td>Table 18.</td>
<td>T-test of SOE placement program planning score</td>
<td>89</td>
</tr>
<tr>
<td>Table 19.</td>
<td>Analysis of dependent variables by location of residence</td>
<td>91</td>
</tr>
<tr>
<td>Table 20.</td>
<td>Analysis of dependent variables by present type of SOE</td>
<td>92</td>
</tr>
<tr>
<td>Table 21.</td>
<td>Analysis of dependent variables by employment preference before high school graduation</td>
<td>94</td>
</tr>
<tr>
<td>Table 22.</td>
<td>Analysis of dependent variables by plans to attend a vocational school, college, or university after high school graduation</td>
<td>95</td>
</tr>
<tr>
<td>Table 23.</td>
<td>Analysis of dependent variables by occupational plans of students</td>
<td>96</td>
</tr>
<tr>
<td>Table 24.</td>
<td>Coefficients of correlation between teacher/school independent variables</td>
<td>99</td>
</tr>
<tr>
<td>Table 25.</td>
<td>Coefficients of correlation between dependent variables</td>
<td>101</td>
</tr>
<tr>
<td>Table 26.</td>
<td>Coefficients of correlation between teacher/school independent variables and dependent variables</td>
<td>102</td>
</tr>
</tbody>
</table>
LIST OF FIGURES

<table>
<thead>
<tr>
<th>Figure</th>
<th>Description</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Figure 1.</td>
<td>A sample of the semantic differential instrument item with a set of hypothetical responses</td>
<td>46</td>
</tr>
<tr>
<td>Figure 2.</td>
<td>Percentage of students by residence location</td>
<td>59</td>
</tr>
<tr>
<td>Figure 3.</td>
<td>Students present type of SOE</td>
<td>61</td>
</tr>
<tr>
<td>Figure 4.</td>
<td>Student high school grade classification</td>
<td>62</td>
</tr>
<tr>
<td>Figure 5.</td>
<td>Type of employment experience preferred by students before high school graduation</td>
<td>66</td>
</tr>
<tr>
<td>Figure 6.</td>
<td>Occupational plans of students after completing their formal education</td>
<td>68</td>
</tr>
<tr>
<td>Figure 7.</td>
<td>Mean number of vocational agriculture students with SOE placement programs per school by treatment group</td>
<td>74</td>
</tr>
<tr>
<td>Figure 8.</td>
<td>Number of days spent teaching sophomore students about SOE placement programs by treatment group</td>
<td>74</td>
</tr>
<tr>
<td>Figure 9.</td>
<td>Teacher evaluation of the instructional packet</td>
<td>79</td>
</tr>
</tbody>
</table>
CHAPTER I.
INTRODUCTION

In recent years a multitude of instructional materials have been developed for use by vocational agriculture teachers. This influx of materials has required teachers to select and use only those most relevant for their vocational agriculture program. The primary concern of teachers when conducting this informal evaluation is whether or not the instructional materials will assist in achieving program objectives.

Development of instructional materials is a process that involves considerable effort and expense. In an attempt to satisfy the needs of vocational agriculture teachers, commercial publishing companies and state educational agencies have allocated resources to develop instructional materials. Generally these materials are developed, then disseminated for teachers to use; consequently, little attention is focused on the value of the materials in enhancing the teaching-learning process. As a result, the effectiveness of instructional materials in creating desired behavioral changes in students is usually unknown.

Agricultural educators have expressed concern that instructional materials are being used without first determining their effectiveness.

---

1As part of Project 2384 of the Iowa Agriculture and Home Economics Experiment Station, this research study was reviewed and approved by the University Human Subjects Review Committee.
in increasing knowledge and bringing about desired behavioral changes in the learner (Hosseini, 1982). In discussing this concern, Bruce (1971) noted:

If instructional materials are to be of maximum value to teachers of agriculture, it is essential that they be evaluated in terms of the student and the purpose for which they are intended (Bruce, 1971, p. 61).

One area of instruction in vocational agriculture where instructional materials have been developed in recent years is supervised occupational experience (SOE). This component of vocational agriculture provides students an opportunity to apply knowledge and skills learned in high school under the supervision of the vocational agriculture teacher. In the beginning, SOE was restricted to "...either on a farm provided for by the school or other farm, for at least six months per year" (Stimson, 1919, p. 19-21). However, the changing character of the agricultural industry created a need for broadening the scope of SOE to serve a more diverse clientele of students in vocational agriculture. As a result, the Vocational Education Act of 1963 broadened the scope of vocational agriculture programs and provided funding for training programs "...in any occupation involving knowledge and skills in agriculture subjects, whether or not such occupations involved work of the farm" (Public Law, 88-210).

Educators have long recognized the educational value and methods of SOE. Research conducted by Pilgrim (1983) revealed that students perceive SOE placement programs as an effective method of preparing for
an agricultural occupation. He advocated that the vocational agriculture class was an appropriate setting to plan SOE placement programs under the direction of the vocational agriculture teacher.

Instructional materials have been developed and disseminated by various commercial and educational agencies to assist teachers in developing student SOE placement programs. However, few of these materials have undergone evaluations to determine whether or not they enhance the learning process. Instructional materials should be tested and revised as necessary before dissemination to ensure their effectiveness.

Statement of the Problem

Staff members in the Agricultural Education Department at Iowa State University conducted a survey of Iowa vocational agriculture teachers to ascertain the status of SOE placement programs. The results indicated that 49 schools had six or more students actively involved with SOE placement programs. According to Pilgrim (1983), students perceived SOE placement programs as a valuable method of developing occupational skills and abilities. Similarly, the employers of students indicated that SOE placement programs are an effective method of preparing students for an agricultural occupation (Fletcher, 1983). These findings indicate that teachers were placing students on farms and in agribusiness as part of the vocational agriculture curriculum in Iowa.

Pilgrim (1983) and Fletcher (1983) both revealed that preparatory
instruction in selecting and developing SOE placement programs should be provided in the vocational agriculture class. However, teachers are concerned about what should be taught to prepare students for part-time beginning employment in agricultural occupations. To assist teachers with the problem, an instructional packet (Williams, 1983a) on preparing students for SOE placement programs was developed by staff members in the Agricultural Education Department at Iowa State University.

The instructional packet was designed for vocational agriculture teachers to use in teaching advanced students how to develop SOE programs in agribusiness and on farms. Generally, students are 16 years of age upon completion of the sophomore year, the minimum age required for employment. Therefore, the sophomore vocational agriculture class was considered the most appropriate class for teaching the instructional packet.

The problem, then, of this study was: How effective was the instructional packet (Williams, 1983a) in preparing students to select and plan SOE placement programs?

Purpose of the Study

The purpose of this study was to evaluate the instructional packet on preparing vocational agriculture students for SOE placement programs. The specific objectives of this research were to:

1. Identify personal and situational characteristics of sophomore vocational agriculture students in selected schools in central Iowa.
2. Identify professional and situational characteristics of vocational agriculture teachers in selected schools in central Iowa.

3. Determine the effectiveness of an instructional packet on preparing students for SOE placement programs as evaluated by:
   a. student knowledge of SOE placement programs,
   b. student attitude toward SOE placement programs, and
   c. student SOE placement program planning.

4. Determine if significant differences exist in students' knowledge of SOE placement programs, students' attitude toward SOE placement programs, and students' SOE placement program planning when students are grouped by selected variables.

5. Determine if significant relationships exist among selected teacher characteristics and student performance on a SOE placement program knowledge test, a SOE placement program attitude inventory, and a SOE placement program planning inventory.

Need for the Study

Expanded offerings in vocational agriculture have prompted the development of a variety of instructional materials. These materials vary extensively in format and content. Teachers do not have the resources to objectively evaluate the quality of instructional materials. Publishing companies and agencies should demonstrate the effectiveness of their materials in the teaching-learning process. Ridenour (1965) described the need for evaluating instructional materials as follows:
The effectiveness of educational materials in the teaching-learning process will be unknown until the materials have been tried in the classroom and evaluated in terms of whether or not they have brought about the behavior changes in students that were specified in the educational objectives (Ridenour, 1965, p. 137).

Gliem (1976) recommended that research be conducted to evaluate the effectiveness of using instructional materials in bringing about changes in knowledge, attitude, and abilities of students. Similarly, Briers (1978) after evaluating the effectiveness of an instructional packet on SOE, recommended that other instructional materials should be evaluated on student knowledge, attitude, and abilities before being disseminated to teachers.

In discussing the need for evaluating instructional materials, Birkenholz (1982) stated the following:

Authors must accept the responsibility of empirically testing the effectiveness of instructional materials and providing results of such evaluations to potential users. These evaluations should not only focus on how materials affect student growth and development (i.e., knowledge, attitude, and skills), but also should determine the impact on teachers as they use the materials (Birkenholz, 1982, p. 4).

Hosseini (1982) concurred by advocating that instructional materials be evaluated to determine their impact on student behaviors. He also recommended that when feasible, instructional materials should be evaluated through carefully planned experimental design investigations.

In summary, agricultural educators have indicated that the development, distribution, and use of instructional materials is not adequate.
One must go further and evaluate the effectiveness of the materials in terms of the student as well as the teacher. Such evaluations should be conducted through carefully designed experiments prior to distributing the materials to vocational agriculture teachers.

Background of the Study

SOE programs are characterized as an integral part of the instructional program to equip vocational agriculture students with experience for agricultural occupations. Advancements in agricultural technology created a need to broaden vocational agriculture programs to serve a more diverse student clientele. Therefore, the passage of the Vocational Education Act of 1963, expanded the offerings of vocational education in agriculture. A U.S. Office of Education bulletin on developing SOE in agriculture, described the implications of these changes to the vocational agriculture teacher as follows:

The day is past when most students in vocational agriculture came from farms and were regarded as ready to put new skills and knowledge to use. With more non-farm youth enrolled and more students obtaining experience through cooperating agricultural businesses, preparation for occupational experience gains in importance. It is a major responsibility of the teacher of agriculture to give learners instruction preparatory to their participation in agricultural occupations (U.S. Office of Education, 1967, p. 28).

Recognizing problems related to supervised occupational experience, the Agricultural Education Department at Iowa State University requested funds for a project from the Agricultural and Home Economics Experiment Station. This project, funded in 1979, proposed the following objectives:
1. To identify procedures used by schools to give vocational agriculture students supervised occupational experience in learning to perform tasks in agricultural occupations.

2. To examine the roles of students, parents, employers, and teachers in conducting supervised occupational experience programs.

3. To develop instructional materials for directing students to select and plan supervised occupational experience programs that involve placement on farms and in agribusinesses.

4. To evaluate the effectiveness of the instructional materials.

The first two objectives have been accomplished under the direction of project leader, Dr. David L. Williams (1979). An instructional packet was developed by Williams (1983a) and the project team to achieve the third objective. This study is concerned with the fourth objective, evaluating the instructional packet.

Definition of Terms

Supervised occupational experience (SOE): refers to all planned agricultural activities of educational value conducted by a vocational agriculture student outside of class for which systematic instruction and supervision are provided (Briers, 1978, p. 8).

Supervised occupational experience (SOE) placement program: refers to all planned agricultural activities of educational value gained by a vocational agriculture student outside of class while placed on a farm,
in an agribusiness, or in school laboratories for which systematic instruction and supervision are provided.

**Instructional packet/materials:** refers to a collection of printed materials outlining subject matter and suggested teaching methodology for the teacher of vocational agriculture (Briers, 1978, p. 8).

**Project team:** refers to staff members and graduate students in the Agricultural Education Department at Iowa State University who worked on Project 2384—Conducting Supervised Occupational Experience in Agriculture—of the Iowa Agriculture and Home Economics Experiment Station.

**School:** refers to the Iowa high schools in which the experiment was conducted. Also, the term may be used to represent the vocational agriculture program that participated in the study.
CHAPTER II.
REVIEW OF LITERATURE

This chapter presents the theoretical framework for the study. Included are summaries of printed matter and research relating to supervised occupational experience (SOE) placement programs in vocational agriculture and reviews of experimental studies on instructional materials evaluation in vocational agriculture.

Review of Literature on SOE Placement Programs in Vocational Agriculture

Earlier studies on SOE by Williams (1977) and Briers (1978) included comprehensive reviews of literature on (1) the historical and philosophical bases for SOE as a learning method in vocational agriculture and (2) research related to SOE. These efforts emphasized production SOE programs; the review presented here examines printed matter related to SOE placement programs. Therefore, this review of SOE literature should be seen as complementary to prior efforts.

The passage of the Vocational Education Act of 1963 and the formulation of new objectives for the vocational agriculture program caused a flurry of research efforts. According to Kahler (1967), these research efforts were primarily concerned with:

...(1) identifying the off-farm agricultural occupations, (2) identifying the skills, abilities, and understandings-agriculture and non-agriculture-needed by workers in these occupations to perform their jobs, and (3) determining future employment needs in these occupations (Kahler, 1967, p. 8).
Cushman et al. (1967) stated that these studies have clearly indicated that a wide variety of jobs involving knowledge and skill in agriculture do exist; therefore, there are sufficient opportunities to justify SOE placement programs in vocational agriculture. However, according to Wallace (1970), these programs are often identified by other related terminology, such as: agricultural occupations employment experience (AOEE), off-farm agricultural occupations experience, off-farm work experience, cooperative occupational education in agriculture, cooperative vocational education in agriculture, directed work experience, and cooperative work experience. These terms indicate that similar programs exist in other areas of vocational education.

As early as 1966, three years after the passage of the 1963 Vocational Education Act, research was being conducted to determine the off-farm agricultural employment situation. Douglas (1966) conducted a descriptive study to determine the off-farm agricultural employment opportunities in southern Washington County in Rhode Island. Further, he wanted to determine the competencies needed in various agricultural occupations so that practical and relevant instructional materials could be developed. These instructional materials were to be used in preparing high school vocational agriculture students for entry level employment in agricultural occupations. He found that teachers in Rhode Island felt that effective SOE programs should be provided for all students, including those interested in off-farm agricultural occupations. His findings confirmed that vocational educators in agriculture
believed in the value of SOE placement programs and felt they should be implemented in vocational agriculture programs.

Early literature on vocational education in agriculture outlines the teachers role in providing SOE for students studying vocational agriculture. However, if teachers are going to perform their roles effectively, they need to be acquainted with procedures for planning and conducting these programs. Oen (1966) was interested in determining what procedures Ohio teachers were using to conduct off-farm work experience programs in agriculture. His descriptive study involved mailing questionnaires to 70 vocational agriculture teachers who were considered to be successful in conducting these programs. To gain further information, he interviewed 13 teacher-coordinators, 12 school administrators, and 24 cooperating employees in their local communities. He found that all three groups of individuals felt the students and teachers should receive release time from school to participate in on-the-job training and supervision. Fifty percent of the employers recommended a minimum of 24 hours per week of work experience; 41 percent recommended 30 hours per week. In essence, the cooperating employers were very supportive of work experience programs that prepared students to enter agricultural occupations.

Oen (1966) found nine factors essential for conducting effective off-farm agricultural occupational experience programs. These nine factors were: (1) good public relations, (2) interested students, (3) an effective and resourceful teacher, (4) school release time for
students and teachers, (5) training outlines listing skills to be acquired on the job, (6) an advisory committee, (7) a separate related class concurrent with the actual work experience, (8) involvement of industry with the program, and (9) sufficient instructional materials and facilities.

Perhaps the most sophisticated attempt to identify procedures for planning and conducting SOE placement programs in agriculture was conducted by Anderson and Bender (1967). First, they wrote 18 statements that represented guidelines for planning and conducting off-farm work experience programs. Then, they obtained from each state supervisor of vocational agriculture, the names of five teachers that were conducting programs which provided cooperative work experience in off-farm agriculture. In addition, the names of teachers from distributive and trade and industrial education, who were conducting outstanding cooperative work experience programs, were secured in a similar manner. These three groups of teachers were asked to evaluate 18 items regarding their importance in planning and conducting off-farm occupational experience programs in agriculture. The 18 statements were as follows:

1. A written local policy statement should be developed to help in administering cooperative work experience.

2. An advisory committee should be organized to give guidance and direction to the teacher coordinator.

3. A survey of the appropriate businesses and firms in the community should be conducted before students are placed in training stations.
4. Systematic and comprehensive efforts should be made to promote the program to students, school personnel, and the public.

5. A well planned and systematic method of selecting training stations which considers definite standards and criteria should be employed to insure the best possible environment for the student.

6. The school should have a definite plan for screening and selecting students that conforms to local school policy, satisfies cooperating employers, and meets student needs.

7. A concentrated effort should be exerted by the teacher-coordinator to insure that the interest of both the student and the employer are considered when a student is placed for employment in a training station.

8. A written training plan which lists the learning activities the student should engage in at the training station should be developed to serve as a guide to the employer in offering on-the-job instruction and to the teacher-coordinator in planning and teaching related instruction.

9. A written agreement between the school and the employer which lists specific responsibilities of the parties or individuals involved should be developed for students placed in cooperative work experience.

10. Adequate and appropriate facilities are essential and should be made available in schools conducting vocational cooperative work experience programs.

11. The school should provide sufficient instructional materials to supplement the teaching of related classroom instruction and reference material related to the areas of work in which students are being trained.

12. The related classroom instruction should be organized and planned so as to provide the information and experience which is not taught on the job and is necessary for students to progress in the various occupations.

13. The teacher-coordinator should have an organized and systematic plan for visiting students at their training stations so that related classroom instruction can be correlated with on-the-job training.
14. Employers should have the responsibility of providing adequate and timely instruction and supervision of the student while they are working in the training station.

15. Certain records and reports should be kept to help insure sound operation of a vocational cooperative work experience program.

16. Achievement in both classroom related instruction and performance on the job should be considered in evaluating students.

17. The school should maintain an organized system of following-up cooperative work experience students after graduation.

18. The vocational cooperative work experience program should practice a continuous and planned program of evaluation (Anderson and Bender, 1967, p. 25-40).

Anderson and Bender (1967) found a high degree of agreement among teachers in the three vocational areas from 44 states on all statements. This indicated that even though vocational agriculture teachers have less experience with cooperative programs, they apparently, were quite familiar with the procedures that should be followed in planning and conducting these programs. Or in other words, no matter which vocational area uses the work experience method, the basic planning and conducting procedures are similar.

In a similar study Cushman et al. (1968) wanted to determine the effectiveness of procedural directives for work experience programs in vocational agriculture. First, the directives were written by the researchers based on the knowledge and experience of individuals which had been successful in implementing these programs in several areas of vocational education. Thus, the directives focused on principles proven to be effective in other cooperative occupational education programs.
These directives were tested using senior vocational agriculture students in 16 high schools located in the Northeast region of the United States. Students were placed for directed work experience with cooperating employers that provided relevant work experience, on-the-job instruction, and individualized supervision at the training station. The vocational agriculture teacher was responsible for coordinating the content of the school instructional program with the students' work experience programs. To evaluate the effectiveness of the directives, data were collected from the teachers, students, and employers. The analytical technique used to analyze the responses was the Thurston Judgement Scale. This required calculating a group mean for each item, then, an overall mean for each item from the three groups. They found a high degree of satisfaction among all three groups as to the effectiveness of the procedural directives.

Vocational educators in agriculture have recognized the value and effectiveness of SOE placement programs for many years. Cushman et al. (1968), however, wanted to compare the effectiveness of these programs to school based supervised occupational experience. One group of schools, identified as comparison centers, offered classroom instruction and a school based practicum of shop, greenhouse, or nursery projects. The other group, identified as experiment centers, offered classroom instruction plus an opportunity for students to engage in directed work experience. The two groups were compared to the following criteria: (1) proportion of students obtaining employment
experience during the project, (2) proportion of students obtaining curriculum related employment experience during the project, (3) achievement of students in technical knowledge, (4) student attitude toward work, and (5) proportion of students entering curricula related employment or advanced study in agriculture following high school graduation. They found significant differences between the two groups on all five variables favoring the directed work experience program. These results indicate that directed work experience programs represent a notable improvement in the effectiveness of vocational education in agriculture for the students involved.

Apparently, vocational educators in agriculture agree that effective supervised occupational experience placement programs should be available for students interested in off-farm agricultural occupations. Furthermore, it is evident that teachers should conduct these programs using approved educational procedures. A report prepared by the Joint Committee of the U.S. Office of Education and the American Vocational Association (1966) stated that, "occupational success is influenced by the interpersonal relationships between the worker, their coworkers, their employer, and society in general" (Joint Committee of the U.S. Office of Education and the American Vocational Association, 1966, p. 9). Moreover, the successful application of specific occupational competencies depends in many instances, on practicing effective human relation skills.

Hull et al. (1967) reported that many vocational agriculture teachers are concerned about their ability to teach distributive
education principles that are common to cooperative occupational experience programs. Therefore, he initiated a nationwide teacher education institute to train teachers in the use of distributive information and methods for preparing students to enter off-farm agricultural occupations. The institute was conducted by a staff with backgrounds in agricultural education as well as distributive education. Participants received formal instruction from institute staff on the principles and concepts of distributive education programs. In addition, they modified distributive education instructional materials to meet the needs of vocational agriculture programs offering off-farm agricultural occupational experience programs.

After the completion of the institute, follow-up visits were conducted by staff members to assess the participants progress in establishing or improving these programs in their vocational agriculture departments. This was accomplished by staff members conducting personal interviews with school superintendents, students, teacher-coordinators, and training station managers in their local communities. Based on the observations from these visits, the institute staff concluded that:
(1) a direct relationship exists between the size of the community and the number of agricultural businesses available to be used as training stations, (2) multiple teacher departments tended to enhance the implementation of a separate class to teach agricultural distribution, while the presence of a cooperative experience program in the school tended to inhibit the establishment of an agricultural distribution class in local
high schools, and (3) sufficient resources – qualified teachers, training stations, and administrative support – are needed if these programs are going to be adopted in high schools.

Even though all participants of the Agricultural Occupations Institute received the same training and encouragement to adopt the cooperative agricultural occupations curricula as part of the vocational agriculture program, their outcomes varied greatly. As a result, Williams (1969) conducted a study to determine why all participants of the institute were not equally successful in adopting the cooperative agricultural occupations curricula into their vocational agriculture program. He limited his study to include only those teachers in Oklahoma that were: (1) a participant in the Agricultural Occupations Institute, and (2) still teaching vocational agriculture where they taught at the time of enrollment in the institute. Data were collected by conducting personal interviews with 32 vocational agriculture teachers and 32 school administrators in their local communities. He found that the variable responsible for the most variation in the adoption of the curricula, was the number of teachers in the vocational agriculture department. Other factors responsible for additional variation included: (1) the number of students enrolled in vocational agriculture, (2) teacher innovativeness, (3) the number of non-farm students enrolled in vocational agriculture, (4) the number of training stations available in the community, (5) the school administrators attitude toward cooperative
agricultural occupations training, and (6) the schools per pupil expenditure. Individually, these factors had little influence on the teachers' attitude to adopt the curricula; however, collectively they accounted for a sizeable amount of the variation.

After the establishment of effective guidelines and procedures for conducting SOE placement programs, agricultural educators were interested in determining the most effective delivery model for these programs. Horner et al. (1969) conducted a study to determine the value of related instruction and on-the-job work experience to students preparing to enter agricultural occupations. They selected 24 high schools in Nebraska that offered vocational education programs in agriculture. These schools were randomly assigned to one of four treatment groups identified as: (1) providing only related instruction, (2) providing only directed work experience, (3) providing both related instruction and directed work experience, and (4) providing no related instruction or directed work experience (the control group). They found no significant difference between the four treatment groups based on objective measures used in the study. The control group performed as well as the experimental groups on all objective measures; therefore, the traditional vocational agriculture classroom instruction was as effective in preparing students to enter agricultural occupations as the other treatments tested.

A similar study was conducted by Bobbitt (1969). He was interested in determining the value of school release time in work experience
programs. His research involved 28 Illinois schools offering vocational agriculture programs; 14 offered work experience with school released time, and 14 offered work experience without school released time. He found no significant difference between the two work experience models regarding the attitudes of pupils, teachers, and school administrators towards supervised occupational experience in agriculture. Therefore, he concluded that work experience programs with or without school release time yield similar results and should be retained as options in SOE placement programs.

Foreman (1973) conducted a study to evaluate the relationship of an early experience program to the transition from school to full-time employment. One of his purposes was to determine if actual work experience, as a part of the high school curriculum, affected attitudes towards work or self-esteem. He sampled 200 senior vocational agriculture students; 100 received six to nine weeks early placement in agricultural occupations, and 100 received the conventional laboratory program. His findings indicated no significant difference between the two groups, however he did discover that students participating in the early placement program required fewer days to obtain full-time employment after graduating from high school.

Since 1973, very little research has been conducted to examine the development and improvement of SOE placement programs. Perhaps this is due to the emphasis placed on production SOE programs in many states. Several studies have been conducted to examine the status of these
programs in local states; however, the findings do not indicate changes for improving procedures earlier established.

Eslinger (1974), for example, conducted a study to assess the practices being used by teachers in conducting these programs in Oregon. He studied the program structure, program involvement, program planning procedures, and teacher use of available resources. His findings indicated that these programs were important and valuable; however, the planning of them needed improvement.

In a similar study conducted in Idaho, Hopper (1975) wanted to determine the status of cooperative vocational education in agriculture. He found that teachers supported these programs and believed they developed a closer relationship between the school and community. However, he also identified reasons teachers were not implementing these programs. These reasons included: (1) a lack of knowledge in coordinating classroom instruction and on-the-job experience, (2) an insufficient number of training stations available, (3) a lack of understanding of the concepts undergirding cooperative occupational experience programs in agriculture, (4) a lack of administrative support, and (5) a lack of community interest in these programs.

Two studies were conducted to determine the effectiveness of the training received in agriculture placement programs. Mortensen (1979) was interested in determining the effectiveness of related classroom instruction provided to students in these programs. Data received from 138 former students revealed they were generally satisfied with the
overall instructional program, but especially valued the instruction received in the areas of human relations. So, to improve the effectiveness of SOE placement programs, one should consider the teaching of human relation skills.

A second study, by Kruckenburg (1979), was conducted to determine the attitudes of selected clientele toward the agricultural occupations employment experience (AOEE) program in Iowa Falls, Iowa. His findings indicated that classroom instruction should focus on general knowledge that can be used in various agricultural occupations. He recommended that skills and competencies required in specific occupations should be taught at the training station.

The most recent research conducted on SOE placement programs was done in Iowa. Pilgrim (1983) conducted a study to determine the perceptions of students involved in agribusiness SOE placement programs in selected Iowa Schools. He identified 49 vocational agriculture departments that had a minimum of six junior and senior students working in agribusiness occupations. His findings indicated that over 50 percent of the students had participated in a placement program as a part of the vocational agriculture program.

Pilgrim (1983) studied the importance of agribusiness SOE placement programs in developing selected occupational abilities as perceived by students. He found that students viewed their agribusiness SOE placement program important in developing 35 occupational abilities. These findings
reveal that SOE placement programs are an important learning method in vocational agriculture.

When asked to rate factors in developing SOE placement programs, students identified the following as most important: (1) the help given to me by the people in agribusiness, (2) my parent(s) or guardian(s), (3) the wages earned from my agribusiness SOE, (4) my vocational agriculture class, and (5) the training or experience plan developed for my agribusiness SOE. These findings should be considered in determining procedures for planning and conducting SOE placement programs. Since students perceive these factors to be important, teachers should use them to improve the effectiveness of these programs.

In a companion study, Fletcher (1983) investigated the perceptions of employers about agribusiness SOE placement programs. He found that employers of junior and senior students viewed these programs as an effective way for students to learn about agricultural occupations. This finding reveals that vocational agriculture teachers have the support of employers in developing SOE placement programs.

Fletcher (1983) studied the importance of agribusiness SOE placement programs in developing occupational abilities in students as perceived by cooperating employers. He found the employers viewed agribusiness SOE placement programs important in developing 29 occupational abilities. This supports Pilgrim's (1983) findings and confirms the potential of SOE placement programs as a method of preparing students for agricultural occupations.
When asked to rate the importance of selected factors in developing SOE placement programs, cooperating employers identified the following as most important: (1) the help received from the people in agribusinesses, (2) the students' parent(s) or guardian(s), (3) the agricultural experiences the student had before starting their agribusiness SOE placement program, (4) the individualized coordination and teaching efforts by the teacher, and (5) the evaluation of the students' performance in their agribusiness SOE placement program. These findings suggest procedures for teachers and employers to improve agribusiness SOE placement programs. Further, these results combined with Pilgrim's (1983) findings should serve as a foundation for developing instructional materials to aid teachers in preparing students for agribusiness SOE programs.

Summary of SOE placement literature review

Since the passage of the Vocational Education Act of 1963, several research studies have been conducted to determine the effectiveness of SOE placement programs. Results of these studies indicated that: (1) students, parents, teachers, and employers recognize SOE placement programs as an effective and important method of instruction in vocational agriculture, (2) various factors and procedures are effective in assisting students in planning and conducting placement programs in agricultural occupations, and (3) the vocational agriculture teacher and vocational agriculture classes are of major importance in assisting students in developing their SOE placement programs.
The literature reveals that classroom instruction on the procedures followed in SOE placement programs and the competencies needed to enter and succeed in an agricultural job are critical to the success of students' SOE placement programs. Research studies have identified content that should be included in the vocational agriculture curriculum when SOE placement programs are used as a teaching-learning method.

Review of Literature on Evaluation of Vocational Agriculture Instructional Materials

Expanded offerings in vocational agriculture have prompted the development of a variety of instructional materials. These efforts have confronted teachers with the problem of selecting instructional materials that can be used effectively in their local instructional programs. While the selection process will vary among teachers, Briers (1978) noted that the overriding concern of teachers was whether or not the instructional materials would help accomplish program objectives.

Research conducted by Briers (1978) included a thorough review of literature on evaluation of instructional materials in vocational agriculture. Therefore, this review of literature will focus primarily on research conducted in this area since 1978, updating the review by Briers (1978). Furthermore, this review is limited to experimental evaluations since these studies are the most rigorous means of establishing a cause and effect relationship (Tuckman, 1978).
Several research studies have been conducted to determine the effectiveness of various instructional materials. Findings from these studies have provided direction for improving the effectiveness of these materials when used by vocational agriculture teachers. For example, Ridenour (1965) found that for maximum effectiveness, instructional materials should be structured to enhance the teaching learning process. In a study conducted by Tillman (1976) he discovered that teachers prefer that instructional materials contain transparency masters, student workbooks, tear-out pages, and finally teacher keys for each activity to be completed by the students. Shontz (1963) found the effectiveness of instructional materials was superior to traditional materials developed by vocational agriculture teachers. The results of a study by Ehresman (1966) found instructional materials were well received by teachers because of the time saved during planning and preparation. Barker (1967) found that when using instructional materials, students obtained a greater knowledge and understanding of the subject matter in comparison to traditional materials individually developed by teachers. Finally, Kaas (1976) concluded that instructional materials could be used in the absence of live specimens to teach plant material identification. Briers (1978) summarized research conducted in this area by stating:

Studies which evaluated instructional materials in vocational agriculture gave varying results. Some of the experiments found that the materials were successful in increasing student knowledge of subject matter. On the other hand, several studies did not detect difference
in student achievement between experimental and control group treatments. Collectively, the experiments suggest that properly constructed materials and carefully designed experiments combine to result in detectable differences in achievement.

Research procedures also varied from study to study. The most popular experimental designs were the posttest only control group design and the pretest-posttest control group design. Similarly, the most frequently used criterion measure was student cognitive knowledge. Other criteria included student attitudes and student proficiency in performing skills (Briers, 1978, p. 38).

The most recent research to evaluate instructional materials in vocational agriculture were four studies conducted in Iowa. Briers (1978) conducted a study to determine the effectiveness of an instructional packet on Supervised Occupational Experience (SOE) Programs for beginning vocational agriculture students. Schools were randomly assigned to the experimental treatment group and the control treatment group. Experimental group teachers were provided with an instructional packet on SOE and in-service education on the use of the packet. Control group teachers were asked to teach SOE to their beginning students using their traditional approach. Using a pretest-posttest control group design, students in the study were asked to complete the following: (1) a SOE knowledge inventory, (2) a SOE attitude inventory, (3) a SOE program planning inventory, and (4) a general information questionnaire. Usable data were collected from 17 experimental schools and 16 control schools.

Briers (1978) found that the experimental group scored significantly higher than the control group on the SOE knowledge inventory.
Furthermore, he found that the experimental group performed significantly better than the control group on the SOE program planning inventory. These findings indicate that the instructional packet was successful in assisting vocational agriculture teachers to work with beginning students in selecting and planning SOE programs.

Townsend (1981) evaluated the effectiveness of an instructional packet on leadership and FFA for beginning vocational agriculture students. Sixty vocational agriculture schools were randomly selected and assigned to two experimental treatment groups and one control group with 20 schools each. Teachers in one experimental group were provided with an instructional packet and in-service education on the use of it; whereas, teachers in the second experimental group received only the instructional packet. The control group teachers were asked to teach leadership and FFA using their traditional approach. Using a posttest-only control group design, Townsend asked students involved in the study to complete the following: (1) a FFA knowledge inventory and (2) a FFA attitude inventory. He found that there was no significant difference in the FFA knowledge scores among groups. However, he did discover that students whose teachers had access to the instructional packet possessed a more positive attitude toward the FFA organization compared to teachers in a control group.

The effectiveness of an agriculture/agribusiness management instructional unit was evaluated by Birkenholz (1982). Selected vocational agriculture departments were randomly assigned in equal numbers
to the experimental and control treatment groups. The experimental group was asked to teach agriculture/agribusiness management using the instructional unit. To equate the content of the instructional unit between the two groups, control group teachers were provided a list of problem areas and study questions included in the instructional unit. These teachers were then asked to teach the unit using their traditional approach. Using a pretest-posttest control group design, he asked the students participating in the study to complete the following: (1) a knowledge inventory, (2) an attitude inventory, and (3) a general information questionnaire. Usable data were collected from 16 experimental departments and 12 control departments.

Birkenholz (1982) found that the experimental group scored significantly higher than the control group on the knowledge inventory. The semantic differential technique employed to measure student attitude revealed no significant difference between the two groups.

Using the same design, Hosseini (1982) evaluated the effectiveness of an instructional unit on soil fertility and fertilizers. Selected vocational agriculture departments were randomly assigned in equal numbers to the experimental and control treatment groups. The experimental group was asked to teach a unit on soil fertility and fertilizers using the instructional unit. To equate the content of the instructional unit between the two groups, teachers in the control group were provided a list of problem areas and study questions included in the instructional unit. These teachers were then asked to use their traditional approach
in teaching the unit. Using a pretest-posttest control group design, students participating in the study were asked to complete the following: (1) a knowledge inventory, (2) an attitude inventory, and (3) a general information questionnaire. Usable data were collected from 15 experimental departments and 12 control departments.

Hosseini (1982) found that experimental group classes scored significantly higher than the control group on the knowledge inventory, concluding that the instructional unit was effective in assisting vocational agriculture teachers to teach a unit on soil fertility and fertilizers.

Both researchers, Birkenholz (1982) and Hosseini (1982), concluded that the problem solving format in which the instructional units were arranged enhanced student learning. In addition, teachers placed a high value on this format in terms of reducing planning and preparation time. Both researchers recommended that future instructional materials should be subjected to rigorous evaluations to determine their effect on student knowledge, attitudes, and abilities before dissemination to teachers.

**Summary of instructional materials literature review**

Experiments conducted to evaluate the effectiveness of instructional materials used in vocational agriculture produced varying results. Some of the experiments found that instructional materials were effective in increasing student achievement of subject matter. However, other
experiments did not detect differences between the control and experimental treatment groups. Collectively, studies reviewed indicated that properly constructed materials and carefully designed experiments combine to result in detectable differences in student achievement.

Researchers have used a variety of procedures in conducting their experiments. The most popular experimental designs were the posttest-only control group design and the pretest-posttest control group design. Similarly, the effectiveness of the instructional packet was most frequently measured by criterion referenced tests, student attitude scales, student proficiency in performing skills, and teacher questionnaires. Frequently, instruments used to measure these dependent variables were constructed by the researchers.

Several researchers concluded that instructional materials were effective in reducing the time required for teacher planning and preparation. They also indicated the need for continuing to evaluate the educational value of instructional materials prior to dissemination.
CHAPTER III.
DESIGN AND METHODOLOGY

This study was designed to evaluate the effectiveness of a supervised occupational experience (SOE) placement instructional packet. Research methods utilized are reported in seven sections: (1) Design, (2) Population, (3) Selection of Sample, (4) Description of Treatment Levels, (5) Instrumentation, (6) Collection of Data, and (7) Analysis of Data.

Design

This investigation utilized a posttest only control group design (Campbell and Stanley 1971). The design may be represented graphically as:

\[
\begin{align*}
R & \quad X_1 & 0_1, 0_3, 0_5, 0_7, 0_9 \\
R & \quad X_2 & 0_2, 0_4, 0_6, 0_8, 0_{10}, 0_{11}
\end{align*}
\]

An explanation of the symbols follows:

- **R** indicates random selection from the population and random assignment to the two treatment groups.
- **X_1** represents the treatment group in which instructors taught preparing for SOE placement programs to sophomore students using "conventional" materials and methods (the control treatment).
- **X_2** represents the treatment group in which instructors taught preparing for SOE placement programs to sophomore students using the instructional packet developed by the project team.
\[ \begin{align*} 
0_1, 0_2 & \text{ represents a posttest instrument designed to measure student knowledge of SOE placement programs (Part I Student Instrument).} \\
0_3, 0_4 & \text{ represents a posttest instrument designed to measure student attitude toward SOE placement programs (Part II Student Instrument).} \\
0_5, 0_6 & \text{ represents a posttest instrument designed to measure the degree to which students had selected and planned their own individual SOE placement programs (Part III Student Instrument).} \\
0_7, 0_8 & \text{ represents an instrument designed to collect personal and situational information from the students (Part IV Student Instrument).} \\
0_9, 0_{10} & \text{ represents an instrument designed to collect professional and situational information from the teachers.} \\
0_{11} & \text{ represents an instrument designed to collect information from experimental teachers regarding their rating of the instructional packet.} 
\end{align*} 

Tuckman (1978) discussed the posttest-only control group design as follows:

This design utilizes two groups, one of which experiences the treatment while the other does not, thus controlling for history and maturation. Furthermore, group assignment is made on a random basis, which controls for selection and mortality. In addition, no pretest is given to either group in order to control for simple testing effects and the interactions between testing and treatment. This design is quite ideal, then, in that it controls all threats to validity or sources of bias (Tuckman, 1978, p. 130).

Population

The population for this study consisted of vocational agriculture departments in the North Central and South Central Vocational
Agriculture/FFA Districts in Iowa during the 1982-83 school year. The study was restricted to these two districts so that the researcher could monitor the experiment through on-site visitations and telephone conversations with the resources available. Additional restrictions were imposed so that the actual population available for the study was defined as follows:

1. Teachers must not be presently involved with other research projects in the Agricultural Education Department at Iowa State University. This was to prevent over using those teachers already involved in research projects.

2. Teachers must have been teaching a class of sophomore vocational agriculture students.

3. Teachers must have agreed to teach a unit on preparing students to enter SOE placement programs to their sophomore students between October 4 and November 26, 1982.

The sophomore class was determined most appropriate for this study since these students are generally 16 years of age, the minimum age required for employment, by the completion of the school year. In addition, utilizing these students could facilitate future follow-up studies to further analyze the effectiveness of the instructional packet.

In essence, the accessible population consisted of all vocational agriculture teachers in the north central and south central districts who met the criteria stated above. The target population was considered
to be present teachers in these districts who meet these criteria. Therefore, generalizations and inferences from the sample to the accessible population can be made without hesitation. Inferences may also be made to the larger target population which might be thought of as the accessible population over time. However, statistical inferences cannot be extended to include all vocational agriculture teachers in Iowa. Yet, generalizations drawn may have logical implications for other teachers meeting the criteria stated above.

Selection of Sample

Forty schools were randomly selected from the north central and south central districts to participate in the study. Alternate schools were numerically ordered to be used as replacements if schools in the original sample could not participate. Schools were randomly assigned to the experimental and control treatment group using a computer program of random numbers. Superintendents of the schools selected were contacted by letter (see Appendix A) to obtain permission to contact the vocational agriculture teacher. A self-addressed stamped postcard (see Appendix A) was enclosed with each letter for the superintendent to sign and return to the researcher. Fifty-nine superintendents were contacted; 41 gave the researcher permission to contact the vocational agriculture teacher. A letter (see Appendix A) was sent to the selected teachers explaining the research project and asking for their participation. The teachers were also informed of the criteria they must meet to take part in the project. A self-addressed stamped postcard (see Appendix A) was enclosed in each letter for the teacher to
sign and return to the researcher. Of the original 40 teachers contacted, 27 teachers agreed to participate in the project. Each of the nine alternate schools were contacted and two teachers agreed to participate. Teachers not agreeing to participate in the project indicated their unwillingness to alter their instructional program during the time period identified.

Thus, the sample for this study consisted of 29 schools, 15 were randomly assigned to the experimental group and 14 to the control group.

Description of Treatment Levels

Experimental studies "refer to that portion of research in which variables are manipulated and their effect upon other variables observed" (Campbell and Stanley, 1971, p. 1). McCracken (1982) emphasized that when conducting studies of this nature, the researcher must describe the experimental and control treatments explicitly. When synthesizing an experimental study conducted by Briers (1978), McCracken (1982) supported his viewpoint with the following statements:

The reader of this study is aware only that the control group teachers were asked "to teach what they would ordinarily teach." It was determined that an SOE unit had been taught by all the teachers. We are unaware, however, of the methods and materials used in instructing the control group. Without an awareness of what the experimental treatment is being compared with, one does not know if the treatment results in better performance when no materials were provided or if other proven materials were used (McCracken, 1982, p. 93-94).
This section describes the independent variable manipulated by the researcher — the degree to which teachers had access to and used the instructional packet on Preparing For Supervised Occupational Experience Placement Programs. Two levels of the independent variable were used in the study.

Control group

Schools (teachers and students) assigned to the control treatment group were not given the instructional packet. Rather, they were provided with a list of problem areas, study questions, suggested references, and learner needs outlined in the instructional packet. In addition, they were provided a reference explaining legal regulations pertaining to SOE placement programs. This was done for the purpose of equating the subject matter content between the two treatment groups as described in Tuckman (1978). These teachers, however, were also asked to use materials and methods they would ordinarily use in teaching sophomore students on preparing for SOE placement programs. The materials provided could be used by the teachers as desired. A sample of the materials provided to the control schools is presented in Appendix C. The teachers were then instructed to collect information from their students after teaching the unit (posttests).

Experimental group

Schools (teachers and students) assigned to the experimental treatment group were provided with the instructional packet entitled,
Preparing For Supervised Occupational Experience Placement Programs (Williams, 1983a). Teachers were instructed to teach the materials using the approach suggested in the instructional packet. They were also instructed to collect information from their students after this unit was taught (posttests).

Instructional packet

The instructional packet was developed by the project team under the direction of David L. Williams as part of the Iowa Agriculture and Home Economics Experiment Station project entitled, "Conducting Supervised Occupational Experience in Agriculture." The packet was developed for vocational agriculture teachers to use in teaching advanced vocational agriculture students how to develop supervised occupational experience programs that include placement (employment) in agricultural businesses and on farms. Research conducted by Pilgrim (1983), Fletcher (1983), and Williams (1983b and 1983c) suggested content and methods to be included in the packet.

The instructional packet presents course materials in a problem solving context and encourages students to build upon their interests and experiences. Research conducted by Archer (1976), Birkenholz (1982), and Hosseini (1982) confirmed the effectiveness of instructional materials developed using the problem solving approach. This approach has proven to be effective in enhancing student learning and has been well-received by Iowa vocational agriculture teachers.
Based on this approach to teaching, three problem areas were identified and included in the instructional packet. The problem areas were:

1. Identifying opportunities for a SOE placement program,
2. Planning SOE placement programs, and
3. Starting SOE placement programs.

Each of the three problem area statements were followed by a situational statement intended to identify the teaching situation to the teacher. Then, the problem area statements were subdivided into study questions. These questions could be used by the teacher to aid the students in arriving at the proper decision for the problem area. These questions were followed by a list of references and instructional materials. While some references were included in the instructional packet, others commonly available to Iowa vocational agriculture teachers were listed for each problem area. Following this section was a listing of learner needs or concepts that instructors should emphasize in addition to the subject matter in each problem area. To aid the teacher, the learner needs were keyed to specific learning activities.

Interest approach activities were suggested for the purpose of arousing student interest in each problem area. Following this component, several learning activities were suggested for the teacher to use to enhance the student-learning process. The learning activities were directly related to the study questions in each problem area. Answers
to the problem and study questions were provided in the conclusions. Following, was evaluation criteria which described what the students should have accomplished as a result of instruction in the problem area. Finally, optional learning activities were provided to aid teachers in directing more in-depth instruction in the problem area.

Throughout the three problem areas of the instructional packet a variety of individual and group instructional methods was suggested. Masters for information sheets, activities, and transparencies were included and suggestions made for their use. A teacher key was provided for each activity that students were asked to complete. The instructional packet was designed for approximately 15 class periods (hours) of instruction in sophomore vocational agriculture classes.

Samples of the materials included in the instructional packet are presented in Appendix D.

Monitoring of treatment

To insure that the treatment was administered within the constructs of the investigation, the researcher closely monitored both groups during the experiment. After receiving postcards from vocational agriculture teachers indicating their willingness to participate in the study, they were contacted by telephone to determine: (1) if they had access to one copy of each suggested reference listed in the materials, (2) the date they planned to begin teaching the unit on SOE placement programs, and (3) the number of students in the sophomore vocational agriculture class.
where the unit on SOE placement programs was going to be taught. Materials were mailed to teachers ten days before they proposed to begin teaching the unit to insure adequate preparation time. Teachers were then telephoned one-week after they began to teach their unit to assess their progress and anticipated date of completion. This information allowed the researcher to mail the posttest instruments to each vocational agriculture teacher at the correct time. In addition, a minimum of two subsequent telephone conversations were conducted with each teacher during the experiment to further assess their progress in teaching the unit. A record of all telephone conversations conducted is located in Appendix E.

Further monitoring of the experiment was performed through on-site visitations to three schools in each treatment group. The purpose of the visitations was to actually observe the control and experimental treatments being used by vocational agriculture teachers in preparing students for SOE placement programs. At each of the schools visited, the sophomore vocational agriculture class where the unit was being taught was observed by the researcher. To avoid biasing results, very little conversation was conducted with the vocational agriculture teachers or students during the visitations.

The schools visited in the control treatment group were: (1) Dexterfield Community High School, (2) Nevada Community High School, and (3) Stuart-Menlo Community High School. Even though all of these teachers
were not closely following the instructional unit outline provided, all three were engaged in teaching the unit.

The schools visited in the experimental treatment group were: (1) Ankeny Community High School, (2) Des Moines Public High School, and (3) Southeast Polk Community High School. The researcher recorded the various student activities, information sheets, and transparency masters that were being used from the instructional packet. A record of the observations from each school in both treatment groups is located in Appendix E.

Instrumentation

Three instruments were developed to measure the dependent variables and to collect personal and situational information from the students and teachers. One instrument, containing four parts, was designed to be completed by the students under the direction of the vocational agriculture teacher, and two were used to collect data from the vocational agriculture teachers involved in the research. The development of the instruments is described in the following paragraphs. A copy of each instrument is located in Appendix F.

Student instrument - Preparing for supervised occupational experience placement

Part I - Supervised Occupational Experience Placement Program

Knowledge Inventory  A criterion referenced test of 24 multiple-choice items with four alternatives each was designed to assess each students'
knowledge of supervised occupational experience placement programs. The instructional packet was not used in writing the test since it was not provided to all teachers. In an attempt to prevent bias, the test items were written based on the problem areas, study questions, and learner needs which had been provided to both treatment groups. To insure content validity, the project team evaluated the contents of the test based on the problem areas, study questions, and learner needs. To insure face validity, a typed copy of the test was presented to staff members in the Agricultural Education Department at Iowa State University. In addition, the test was field tested with a class of sophomore vocational agriculture students not involved in the study. The final instrument consisted of eight items pertaining to each of the three problem areas of the instructional packet. The test was administered as a posttest with the items and the alternatives for each item randomly arranged. Reliability was calculated and item analysis was done as part of the experiment. These procedures are described in the analysis of data section.

Part II - Supervised Occupational Experience Placement Program

Attitude Inventory

To measure students' attitude toward vocational agriculture supervised occupational experience placement programs, an attitude inventory instrument was developed. Six broad attitudinal concepts were identified, two from each problem area. These concepts were: (1) developing an awareness of agricultural occupations,
planned employment experience in a selected area of agriculture, vocational agriculture SOE placement programs, (4) procedures and regulations for SOE placement programs, (5) steps in obtaining a job for a SOE placement program, and (6) accomplishments of a student in a SOE placement program.

A review of the literature revealed that several types of attitude scales could be used. However, research conducted by Kotrlik (1978), McMillion (1966), Birkenholz (1982), and Hosseini (1982) reported success with the semantic differential technique with vocational agriculture students. Therefore, the semantic differential technique was selected for this study.

The semantic differential instrument developed for this study consisted of six, seven-step scales bound by appropriate bipolar adjectives. The bipolar adjectives were taken from those recommended by Osgood et al. (1971), the originators of the semantic differential technique. The adjectives were selected on the basis of the dimension of meaning they represented, and their appropriateness for the concept being measured.

To insure face and content validity, the project team selected the bipolar adjectives based on concepts to be measured. Then, a typed copy of the instrument was reviewed by staff members in the Agricultural Education Department at Iowa State University. In addition, the attitude inventory was field tested with a class of sophomore vocational agriculture students not involved in the study.
Based on comments received throughout the developmental process, some adjectives were removed or changed to arrive at the final instrument. To avoid confusing the respondents, the positive adjectives were located at the right side of the scale (see Figure 1). An example of the concept "vocational agriculture SOE placement programs" with its bipolar adjectives appears in Figure 1.

I feel that vocational agriculture SOE PLACEMENT PROGRAMS ARE:


UNAPPROPRIATE : __ : __ : __ : __ : __ : APPROPRIATE


Figure 1. A sample of the semantic differential instrument item with a set of hypothetical responses

A set of hypothetical responses is presented to illustrate how an individual may respond to a concept. Digits were assigned for computational purposes as follows:


A person's raw score on an item was the digit corresponding to the scale position checked by that individual. In its final format, this instrument contained 36 items that each student responded to, or in
other words, 36 attitude measures from each student regarding SOE placement programs. The attitude instrument was administered as a posttest with the concepts and their bipolar adjectives randomly arranged. SPSS subprograms RELIABILITY and FACTOR were used in analyzing the attitude inventory.

PART III - Supervised Occupational Experience Placement Program Planning Inventory This 14-item inventory measured the degree to which students had actually selected and planned their individual SOE placement program at the conclusion of the instructional unit. To select items for this instrument, the researcher formulated 26 possible indicators that sophomore vocational agriculture students had selected and planned their SOE placement program. These indicators, which were statements describing an SOE placement program planning activity, were then presented to a jury of individuals considered by the researcher to be knowledgeable of SOE placement programs.

The jury consisted of the following persons:

Dr. Gary Briers, Associate Professor, Agricultural Education Department, Texas A&M University, College Station, Texas.

Dr. Richard Foster, Associate Professor, Department of Agricultural Education, University of Idaho, Moscow, Idaho.

Dr. Martin McMillion, Professor, Agricultural Education Program, Virginia Polytechnic Institute and State University, Blacksburg, Virginia.

Ms. Anna Beth Neason, Graduate Research Assistant, Agricultural Education Department, Iowa State University, Ames, Iowa.

Mr. Keith Rheault, Graduate Research Assistant, Agricultural Education Department, Iowa State University, Ames, Iowa.
The jury was instructed to indicate the degree of importance they would attach to each of the items as an indicator of good student planning of a SOE placement program. They responded to each statement using the following scale:

1 2 3 4 5 6 7 8 9
No Little Some Much Utmost
Importance Importance Importance Importance Importance

A mean rating for each of the 26 statements was calculated by averaging the judges' responses, and the standard deviations were examined to determine the extent of agreement among the jurists. This validation process reduced the number of indicators to 14. Twelve items from the original list were eliminated because the jury disagreed on their importance in planning SOE placement programs. The standard deviation of the 12 items eliminated were above 1.095; all others were below 1.095. The original 26 items and the final 14 items and their weighted means appear in Appendix G.

Questions requiring students in the experiment to mark a yes or no response were written to correspond to these 14 indicators. Reliability of the SOE placement program planning inventory was computed from data collected in the experiment. As with the knowledge and attitude inventories, the procedures used are described in the analysis of data section.

**Part IV - Student Data Questionnaire** This instrument was used to
collect student data related to selecting and planning SOE placement programs in vocational agriculture. The eight questions elicited personal and situational data from each student.

**Teacher instruments**

**Teacher/school demographic data** An 11-item questionnaire was designed to assess situational variables related to the school and teacher. Questions were asked to gather teacher professional data and vocational agriculture department data associated with SOE placement programs. This instrument was completed by each vocational agriculture teacher at the conclusion of the experiment.

**Preparing for supervised occupational experience placement programs—instructional packet evaluation** A three-part instrument was developed to assess teachers' ratings of the instructional packet.

**Part I**—employed a semantic differential scale using seven bipolar adjectives. Teachers were asked to mark the scale at the location that described their feelings about the packet in regard to the bipolar adjectives.

**Part II**—contained statements regarding the format of each problem area of the instructional packet such as study questions, learner needs, interest approach, etc. Teachers were asked to rate the value of each format component of each problem area using the following scale:

<table>
<thead>
<tr>
<th>Value</th>
<th>Value</th>
<th>Value</th>
<th>Value</th>
<th>Value</th>
<th>Value</th>
<th>Value</th>
<th>Value</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
<td>8</td>
<td>9</td>
</tr>
<tr>
<td>No</td>
<td>Little</td>
<td>Some</td>
<td>Much</td>
<td>Great</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>


Part III - provided an opportunity for vocational agriculture teachers to express personal suggestions for improving the instructional packet.

This instrument was completed by each vocational agriculture teacher in the experimental treatment group at the conclusion of the experiment.

Collection of Data

Teachers in both treatment groups were contacted by the researcher after they had agreed to participate in the study. A telephone conversation was conducted to determine the number of students in their sophomore vocational agriculture classes and the appropriate dates between which they would teach their SOE placement units. Each teacher was then contacted one week after they began to teach the unit to determine their completion date. Using this information, the researcher mailed the instruments and directions for their administration in proper quantities shortly before the reported completion date for teaching the unit (see Appendix A).

These procedures resulted in usable data from all 29 of the schools, or a 100 percent return. As a result, 14 schools were in the control treatment group and 15 schools were in the experimental treatment group (see Appendix B).

Analysis of Data

The data gathered from the teachers and students were coded and punched into IBM cards, and analyses were done using the computer
facilities at the Computation Center, Iowa State University. The computer program used for the statistical analyses of data was: the Statistical Package for the Social Sciences (SPSS) (Nie et al., 1975). In the following paragraphs, an overview of the data modification procedures and statistical routines used in the analyses are presented.

Data modification procedures

After the data were punched into IBM cards, procedures were employed to modify the data so that the objectives of the study could be accomplished. For example, data were collected from each individual student; however, since schools were randomly chosen and assigned to treatment groups, the intact class served as the experimental unit to evaluate the treatment effects. Following is an explanation of the data modification procedures used.

Modification of SOE placement program knowledge inventory data

Responses from students for each item on the instrument were assigned a value of 1, 2, 3, or 4 and punched into an IBM card. To compute a score for each student, the correct alternative was recorded as a "1", an incorrect alternative was assigned a "0" and the correct responses ("1's") were counted. This resulted in a possible score of 24 for the knowledge inventory if all items were answered correctly. To convert all scores to a percentage basis, the number of correct responses was divided by 24 then multiplied by 100. Thus, the highest possible score was 100.
Class means were computed to be used for the analysis of treatment effects.

Modification of SOE placement program attitude inventory data
Student responses for each subscale on the instrument were assigned a value of 1, 2, 3, 4, 5, 6, or 7 and punched into an IBM card. A student attitude score for each concept was calculated by summing the six subscales undergirding each concept and calculating a mean score. Then, an overall student attitude score of SOE placement programs was calculated by summing the mean scores for each concept and dividing by six. Class means were computed and used for the analysis of treatment effects.

Modification of SOE placement program planning inventory data
Students responded to each of the 14 questions on the instrument by marking "yes" or "no". The yes response was coded "1" while the no response was coded "2" on an IBM card. The punched values were then multiplied by the assigned weight to each question (see Appendix G) and summed to yield a maximum student score of 99.2. Scores were converted to a percentage by dividing by 99.2 and multiplying by 100. Students' scores were then averaged by class to yield class means for analyzing treatment effects.

Modification of data from student and teacher questionnaires
Student responses for each item were punched into an IBM card. Since categorical variables do not lend themselves to means as measures of
central tendency, values for these variables served to describe the students (sampling units). Since only one teacher existed for each class, no modification was needed for teacher data in statistical analyses.

**Descriptive analyses**

**Analyses of background variables**  SPSS subprogram FREQUENCIES was used to summarize categorical variables for student and teacher characteristics. To summarize dependent variables within schools subprogram AGGREGATE was employed. Similarly, subprogram CONDESCRIPTIVE was used to summarize interval level variables. Means and standard deviations were computed for selected student variables and experimental teacher evaluations of the instructional packet.

**Analyses of dependent variable data gathering instruments**  The SOE placement program knowledge inventory was analyzed for consistency using SPSS subprogram RELIABILITY. A reliability coefficient alpha was computed for the entire 24-item instrument. In addition, item analytic measures, average item difficulty and average item discriminating power, were also computed.

To analyze the internal consistency of the SOE placement program attitude inventory the reliability coefficient alpha was computed for the entire 36 subscales. To investigate the unidimensionality of the instrument, factor analysis was performed using subprogram FACTOR.
The factoring method utilized was the PA2 - principal factoring with iteration.

At present time this is the most widely accepted factoring method. Those who have limited experience with factor analysis might do well to stay with this method (Nie et al., 1975, p. 480).

Variances of the individual items and item intercorrelations were computed to determine the feasibility for summing the items to give a total score.

The SOE placement program planning inventory was also analyzed by computing a reliability coefficient alpha of the entire 14-item instrument. Again, data collected in the experiment served as the basis for the analysis.

Results of the instrument analyses are reported in Chapter 4.

Inferential analyses

Chi-square analyses were performed using SPSS subprogram CROSSTABS to determine if relationships existed between treatment group and selected student and teacher categorical variables. In these analyses, experimental units were considered to be students rather than classes.

SPSS subprogram T-TEST was employed in analyzing selected interval level teacher variables to determine if they differed for the two treatment groups. In addition, this subprogram was used to analyze the effects of the treatment levels on student knowledge of SOE placement programs, student attitude toward SOE placement programs, and student SOE placement program planning.
SPSS subprogram ONEWAY was used to test for significant differences in students' SOE placement program knowledge scores, SOE placement program attitude scores, and SOE placement program planning scores when students were grouped by selected variables. Duncan's multiple range test was used to identify groups that were significantly different.

SPSS subprogram PEARSON CORR computed Pearson product-moment coefficients of correlation for selected interval level variables. Significant correlations were inferred from the procedure.

Summary of Research Procedures

The study was conducted during the fall semester 1982, to evaluate the effectiveness of a SOE placement instructional packet. Effectiveness was assessed in terms of: (1) student knowledge of SOE placement programs, (2) student attitude toward SOE placement programs, and (3) student planning of individual SOE placement programs. Two treatment levels were used: (1) schools whose teachers were provided the instructional packet and (2) schools whose teachers were provided with a list of problem areas, study questions, suggested references, and learner needs outlined in the instructional packet (control group).

The posttest only control group design was used in the study. To ensure administration of the treatment within the constructs of the investigation, both groups were closely monitored during the experiment. At the conclusion of the instruction, posttest instruments collected
information concerning: (1) student personal and situational variables, (2) teacher professional and programmatic variables, (3) student knowledge of SOE placement programs, (4) student attitude toward SOE placement programs, (5) student planning of their SOE placement programs, and (6) teacher ratings of the instructional packet.

Schools were randomly selected from the population of vocational agriculture teachers in the North Central and South Central Vocational Agriculture/FFA Districts in Iowa and were randomly assigned to the control or experimental group. The experimental unit consisted of the teacher and the students enrolled in their sophomore vocational agriculture class.

Administration of data collecting instruments was done by the vocational agriculture teacher. The data were then statistically analyzed using computer facilities at Iowa State University.
CHAPTER IV.
FINDINGS AND DISCUSSION

The purpose of this study was to evaluate the effectiveness of a supervised occupational experience placement instructional packet. To accomplish this purpose schools with vocational agriculture programs in the North Central and South Central Vocational Agriculture/FFA Districts in Iowa were randomly selected to participate in this study. Half were assigned to an experimental treatment group which used the instructional packet; the other half represented a control treatment group which used traditional materials and methods to learn about SOE placement programs. Data collected from the two groups were as follows: (1) personal and situational information from the students, (2) professional and situational information from the teachers, (3) teacher evaluations of the instructional packet, (4) student knowledge of SOE placement programs, (5) student attitude toward SOE placement programs, and (6) student SOE placement program planning.

Results of data analyses are presented in six sections: (1) descriptions and analyses of personal/professional and situational characteristics of vocational agriculture students, teachers, and departments participating in the study, (2) teacher evaluation of the instructional packet, (3) analyses of dependent variable data collection instruments, (4) comparison of treatment groups, (5) comparison of dependent variables to selected independent variables, and (6) correlational analyses of selected interval level variables.
Student and Teacher Characteristics

Student characteristics

Twenty-nine vocational agriculture departments were randomly selected and assigned to control or experimental treatment groups. Characteristics of the two groups are shown in a series of tables expressed as nominal data. Chi-square statistics were computed to determine if significant relationships existed between the treatment group and the criterion variables. Since these variables were not influenced by the treatment, experimental units were considered to be students rather than classes.

Over 60 percent of the students involved in the study lived on a farm, as shown in Figure 2. Another 23 percent lived in a town or city; 11 percent lived in a rural area but not on a farm. A chi-square analysis of these data, presented in Table 1, indicates that no relationship existed between students location of residence and treatment group. Therefore, the treatment groups were homogeneous in regards to where they lived.

These findings differed from those reported by Briers (1978). He found that 76 percent of the students in his random sample lived on a farm; 13.7 percent lived in a town; and 9.8 percent lived in a rural area, not on a farm. These differences may indicate that the percentage of town and urban students compared to farm students enrolling in vocational agriculture programs have increased.

Another situational variable closely associated with students location of residence is their present type of SOE program. Figure 3
Figure 2. Percentage of students by residence location
Table 1. Residence location by treatment group

<table>
<thead>
<tr>
<th>Place of Residence</th>
<th>Treatment Group</th>
<th></th>
<th>Total</th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Experimental</td>
<td>Control</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>N</td>
<td>%</td>
<td>N</td>
<td>%</td>
<td>N</td>
<td>%</td>
</tr>
<tr>
<td>City or town</td>
<td>42</td>
<td>13.0</td>
<td>34</td>
<td>10.6</td>
<td>76</td>
<td>23.6</td>
</tr>
<tr>
<td>Rural area, not on farm</td>
<td>23</td>
<td>7.1</td>
<td>15</td>
<td>4.7</td>
<td>38</td>
<td>11.8</td>
</tr>
<tr>
<td>On a farm</td>
<td>113</td>
<td>35.0</td>
<td>95</td>
<td>29.6</td>
<td>208</td>
<td>64.6</td>
</tr>
<tr>
<td>Total</td>
<td>178</td>
<td>55.1</td>
<td>144</td>
<td>44.9</td>
<td>322</td>
<td>100.0</td>
</tr>
</tbody>
</table>

Chi-square = .49ns

reveals that most students had agriculture production SOE programs. However, about 31 percent of the students were conducting SOE through agribusiness, working on farms, and in school laboratories. Only 11.2 percent of the students indicated they did not have SOE in vocational agriculture.

Further analysis of these data (Table 2) reveals that the two treatment groups had a similar number of students involved in the six types of SOE programs. When comparing the two treatment groups, twice as many students in the experimental group were employed on a farm other than their home farm. Similarly, a larger number of students in the experimental group utilized school facilities for obtaining experiences related to agricultural occupations. A chi-square statistic of 8.23 revealed that no significant relationship existed between treatment group and type of SOE.

Along with situational variables which may influence the student's
Figure 3. Students present type of SOE (1 = raising animals or crops; 2 = working on a farm other than home farm; 3 = working in off-farm agribusiness; 4 = working in school laboratory facilities; 5 = other types of SOE; 6 = no present SOE).

Table 2. Type of present SOE by treatment group

<table>
<thead>
<tr>
<th>Type of SOE</th>
<th>Treatment Group</th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Experimental</td>
<td>Control</td>
<td>Total</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>N</td>
<td>%</td>
<td>N</td>
<td>%</td>
<td>N</td>
</tr>
<tr>
<td>Animals and/or crops</td>
<td>98</td>
<td>30.5</td>
<td>88</td>
<td>27.3</td>
<td>186</td>
</tr>
<tr>
<td>Working on farm other than home farm</td>
<td>35</td>
<td>10.8</td>
<td>17</td>
<td>5.3</td>
<td>52</td>
</tr>
<tr>
<td>Working in off-farm agribusiness</td>
<td>13</td>
<td>4.0</td>
<td>12</td>
<td>3.8</td>
<td>25</td>
</tr>
<tr>
<td>Project using school facilities</td>
<td>9</td>
<td>2.8</td>
<td>5</td>
<td>1.5</td>
<td>14</td>
</tr>
<tr>
<td>Other</td>
<td>2</td>
<td>0.6</td>
<td>7</td>
<td>2.2</td>
<td>9</td>
</tr>
<tr>
<td>None</td>
<td>21</td>
<td>6.5</td>
<td>15</td>
<td>4.7</td>
<td>36</td>
</tr>
<tr>
<td>Total</td>
<td>178</td>
<td>55.2</td>
<td>144</td>
<td>44.8</td>
<td>322</td>
</tr>
</tbody>
</table>

Chi-square = 8.23ns
knowledge, attitude, and performance are personal characteristics. Figure 4 illustrates that more than 75 percent of the students participating in the study were sophomores. The curriculum in some schools groups students of various grade classifications into the same vocational agriculture class. Thus, 21.4 percent of the sample were freshman, junior, and senior high school students.

Figure 4. Student high school grade classification
Furthermore, data in Table 3 show that almost 12 percent of the experimental treatment group and ten percent of the control treatment group were not sophomore vocational agriculture students. A chi-square analysis revealed a highly significant relationship between treatment group and grade in school. In other words, the treatment groups were not homogeneous in terms of their high school grade classification.

Table 3. High school grade classification by treatment group

<table>
<thead>
<tr>
<th>Grade</th>
<th>Treatment Group</th>
<th>Control</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Experimental</td>
<td></td>
<td></td>
</tr>
<tr>
<td>9</td>
<td>13 4.0%</td>
<td>6 1.9%</td>
<td>19 5.9%</td>
</tr>
<tr>
<td>10</td>
<td>140 43.5%</td>
<td>113 35.1%</td>
<td>253 78.6%</td>
</tr>
<tr>
<td>11</td>
<td>24 7.5%</td>
<td>7 2.1%</td>
<td>31 9.6%</td>
</tr>
<tr>
<td>12</td>
<td>1 .3%</td>
<td>18 5.6%</td>
<td>19 5.9%</td>
</tr>
<tr>
<td>Total</td>
<td>178 55.3%</td>
<td>144 44.7%</td>
<td>322 100.0%</td>
</tr>
</tbody>
</table>

Chi-square = 26.70**

**Significant at .01.

Similarly, Table 4 shows that 238 (73.9%) of the students have been enrolled in vocational agriculture for two years. The experimental treatment group had a larger number of students with only one year of vocational agriculture; however, the number of students with more than two years of vocational agriculture was about the same for both treatment groups.
Table 4. Years of vocational agriculture by treatment group

<table>
<thead>
<tr>
<th>Years Vocational Agriculture</th>
<th>Treatment Group</th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Experimental</td>
<td>Control</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>N</td>
<td>%</td>
<td>N</td>
<td>%</td>
<td>N</td>
</tr>
<tr>
<td>1</td>
<td>37</td>
<td>11.5</td>
<td>16</td>
<td>5.0</td>
<td>53</td>
</tr>
<tr>
<td>2</td>
<td>125</td>
<td>38.8</td>
<td>113</td>
<td>35.1</td>
<td>238</td>
</tr>
<tr>
<td>3</td>
<td>15</td>
<td>4.7</td>
<td>2</td>
<td>0.6</td>
<td>17</td>
</tr>
<tr>
<td>4</td>
<td>1</td>
<td>.3</td>
<td>13</td>
<td>4.0</td>
<td>14</td>
</tr>
<tr>
<td>Total</td>
<td>178</td>
<td>55.3</td>
<td>144</td>
<td>44.7</td>
<td>322</td>
</tr>
</tbody>
</table>

Chi-square = 25.85**

**Significant at .01.

Presented in Table 5 is the number of years students have been a member of the FFA. Concurring with data in Table 4, almost 70 percent of the students had been FFA members for two years. Only 12.4 percent of all students participating in the study had never been an FFA member; 9.6 percent were from the experimental treatment group. Thus, a highly significant relationship existed between treatment group and years of FFA membership.
Table 5. Years of FFA membership by treatment group

<table>
<thead>
<tr>
<th>Years FFA Member</th>
<th>Treatment Group</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Experimental</td>
<td>Control</td>
</tr>
<tr>
<td></td>
<td>N</td>
<td>%</td>
</tr>
<tr>
<td>0</td>
<td>31</td>
<td>9.6</td>
</tr>
<tr>
<td>1</td>
<td>22</td>
<td>6.8</td>
</tr>
<tr>
<td>2</td>
<td>111</td>
<td>34.5</td>
</tr>
<tr>
<td>3</td>
<td>14</td>
<td>4.4</td>
</tr>
<tr>
<td>4</td>
<td>0</td>
<td>0.0</td>
</tr>
<tr>
<td>Total</td>
<td>178</td>
<td>55.3</td>
</tr>
</tbody>
</table>

**Chi-square = 33.46**

**Significant at .01.**

Another personal variable examined was the type of employment experience students preferred before graduating from high school. Figure 5 illustrates that almost 50 percent of the students wanted experience in production agriculture. Nineteen percent of the students wanted experience in agricultural mechanics occupations; ten percent desired employment experience in natural resources. These data indicate that half of the students were interested in obtaining employment experience in off-farm agricultural occupations.

Data in Table 6 show that students in the two treatment groups were interested in obtaining similar employment experience before high school graduation. Almost equal numbers of students in the two groups
Figure 5. Type of employment experience preferred by students before high school graduation (1 = production agriculture, 2 = agricultural mechanics, 3 = forestry, 4 = horticulture, 5 = agricultural sales and service, 6 = agricultural processing, 7 = natural resources, 8 = other agriculture, 9 = non-agriculture).
indicated a strong interest in pursuing production agriculture and agricultural mechanics occupations. Thus, a chi-square analysis revealed no significant relationship between treatment group and preferred experience before graduation.

Table 6. Preferred employment experience before graduating from high school by treatment group

<table>
<thead>
<tr>
<th>Occupational Area</th>
<th>Treatment Group</th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Experimental</td>
<td>Control</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>N</td>
<td>%</td>
<td>N</td>
<td>%</td>
<td>N</td>
</tr>
<tr>
<td>Production agriculture</td>
<td>86</td>
<td>26.7</td>
<td>74</td>
<td>23.0</td>
<td>160</td>
</tr>
<tr>
<td>Agricultural mechanics</td>
<td>33</td>
<td>10.3</td>
<td>29</td>
<td>9.0</td>
<td>62</td>
</tr>
<tr>
<td>Forestry</td>
<td>2</td>
<td>.6</td>
<td>2</td>
<td>.6</td>
<td>4</td>
</tr>
<tr>
<td>Horticulture</td>
<td>4</td>
<td>1.2</td>
<td>0</td>
<td>.0</td>
<td>4</td>
</tr>
<tr>
<td>Agricultural sales and service</td>
<td>12</td>
<td>3.7</td>
<td>7</td>
<td>2.2</td>
<td>19</td>
</tr>
<tr>
<td>Agricultural processing</td>
<td>6</td>
<td>1.9</td>
<td>6</td>
<td>1.9</td>
<td>12</td>
</tr>
<tr>
<td>Natural resources</td>
<td>23</td>
<td>7.2</td>
<td>9</td>
<td>2.8</td>
<td>32</td>
</tr>
<tr>
<td>Other agriculture</td>
<td>4</td>
<td>1.2</td>
<td>4</td>
<td>1.2</td>
<td>8</td>
</tr>
<tr>
<td>Non-agriculture</td>
<td>8</td>
<td>2.5</td>
<td>13</td>
<td>4.0</td>
<td>21</td>
</tr>
<tr>
<td>Total</td>
<td>178</td>
<td>55.3</td>
<td>144</td>
<td>44.7</td>
<td>322</td>
</tr>
</tbody>
</table>

^Chi-square = 6.91ns

^The chi-square value was computed with the occupational areas of forestry, horticulture, and other agriculture removed because of low cell frequencies.
To complete the description and analyses of students participating in the study, personal plans of students are presented in the following tables. First, the occupational plans of all students were examined. Figure 6 shows that 37 percent of the students plan to pursue production agriculture; 32 percent plan to pursue off-farm agricultural occupations, 11 percent did not anticipate taking an agricultural job; and 18 percent were undecided about their future occupational plans.

![Figure 6. Occupational plans of students after completing their formal education](image)

Figure 6. Occupational plans of students after completing their formal education
Table 7 shows that a larger number of students in the experimental treatment group planned to pursue off-farm agricultural occupations. On the other hand, 17.7 percent of the students in the control treatment group planned to enter occupations in production agriculture. Similar numbers of students in both treatment groups were still undecided about their occupational plans. Chi-square analysis revealed no significant relationship between treatment group and occupational aspirations of students.

Table 7. Occupational plans by treatment group

<table>
<thead>
<tr>
<th>Occupational Area</th>
<th>Treatment Group</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Experimental</td>
<td>Control</td>
</tr>
<tr>
<td></td>
<td>N</td>
<td>%</td>
</tr>
<tr>
<td>Production agriculture</td>
<td>65</td>
<td>20.2</td>
</tr>
<tr>
<td>Off-farm agriculture</td>
<td>68</td>
<td>21.1</td>
</tr>
<tr>
<td>Non-agriculture</td>
<td>13</td>
<td>4.0</td>
</tr>
<tr>
<td>Undecided</td>
<td>32</td>
<td>10.0</td>
</tr>
<tr>
<td>Total</td>
<td>178</td>
<td>55.30</td>
</tr>
</tbody>
</table>

Chi-square = 11.88ns

These findings differ with three earlier Iowa studies analyzing the occupational plans of students enrolled in vocational agriculture. Briers (1978) reported that 54 percent of the 372 students in his randomly selected sample planned to farm; 13.7 percent planned to enter off-farm agriculture; 21 percent planned to seek non-agricultural occupations; 11.3 percent were undecided.
In addition, Briers (1978) reported that his findings were similar to other Iowa studies by Williams (1977) and Byler and Kaas (1976). He described their findings as follows:

Williams (1977) reported that 48 percent of the 175 students in his sample planned to farm; 13 percent chose off-farm agribusiness, and 39 percent planned to seek non-agricultural occupations. Byler and Kaas (1976) reported in a study of over 600 junior and senior Iowa high school vocational agriculture students these data: 54 percent of the students planned to enter farming occupations; 18 percent off-farm agricultural occupations; and 28 percent non-agricultural occupations (Briers, 1978, p. 72).

Students were asked to indicate their plans for attending a vocational school, college, or university upon high school graduation. Table 8 reveals the two treatment groups were uniform in their responses. The chi-square value of 1.16 revealed that no significant relationship existed between the treatment group and students' educational plans.

Table 8. Plans to attend a vocational school, college, or university after high school graduation by treatment group

<table>
<thead>
<tr>
<th>Plan To Obtain Post-Secondary Education</th>
<th>Treatment Group</th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>N</td>
<td>%</td>
<td>N</td>
<td>%</td>
<td>N</td>
</tr>
<tr>
<td>Yes</td>
<td>111</td>
<td>34.5</td>
<td>99</td>
<td>30.7</td>
<td>210</td>
</tr>
<tr>
<td>No</td>
<td>67</td>
<td>20.8</td>
<td>45</td>
<td>14.0</td>
<td>112</td>
</tr>
<tr>
<td>Total</td>
<td>178</td>
<td>55.3</td>
<td>144</td>
<td>44.70</td>
<td>322</td>
</tr>
</tbody>
</table>

Chi-square = 1.16ns
In summary, the data from this study indicated the two treatment groups were homogeneous on five of the eight student variables measured. Chi-square analyses revealed significant relationships occurred between the treatment group and high school grade classification, years of vocational agriculture, and years of FFA membership. Years of vocational agriculture and FFA membership are closely associated with grade classification. Thus, random assignment of schools to the experimental and control treatment groups was effective in creating two groups similar in background and future plans.

**Teacher and school characteristics**

To describe the professional and situational characteristics of teachers participating in the study, a series of variables which may influence the teaching-learning process were collected. The following tables and discussion present an overview of these variables. Numbers and percentages are given to describe the variables; inferential techniques chi-square and t-test were used in analyzing the data.

Presented in Table 9 are professional characteristics about the teachers involved in the study. On the average, vocational agriculture teachers had taught for 9.7 years; 7.9 years in the present school district. Nineteen of the 29 teachers averaged 30 months of work experience in agribusiness occupations. T-values were computed for these variables and no significant differences were found between the two treatment groups.
Table 9. Comparison of teacher professional characteristics by treatment group

<table>
<thead>
<tr>
<th>Professional Characteristic</th>
<th>Treatment Group</th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Experimental</td>
<td>Control</td>
<td>Total</td>
<td>Test Statistic</td>
</tr>
<tr>
<td></td>
<td>Mean</td>
<td>S.D. N</td>
<td>Mean S.D. N</td>
<td>N</td>
<td></td>
</tr>
<tr>
<td>Years Taught Vo Ag</td>
<td>10.93</td>
<td>10.48 15</td>
<td>8.50 14</td>
<td></td>
<td>.68&lt;sup&gt;a&lt;/sup&gt;ns</td>
</tr>
<tr>
<td>Total</td>
<td>9.53</td>
<td>10.87 15</td>
<td>6.21 14</td>
<td></td>
<td>.95&lt;sup&gt;a&lt;/sup&gt;ns</td>
</tr>
<tr>
<td>In present school</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Months Agribusiness Experience</td>
<td>32.50</td>
<td>31.46 10</td>
<td>27.44 9</td>
<td></td>
<td>.34&lt;sup&gt;a&lt;/sup&gt;ns</td>
</tr>
<tr>
<td>Highest Degree Earned</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>.22&lt;sup&gt;b&lt;/sup&gt;ns</td>
</tr>
<tr>
<td>Bachelor of Science</td>
<td>12 80.0</td>
<td>13 92.3</td>
<td>25 86.2</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Master of Science</td>
<td>1 6.7</td>
<td>1 6.7</td>
<td>2 6.9</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Other</td>
<td>2 13.3</td>
<td>0 0.0</td>
<td>2 6.9</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>15 100.0</td>
<td>14 100.0</td>
<td>29 100.0</td>
<td></td>
<td></td>
</tr>
<tr>
<td>College Course on SOE Placement Programs</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>0.01&lt;sup&gt;c&lt;/sup&gt;ns</td>
</tr>
<tr>
<td>Yes</td>
<td>10 66.7</td>
<td>9 64.3</td>
<td>19 65.5</td>
<td></td>
<td></td>
</tr>
<tr>
<td>No</td>
<td>5 33.3</td>
<td>5 35.7</td>
<td>10 34.5</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>15 100.0</td>
<td>14 100.0</td>
<td>29 100.0</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<sup>a</sup>Value.  
<sup>b</sup>Chi-square value was computed by combining "master of science" and "other" into one category because of low cell frequencies.  
<sup>c</sup>Chi-square value.
Another professional variable examined was the highest degree earned by the teachers. Table 9 shows that over 86 percent of the teachers had earned only the bachelor of science degree. Very few teachers held the master of science or "other" degrees; therefore, these categories were combined to allow chi-square analysis to be performed. A chi-square statistic of .22 indicated no significant relationship existed between treatment group and teachers' education.

The final professional characteristic examined was whether or not teachers had received a college course about SOE placement programs. Table 9 reveals that two-thirds of the teachers in each treatment group had participated in this type of a course. Therefore, most of the teachers should have been familiar with the procedures used in conducting SOE placement programs.

The second part of the analyses of data for teacher and school characteristics, analyzed situational variables. Table 10 shows the average number of students enrolled in vocational agriculture was similar for the two treatment groups. Nine experimental schools reported an average of 26 students with SOE placement programs compared to eight for the control treatment group (see Figure 7). T-values were computed for these variables; no significant differences were found.

Table 10 also reveals that the two treatment groups were different in terms of days spent teaching sophomore students about SOE placement programs. Mean scores indicated experimental teachers normally spent nine days teaching this instructional area while control schools spent
7.5 days comparably. A t-value of .64, however, indicated there was no significant difference between the two treatment groups.

![Bar chart showing mean number of vocational agriculture students with SOE placement programs per school by treatment group](image1)

**Figure 7.** Mean number of vocational agriculture students with SOE placement programs per school by treatment group

Similarly, teachers were asked how many days they spent teaching sophomore students about SOE placement programs this year. Figure 8 illustrates experimental teachers spent an average of 14 days teaching the unit using the instructional packet provided; control teachers spent an average of eight days. The difference in means were analyzed and resulted in a t-value of 3.17. Thus, there was a highly significant difference between the experimental and control treatment groups.

![Bar chart showing number of days spent teaching sophomore students about SOE placement programs by treatment group](image2)

**Figure 8.** Number of days spent teaching sophomore students about SOE placement programs by treatment group
Table 10. Comparison of teacher situational characteristics by treatment group

<table>
<thead>
<tr>
<th>Situational Characteristic</th>
<th>Treatment Group</th>
<th></th>
<th>Test Total Statistic</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Experimental</td>
<td>Control</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Mean</td>
<td>S.D.</td>
<td>N</td>
</tr>
<tr>
<td>Number of students enrolled in vocational agriculture</td>
<td>45.40</td>
<td>22.82</td>
<td>15</td>
</tr>
<tr>
<td>Students with SOE placement programs</td>
<td>26.56</td>
<td>35.83</td>
<td>9</td>
</tr>
<tr>
<td>Number of class preparations</td>
<td>4.07</td>
<td>1.16</td>
<td>15</td>
</tr>
<tr>
<td>Days normally spent teaching SOE placement programs</td>
<td>9.00</td>
<td>5.67</td>
<td>15</td>
</tr>
<tr>
<td>Days spent teaching SOE placement programs this year</td>
<td>14.06</td>
<td>5.96</td>
<td>15</td>
</tr>
<tr>
<td>School Farm</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>4</td>
<td>26.7</td>
<td>7</td>
</tr>
<tr>
<td>No</td>
<td>11</td>
<td>73.3</td>
<td>7</td>
</tr>
<tr>
<td>School greenhouse</td>
<td></td>
<td></td>
<td>15</td>
</tr>
<tr>
<td>Yes</td>
<td>4</td>
<td>26.7</td>
<td>3</td>
</tr>
<tr>
<td>No</td>
<td>11</td>
<td>73.3</td>
<td>11</td>
</tr>
</tbody>
</table>
### Agricultural Mechanics Laboratory

<table>
<thead>
<tr>
<th></th>
<th>Yes</th>
<th>No</th>
</tr>
</thead>
<tbody>
<tr>
<td>Count</td>
<td>12</td>
<td>3</td>
</tr>
<tr>
<td>%</td>
<td>80.0</td>
<td>20.0</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th>10</th>
<th>4</th>
</tr>
</thead>
<tbody>
<tr>
<td>%</td>
<td>71.4</td>
<td>28.6</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th>22</th>
<th>7</th>
</tr>
</thead>
<tbody>
<tr>
<td>%</td>
<td>75.9</td>
<td>24.1</td>
</tr>
</tbody>
</table>

\[ t\text{-value.}\]

\[ \chi^2\text{-value.}\]

**Significant at .01.**

### Written Guidelines For SOE Placement Programs

<table>
<thead>
<tr>
<th></th>
<th>Yes</th>
<th>No</th>
</tr>
</thead>
<tbody>
<tr>
<td>Count</td>
<td>7</td>
<td>8</td>
</tr>
<tr>
<td>%</td>
<td>46.7</td>
<td>53.3</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th>10</th>
<th>4</th>
</tr>
</thead>
<tbody>
<tr>
<td>%</td>
<td>71.4</td>
<td>28.6</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th>17</th>
<th>12</th>
</tr>
</thead>
<tbody>
<tr>
<td>%</td>
<td>58.6</td>
<td>41.4</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th>15</th>
<th>14</th>
</tr>
</thead>
<tbody>
<tr>
<td>%</td>
<td>100.0</td>
<td>100.0</td>
</tr>
</tbody>
</table>

\[ t\text{-value.}\]

\[ \chi^2\text{-value.}\]

**Significant at .01.**
Variables related to the availability of various facilities for students to use in conducting SOE placement programs were studied. As reported in Table 10, only 38 percent of the teachers had access to a school farm while over 75 percent had an agricultural mechanics laboratory. Experimental teachers had slightly more accessibility to each of these facilities than did the control treatment group. The most limited facility was the school greenhouse. Only 26 percent of the experimental group and 21 percent of the control group had access to this type of facility. The two groups were similar with regard to school facilities available to vocational agriculture students.

The final situational variable examined identified the number of teachers that had established written guidelines for SOE placement programs. More of the control treatment schools (71 percent) had guidelines available while only 46 percent of the experimental schools had them established. A chi-square statistic of .95 revealed that no significant relationship existed between treatment group and teachers with written guidelines for SOE placement programs.

**Summary of analyses of student and teacher variables**

In summary, the experimental and control treatment groups were similar. Thus, the random assignment of students and teachers to control and experimental groups appeared to be successful in establishing homogeneous groups.
Teacher Evaluation of Instructional Packet

An important dimension in developing instructional materials for vocational agriculture is involving teachers in assessing the educational value of the materials. Data were collected from the 15 experimental group teachers to evaluate the quality and value of the instructional packet. The following tables and discussion summarize the data collected.

To evaluate the quality of the instructional packet, teachers responded to a seven-step semantic differential scale bound by seven bipolar adjectives. Figure 9 illustrates that the mean ratings for each subscale exceeded the midpoint. This indicated that teachers were satisfied with the quality of the instructional packet.

Further, Table 11 shows there was little variation in the mean scores for each characteristic. The standard deviations tended to increase as the mean ratings decreased. This inverse relationship resulted in a standard deviation range of .35, indicating that teacher responses were uniform.

A nine-point scale was used to collect data regarding the value of each component of the instructional packet. Table 12 shows means, standard deviations, and response ranges for each component by problem area. Components with the highest overall mean ratings were: (1) supplemental materials, (2) problem area outline, and (3) interest approach. On the other hand, learner needs statements had the lowest mean value and the highest standard deviation.
Figure 9. Teacher evaluation of the instructional packet
Table 11. Evaluation of instructional packet by experimental group teachers

<table>
<thead>
<tr>
<th>Characteristic</th>
<th>Mean</th>
<th>Standard Deviation</th>
<th>Response Range</th>
</tr>
</thead>
<tbody>
<tr>
<td>Appropriateness</td>
<td>5.80</td>
<td>1.01</td>
<td>4.00-7.00</td>
</tr>
<tr>
<td>Accuracy</td>
<td>5.80</td>
<td>.78</td>
<td>5.00-7.00</td>
</tr>
<tr>
<td>Effectiveness</td>
<td>5.33</td>
<td>.82</td>
<td>4.00-7.00</td>
</tr>
<tr>
<td>Worth</td>
<td>5.80</td>
<td>.94</td>
<td>4.00-7.00</td>
</tr>
<tr>
<td>Usefulness</td>
<td>6.33</td>
<td>.72</td>
<td>5.00-7.00</td>
</tr>
<tr>
<td>Need</td>
<td>5.13</td>
<td>1.06</td>
<td>3.00-6.00</td>
</tr>
<tr>
<td>Completeness</td>
<td>5.47</td>
<td>.99</td>
<td>4.00-7.00</td>
</tr>
</tbody>
</table>

\[N = 15.\]

These data agree with the results of a recent study by Birkenholz (1982) to evaluate the effectiveness of an agriculture/agribusiness management instructional unit. He reported the components of the instructional unit of greatest value to experimental teachers were: problem area, study questions, interest approach, learning activities, and conclusions. In addition, learner needs statements resulted in the lowest mean value and the highest standard deviation.

Overall, the experimental group teachers appeared satisfied with the instructional packet. An overall mean value of 7.29 indicated the instructional packet was valuable to the teachers. Written and oral comments received from the teachers indicated the instructional packet was: (1) convenient to use, (2) valuable in assisting students with SOE placement programs, and (3) excellent in reducing preparation time.
<table>
<thead>
<tr>
<th>Component</th>
<th>Problem Area I</th>
<th>Problem Area II</th>
<th>Problem Area III</th>
<th>Overall</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Mean</td>
<td>SD</td>
<td>Mean</td>
<td>SD</td>
</tr>
<tr>
<td>Problem area statement</td>
<td>6.73</td>
<td>1.62</td>
<td>6.73</td>
<td>1.75</td>
</tr>
<tr>
<td>Situational statement</td>
<td>6.60</td>
<td>1.80</td>
<td>6.60</td>
<td>1.72</td>
</tr>
<tr>
<td>Study questions</td>
<td>6.87</td>
<td>1.06</td>
<td>6.80</td>
<td>1.01</td>
</tr>
<tr>
<td>Learner needs</td>
<td>6.27</td>
<td>1.83</td>
<td>6.33</td>
<td>1.87</td>
</tr>
<tr>
<td>Interest approach</td>
<td>7.00</td>
<td>1.36</td>
<td>7.13</td>
<td>1.19</td>
</tr>
<tr>
<td>Learning activities</td>
<td>6.60</td>
<td>1.77</td>
<td>6.93</td>
<td>1.39</td>
</tr>
<tr>
<td>Conclusion</td>
<td>6.87</td>
<td>1.36</td>
<td>7.00</td>
<td>1.36</td>
</tr>
<tr>
<td>Evaluation criteria</td>
<td>6.67</td>
<td>1.05</td>
<td>6.67</td>
<td>.97</td>
</tr>
<tr>
<td>Optional learning activities</td>
<td>6.20</td>
<td>1.37</td>
<td>6.53</td>
<td>1.37</td>
</tr>
<tr>
<td>Problem area outline</td>
<td>7.47</td>
<td>1.51</td>
<td>7.47</td>
<td>1.55</td>
</tr>
<tr>
<td>Supplemental materials</td>
<td>7.67</td>
<td>.98</td>
<td>7.67</td>
<td>.98</td>
</tr>
<tr>
<td>Entire problem area</td>
<td>7.07</td>
<td>1.10</td>
<td>7.60</td>
<td>.74</td>
</tr>
</tbody>
</table>
Instrument Characteristics

Reliability coefficients were computed for the three instruments used to collect information on the dependent variables. In addition, item analysis of the SOE placement program knowledge inventory was done; item and factor-analytic procedures were employed to examine the SOE placement program attitude inventory. Results of these procedures are presented in the following sections.

SOE placement program knowledge inventory

Students were asked to complete a 24-item knowledge inventory and their responses were analyzed. Presented in Table 13 are summary statistics which were calculated to appraise the inventory.

Table 13. Descriptive summary of SOE placement program knowledge inventory

<table>
<thead>
<tr>
<th>Characteristic</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mean score</td>
<td>64.50</td>
</tr>
<tr>
<td>Standard error of measurement</td>
<td>.837</td>
</tr>
<tr>
<td>Reliability coefficient alpha</td>
<td>.689</td>
</tr>
<tr>
<td>Mean item difficulty</td>
<td>.645</td>
</tr>
<tr>
<td>Mean item discriminating power</td>
<td>.079</td>
</tr>
</tbody>
</table>

The 322 students participating in the study answered correctly an average of 64.5 percent of the items. The reliability coefficient of .689 was computed from data collected in the experiment. Ahmann and Glock (1959) discuss acceptable levels of reliability as follows:
There is no single minimum size a coefficient of reliability must reach. The minimum size changes with the purpose for which the test scores are to be used. Commonly listed as appropriate minimum sizes for various purposes are those reported by Kelly (1927). On the basis of a selected difference in test scores that is assumed to be a desirable minimum, he establishes, among other values, 0.50 as the minimum correlation necessary if the level of group accomplishment is to be evaluated, and 0.94 as the minimum if the level of individual accomplishment is to be evaluated (Ahmann and Glock, 1959, p. 131).

Thorndike and Hagen (1961) supported Ahmann and Glock (1959) by stating the following:

...a test with relatively low reliability will permit us to make useful studies of and draw accurate conclusions about groups, but relatively high reliability is required if we are to have precise information about individuals (Thorndike and Hagen, 1961, p. 190).

Thus, the internal consistency of the instrument was considered adequate since group measurements were utilized in this study.

The mean item difficulty statistic (which actually is shown as a mean score) was also considered reasonable. Similarly, the item discriminating power mean was .079. Individual item analyses of the SOE placement program knowledge inventory are presented in Appendix H.

**SOE placement program attitude inventory**

The measure of students' attitude toward SOE placement programs was assessed with six related concepts. A reliability coefficient for the entire instrument and each individual concept is presented in Table 14. Even though slight variations exist in the reliability coefficients for
individual concepts, the overall reliability coefficient of .948 was considered acceptable for the intended use of this instrument. Furthermore, the magnitude of this reliability coefficient was evidence that the subscales were linearly related.

To further analyze the instrument factor analysis was performed. This procedure provided statistical evidence that six distinguishable concepts were being measured by the instrument. In addition, one factor accounted for 65 percent of the total variability in the instrument.

Table 14. Summary of SOE placement program attitude inventory characteristics

<table>
<thead>
<tr>
<th>Characteristic</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mean score</td>
<td>5.65</td>
</tr>
<tr>
<td>Composite reliability coefficient alpha</td>
<td>.948</td>
</tr>
<tr>
<td>Individual concept reliability coefficient alpha</td>
<td></td>
</tr>
<tr>
<td>Awareness of agricultural occupations</td>
<td>.799</td>
</tr>
<tr>
<td>Planned employment experience</td>
<td>.864</td>
</tr>
<tr>
<td>SOE placement programs</td>
<td>.815</td>
</tr>
<tr>
<td>Procedures and regulations</td>
<td>.845</td>
</tr>
<tr>
<td>Steps in obtaining a job</td>
<td>.774</td>
</tr>
<tr>
<td>Accomplishments of a student</td>
<td>.903</td>
</tr>
<tr>
<td>Concentration of intercorrelations among subscales</td>
<td>86% were</td>
</tr>
<tr>
<td></td>
<td>between</td>
</tr>
<tr>
<td></td>
<td>.50-.70</td>
</tr>
</tbody>
</table>

Finally, the intercorrelations among the subscales of the instrument were inspected. Eighty-six percent of the intercorrelations were between .50 and .70. This indicated that the intercorrelations were
homogeneous. Furthermore, all item intercorrelations were positive which supported the procedure for summing an attitude score. Individual item analyses are presented in Appendix H.

**SOE placement program planning inventory**

To assess the degree to which students had selected and planned their individual SOE placement program, the SOE placement program planning inventory was used. It consisted of 14 questions that elicited yes or no responses from students. The average student program planning score is presented in Table 15. The internal consistency of the instrument was determined by computing a reliability coefficient alpha. The observed coefficient alpha of .711 was considered acceptable for the purpose of this instrument.

<table>
<thead>
<tr>
<th>Characteristic</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mean score</td>
<td>38.31</td>
</tr>
<tr>
<td>Reliability coefficient alpha</td>
<td>.711</td>
</tr>
</tbody>
</table>

**Summary of instrument characteristics**

The three instruments used to collect data from the students - SOE placement program knowledge inventory, SOE placement program attitude inventory, and SOE placement program planning inventory - all had reasonable levels of internal consistency as measured by the reliability
coefficient alpha. Based on these measures, the instruments were considered to be statistically acceptable.

Comparison of Treatment Groups

The fourth section of the data analyses involved testing of hypotheses. Comparisons were made between the experimental and control groups for three variables: (1) SOE placement program knowledge, (2) SOE placement program attitude, and (3) SOE placement program planning. These tests served as the primary means of evaluating the instructional packet. The hypotheses tested and the results of each are presented in the following subsections.

**Comparison of SOE placement program knowledge scores**

The hypothesis tested involving SOE placement program knowledge scores was:

$H_0^1$: There is no significant difference between the SOE placement program knowledge scores for the experimental and control treatment groups.

Presented in Table 16 are the mean values and t-value for the SOE placement program knowledge scores by treatment group. The mean score for the experimental treatment group was higher than the mean score of the control treatment group. Similarly, the experimental treatment group had a higher standard deviation than did the control treatment group. This indicated that there was a greater variation between scores in the experimental treatment group.
Table 16. T-test of SOE placement program knowledge score

<table>
<thead>
<tr>
<th>Treatment Level</th>
<th>N</th>
<th>Mean</th>
<th>S.D.</th>
<th>t-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Experimental</td>
<td>15</td>
<td>65.97</td>
<td>9.44</td>
<td>1.26ns</td>
</tr>
<tr>
<td>Control</td>
<td>14</td>
<td>61.72</td>
<td>8.77</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>29</td>
<td>64.50</td>
<td>15.01</td>
<td></td>
</tr>
</tbody>
</table>

A t-test was computed to test the statistical significance of the difference in means between treatment groups. The t-value of 1.26 indicated the means of the SOE placement program knowledge scores were not significantly different. Therefore, the data supported the null hypothesis; it was not rejected.

Comparison of SOE placement program attitude scores

The SOE placement program attitude score served as the second criterion by which the instructional packet was evaluated. The null hypothesis tested was:

\[ H_{02}: \text{There is no significant difference between the SOE placement program attitude scores for the experimental and control treatment groups.} \]

The data in Table 17 show the experimental treatment group had a higher attitude score than the control treatment group. A low standard deviation in the attitude scores of both treatment groups indicated that students responses were uniform.
Table 17. T-test of SOE placement program attitude score

<table>
<thead>
<tr>
<th>Treatment Level</th>
<th>N</th>
<th>Mean</th>
<th>S.D.</th>
<th>t-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Experimental</td>
<td>15</td>
<td>5.66</td>
<td>.361</td>
<td>.70ns</td>
</tr>
<tr>
<td>Control</td>
<td>14</td>
<td>5.56</td>
<td>.426</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>19</td>
<td>5.65</td>
<td>.771</td>
<td></td>
</tr>
</tbody>
</table>

Once again a t-test was used to test for significant difference between means. A t-value of .70 revealed no significant difference existed between the mean scores for the experimental and control treatment groups. Therefore, the null hypothesis was not rejected.

Comparison of SOE placement program planning scores

The final criterion for evaluating the instructional packet on SOE placement programs was the SOE placement program planning inventory. The null hypothesis tested was:

Ho3: There is no significant difference between the SOE placement program planning score for the experimental and control treatment groups.

The mean values for the two treatment groups are presented in Table 18. The experimental treatment group had a higher mean score than the control group. The difference in mean scores were analyzed using a t-test. A t-value of 1.29 was computed; this indicated that a significant difference did not exist between the experimental and control treatment groups at the .05 level. Thus, the null hypothesis was not rejected.
Table 18. T-test of SOE placement program planning score

<table>
<thead>
<tr>
<th>Treatment Level</th>
<th>N</th>
<th>Mean</th>
<th>S.D.</th>
<th>t-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Experimental</td>
<td>15</td>
<td>40.10</td>
<td>8.38</td>
<td>1.29ns</td>
</tr>
<tr>
<td>Control</td>
<td>14</td>
<td>34.88</td>
<td>12.84</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>29</td>
<td>38.31</td>
<td>20.80</td>
<td></td>
</tr>
</tbody>
</table>

Summary of tests of hypotheses

For each of the dependent variables used to evaluate the SOE placement instructional packet, the experimental treatment group scored higher than the control treatment group. The largest difference in mean scores between the two treatment groups occurred in the SOE placement program planning scores. The difference between the mean scores for the experimental and control treatment groups were analyzed for each dependent variable; none were statistically significant.

Comparison of Dependent Variables to Selected Independent Variables

To examine the relationship between the three dependent variables and selected student independent variables (ignoring treatment groups) the single classification analysis of variance was employed. The selected independent variables included: (1) place of residence, (2) present type of SOE program, (3) employment experience preferred before high school graduation, (4) plans to attend a vocational school, college, or university, and (5) occupational plans upon completion of formal
education. Findings of these analyses are reported in the following tables and discussion.

Presented in Table 19 are the means, standard deviations, and F-values of SOE placement program knowledge scores, SOE placement program attitude scores, and SOE placement program planning scores by location of residence. The highest knowledge score was obtained by students living on farms. Students living in a rural area but not on a farm obtained a score of 65.35, slightly less than the on-farm students. The lowest knowledge score was observed by students living in a city or town. The mean scores were tested for statistical significance and resulted in a highly significant F-value of 5.67. The Duncan post hoc test revealed the significant difference was between students living in a city or town and students living on a farm.

Students living on a farm possessed the most positive attitude towards SOE placement programs. Students living in a rural area or in a town or city had slightly lower attitude scores; however, they still possessed a positive attitude toward SOE placement programs. No significant difference existed between the attitude scores of students in the three residence locations.

Students living in a rural area, but not a farm achieved the highest SOE placement program planning score. City or town students had completed the least amount of planning for their SOE placement program as revealed in their low mean score. An F-value of 1.39 indicated the difference in mean scores was not significant at the .05 level.
Table 19. Analysis of dependent variables by location of residence

<table>
<thead>
<tr>
<th>Residence</th>
<th>Mean</th>
<th>S.D.</th>
<th>F-value</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Knowledge Score</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>In a city or town</td>
<td>59.49</td>
<td>17.72</td>
<td></td>
</tr>
<tr>
<td>In a rural area, not a farm</td>
<td>65.35</td>
<td>13.57</td>
<td>5.67**</td>
</tr>
<tr>
<td>On a farm</td>
<td>66.12</td>
<td>13.82</td>
<td></td>
</tr>
<tr>
<td><strong>Attitude Score</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>In a city or town</td>
<td>5.55</td>
<td>.91</td>
<td></td>
</tr>
<tr>
<td>In a rural area, not a farm</td>
<td>5.62</td>
<td>.81</td>
<td>.98ns</td>
</tr>
<tr>
<td>On a farm</td>
<td>5.70</td>
<td>.70</td>
<td></td>
</tr>
<tr>
<td><strong>Program Planning Score</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>In a city or town</td>
<td>36.95</td>
<td>22.34</td>
<td></td>
</tr>
<tr>
<td>In a rural area, not a farm</td>
<td>43.48</td>
<td>18.27</td>
<td>1.39ns</td>
</tr>
<tr>
<td>On a farm</td>
<td>37.86</td>
<td>20.60</td>
<td></td>
</tr>
</tbody>
</table>

**Significant at .01.

Table 20 reveals that students with production SOE programs achieved the highest knowledge scores. The data reveal that students with other types of SOE programs tended to perform similar on the SOE placement program knowledge inventory. An F-value of 3.11 (and the Duncan post hoc test) revealed a difference existed at the .01 level between students with animals and crops for SOE programs and students with on-farm placement SOE programs.

Attitude scores of students in the six types of SOE programs exhibited very little variation. A non-significant F-value indicated students attitudes towards SOE placement programs were homogeneous.
Table 20. Analysis of dependent variables by present type of SOE

<table>
<thead>
<tr>
<th>Present Type of SOE</th>
<th>Mean</th>
<th>S.D.</th>
<th>F-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Knowledge Score</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Raising animals or crops</td>
<td>67.09</td>
<td>13.80</td>
<td></td>
</tr>
<tr>
<td>Working on a farm, not home farm</td>
<td>59.05</td>
<td>14.45</td>
<td></td>
</tr>
<tr>
<td>Working in off-farm agribusiness</td>
<td>62.17</td>
<td>17.26</td>
<td>3.11**</td>
</tr>
<tr>
<td>Working with school facilities</td>
<td>60.11</td>
<td>16.64</td>
<td></td>
</tr>
<tr>
<td>Other</td>
<td>61.11</td>
<td>11.79</td>
<td></td>
</tr>
<tr>
<td>None</td>
<td>62.47</td>
<td>17.94</td>
<td></td>
</tr>
<tr>
<td>Attitude Score</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Raising animals or crops</td>
<td>5.70</td>
<td>.73</td>
<td></td>
</tr>
<tr>
<td>Working on a farm, not home farm</td>
<td>5.52</td>
<td>.83</td>
<td></td>
</tr>
<tr>
<td>Working in off-farm agribusiness</td>
<td>5.64</td>
<td>.90</td>
<td>.61ns</td>
</tr>
<tr>
<td>Working with school facilities</td>
<td>5.59</td>
<td>.91</td>
<td></td>
</tr>
<tr>
<td>Other</td>
<td>5.76</td>
<td>.64</td>
<td></td>
</tr>
<tr>
<td>None</td>
<td>5.65</td>
<td>.73</td>
<td></td>
</tr>
<tr>
<td>Program Planning Score</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Raising animals or crops</td>
<td>37.46</td>
<td>20.07</td>
<td></td>
</tr>
<tr>
<td>Working on a farm, not home farm</td>
<td>40.75</td>
<td>22.50</td>
<td></td>
</tr>
<tr>
<td>Working in off-farm agribusiness</td>
<td>47.78</td>
<td>24.86</td>
<td></td>
</tr>
<tr>
<td>Working with school facilities</td>
<td>44.33</td>
<td>19.78</td>
<td>2.45*</td>
</tr>
<tr>
<td>Other</td>
<td>35.28</td>
<td>18.57</td>
<td></td>
</tr>
<tr>
<td>None</td>
<td>31.00</td>
<td>17.39</td>
<td></td>
</tr>
</tbody>
</table>

*Significant at .05.
**Significant at .01.
regardless of their present type SOE program. Students working in an off-farm agribusiness achieved the highest program planning score. Analysis of variance and Duncan post hoc procedures revealed a significant difference between planning scores for students working in an off-farm agribusiness and students with no SOE program.

Data in Table 21 show that students desiring employment experience in "other agriculture" yielded the highest average knowledge score. Even though the nine mean scores exhibit some variability, the largest difference in scores involved students interested in "forestry" and "other agriculture." No statistical significance was found.

The only significant difference found concerning student attitude toward SOE placement programs was between students wanting employment experience in production agriculture and students desiring employment experience in agricultural processing. Students interested in the other occupational areas yielded similar attitude scores. On the other hand, no significant difference was found in the program planning scores when students were grouped by employment experience preferred. However, students interested in the occupational areas of forestry and production agriculture achieved the highest scores for this dependent variable.

One would suspect that a students' knowledge, attitude, and program planning scores would be affected by formal education plans. Table 22 shows a highly significant difference in knowledge scores between students who planned to continue their formal education after high school
Table 21. Analysis of dependent variables by employment preference before high school graduation

<table>
<thead>
<tr>
<th>Occupational Area</th>
<th>Mean</th>
<th>S.D.</th>
<th>F-value</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Knowledge Score</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Production agriculture</td>
<td>63.85</td>
<td>14.84</td>
<td></td>
</tr>
<tr>
<td>Agricultural mechanics</td>
<td>65.59</td>
<td>16.19</td>
<td></td>
</tr>
<tr>
<td>Forestry</td>
<td>47.91</td>
<td>20.55</td>
<td></td>
</tr>
<tr>
<td>Horticulture</td>
<td>69.79</td>
<td>11.96</td>
<td></td>
</tr>
<tr>
<td>Agricultural sales and service</td>
<td>66.88</td>
<td>14.12</td>
<td>1.65ns</td>
</tr>
<tr>
<td>Agricultural processing</td>
<td>58.33</td>
<td>18.11</td>
<td></td>
</tr>
<tr>
<td>Natural resources</td>
<td>66.79</td>
<td>12.72</td>
<td></td>
</tr>
<tr>
<td>Other agriculture</td>
<td>73.95</td>
<td>6.95</td>
<td></td>
</tr>
<tr>
<td>Non-agriculture</td>
<td>62.10</td>
<td>14.48</td>
<td></td>
</tr>
<tr>
<td><strong>Attitude Score</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Production agriculture</td>
<td>5.75</td>
<td>.67</td>
<td></td>
</tr>
<tr>
<td>Agricultural mechanics</td>
<td>5.62</td>
<td>.81</td>
<td></td>
</tr>
<tr>
<td>Forestry</td>
<td>5.34</td>
<td>.58</td>
<td></td>
</tr>
<tr>
<td>Horticulture</td>
<td>5.75</td>
<td>.67</td>
<td></td>
</tr>
<tr>
<td>Agricultural sales and service</td>
<td>5.38</td>
<td>.75</td>
<td>3.73**</td>
</tr>
<tr>
<td>Agricultural processing</td>
<td>4.62</td>
<td>1.17</td>
<td></td>
</tr>
<tr>
<td>Natural resources</td>
<td>5.71</td>
<td>.64</td>
<td></td>
</tr>
<tr>
<td>Other agriculture</td>
<td>5.57</td>
<td>.81</td>
<td></td>
</tr>
<tr>
<td>Non-agriculture</td>
<td>5.75</td>
<td>.94</td>
<td></td>
</tr>
<tr>
<td><strong>Program Planning Score</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Production agriculture</td>
<td>40.06</td>
<td>20.59</td>
<td></td>
</tr>
<tr>
<td>Agricultural mechanics</td>
<td>37.95</td>
<td>22.02</td>
<td></td>
</tr>
<tr>
<td>Forestry</td>
<td>41.63</td>
<td>20.07</td>
<td></td>
</tr>
<tr>
<td>Horticulture</td>
<td>28.62</td>
<td>16.05</td>
<td></td>
</tr>
</tbody>
</table>

**Significant at .01.
Table 21. Continued

<table>
<thead>
<tr>
<th>Occupational Area</th>
<th>Mean</th>
<th>S.D.</th>
<th>F-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Agricultural sales and service</td>
<td>39.01</td>
<td>24.53</td>
<td>.644ns</td>
</tr>
<tr>
<td>Agricultural processing</td>
<td>35.33</td>
<td>23.27</td>
<td></td>
</tr>
<tr>
<td>Natural resources</td>
<td>35.96</td>
<td>19.61</td>
<td></td>
</tr>
<tr>
<td>Other agriculture</td>
<td>27.64</td>
<td>9.85</td>
<td></td>
</tr>
<tr>
<td>Non-agriculture</td>
<td>35.86</td>
<td>20.24</td>
<td></td>
</tr>
</tbody>
</table>

Graduation and those who did not. Surprisingly, these plans had very little effect upon the students attitude and program planning scores.

Table 22. Analysis of dependent variables by plans to attend a vocational school, college, or university after high school graduation

<table>
<thead>
<tr>
<th>Plan To Obtain Post-Secondary Education</th>
<th>Mean</th>
<th>S.D.</th>
<th>F-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Knowledge Score</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>66.29</td>
<td>13.58</td>
<td>9.11**</td>
</tr>
<tr>
<td>No</td>
<td>61.04</td>
<td>16.92</td>
<td></td>
</tr>
<tr>
<td>Attitude Score</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>5.69</td>
<td>.71</td>
<td>2.03ns</td>
</tr>
<tr>
<td>No</td>
<td>5.57</td>
<td>.85</td>
<td></td>
</tr>
<tr>
<td>Program Planning Score</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>38.70</td>
<td>20.44</td>
<td>.210ns</td>
</tr>
<tr>
<td>No</td>
<td>37.58</td>
<td>21.53</td>
<td></td>
</tr>
</tbody>
</table>

**Significant at .01.
The final comparison examined was the students' occupational plans with each dependent variable. Table 23 shows that students planning to pursue employment in production agriculture achieved a significantly higher knowledge score than students undecided about their occupational plans. No significant difference was observed in attitude nor program planning scores when students were grouped according to occupational plans.

Table 23. Analysis of dependent variables by occupational plans of students

<table>
<thead>
<tr>
<th>Occupational Area</th>
<th>Mean</th>
<th>S.D.</th>
<th>F-value</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Knowledge Score</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Production agriculture</td>
<td>70.31</td>
<td>12.78</td>
<td></td>
</tr>
<tr>
<td>Off-farm agriculture</td>
<td>65.79</td>
<td>15.25</td>
<td>2.11*</td>
</tr>
<tr>
<td>Non-agriculture</td>
<td>66.20</td>
<td>13.58</td>
<td></td>
</tr>
<tr>
<td>Undecided</td>
<td>58.33</td>
<td>17.13</td>
<td></td>
</tr>
<tr>
<td><strong>Attitude Score</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Production agriculture</td>
<td>5.98</td>
<td>.53</td>
<td></td>
</tr>
<tr>
<td>Off-farm agriculture</td>
<td>5.68</td>
<td>.70</td>
<td>1.61ns</td>
</tr>
<tr>
<td>Non-agriculture</td>
<td>5.60</td>
<td>.95</td>
<td></td>
</tr>
<tr>
<td>Undecided</td>
<td>5.38</td>
<td>.93</td>
<td></td>
</tr>
<tr>
<td><strong>Program Planning Score</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Production agriculture</td>
<td>39.63</td>
<td>21.11</td>
<td></td>
</tr>
<tr>
<td>Off-farm agriculture</td>
<td>39.11</td>
<td>21.10</td>
<td>.99ns</td>
</tr>
<tr>
<td>Non-agriculture</td>
<td>32.88</td>
<td>21.46</td>
<td></td>
</tr>
<tr>
<td>Undecided</td>
<td>35.25</td>
<td>21.80</td>
<td></td>
</tr>
</tbody>
</table>

*Significant at .05.
Summary of comparison between dependent and independent variables

Comparisons were made of scores for dependent variables with students grouped according to selected variables using analysis of variance and the Duncan post hoc procedures. Students living on farms achieved a significantly higher knowledge score than students living in a town or city. Students that planned to obtain post-secondary education achieved significantly higher knowledge scores than those who did not. Furthermore, students involved in raising animals or crops as their SOE programs achieved a significantly higher knowledge score than students involved with on-farm placement programs. Students interested in pursuing employment in production agriculture achieved a significantly higher knowledge score than did students undecided about their occupational plans. Attitude scores were significantly higher for students that desired employment experience in production agriculture than students desiring employment experience in agricultural processing. Students working in an off-farm agribusiness achieved a significantly higher program planning score than did students with no SOE program.

Correlational Analyses of Variables

The final step of the analyses of data collected in the study was the computation of Pearson product-moment coefficients of correlation between: (1) independent variables, (2) dependent variables, and (3) independent and dependent variables for the data obtained from the 29 schools participating in the study. Since schools were the experimental
unit in the study, school (class) means were used for all variables. Furthermore, the direction of the correlation was not hypothesized, therefore, a two tail test of statistical significance was performed.

**Relations between independent variables**

Data in Table 24 show coefficients of correlation between teacher/school independent variables. Three variables examined the professional characteristics of the teachers. They were: (1) total years of teaching vocational agriculture, (2) years of teaching vocational agriculture in present school, and (3) months of agribusiness employment. The total years of teaching and tenure in present school were highly positively correlated. However, the months of agribusiness experience teachers obtained was negatively correlated with these two variables. In other words, the longer one taught vocational agriculture, the fewer months of agribusiness experience they had obtained.

Measures of teaching load produced two statistically significant correlations. The number of class preparations was highly correlated with the years of teaching vocational agriculture as well as the number of years teachers had taught in their present school. However, a negative correlation (-.214) revealed that the more class preparations a teacher had the fewer students were involved with SOE placement programs.

The number of students involved with SOE placement programs produced several highly significant positive correlations. First,
Table 24. Coefficients of correlation between teacher/school independent variables

<table>
<thead>
<tr>
<th>Variable</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total years taught vo ag</td>
<td>1.000</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Years taught vo ag present school</td>
<td>.962**</td>
<td>1.000</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Number of students in vo ag</td>
<td>.266</td>
<td>.281</td>
<td>1.000</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Number of students with SOE placement programs</td>
<td>.313</td>
<td>.348</td>
<td>.631**</td>
<td>1.000</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Number of class preparations</td>
<td>.397*</td>
<td>.403*</td>
<td>-.065</td>
<td>-.214</td>
<td>1.000</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Months of agri-business experience</td>
<td>-.204</td>
<td>-.197</td>
<td>.081</td>
<td>.117</td>
<td>-.375*</td>
<td>1.000</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Normal number of days of SOE placement instruction in Vo Ag II</td>
<td>.175</td>
<td>.229</td>
<td>.259</td>
<td>.682**</td>
<td>-.232</td>
<td>.427*</td>
<td>1.000</td>
<td></td>
</tr>
<tr>
<td>Number of days of SOE placement instruction this year in Vo Ag II</td>
<td>.066</td>
<td>.086</td>
<td>.202</td>
<td>.561**</td>
<td>-.356*</td>
<td>.071</td>
<td>.397*</td>
<td>1.000</td>
</tr>
</tbody>
</table>

*Significant at .05.  
**Significant at .01.
Table 24 shows that the larger the enrollment in vocational agriculture, the more students there would be involved with SOE placement programs. Secondly, the number of days normally spent teaching sophomores about SOE placement programs had a significant positive relationship (.682) with the number of students involved in these programs. Similarly, the number of days spent this year teaching sophomores about SOE placement programs had a significant positive relationship (.561) with the number of students involved in SOE placement programs. Therefore, one way vocational agriculture teachers can influence students to participate in SOE placement programs is by spending an adequate number of days in teaching students to develop SOE placement programs.

Relations between dependent variables

To determine relationships between dependent variables coefficients of correlation were computed. Data in Table 25 show that a positive relationship existed between the knowledge score and attitude score. The highly significant correlation (.681) indicates a tendency for students to score higher on the knowledge test as their attitude toward SOE placement programs increased; or inversely, for students' attitudes toward SOE placement programs to increase as their knowledge of SOE placement programs increased.

A correlation coefficient of -.036 was computed between the knowledge score and program planning score. This indicated that a negative relationship existed between the two variables. Thus, as students
Table 25. Coefficients of correlation between dependent variables

<table>
<thead>
<tr>
<th>Variable</th>
<th>Correlation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Knowledge score with attitude score</td>
<td>.681**</td>
</tr>
<tr>
<td>Knowledge score with program planning score</td>
<td>-.036</td>
</tr>
<tr>
<td>Attitude score with program planning score</td>
<td>.024</td>
</tr>
</tbody>
</table>

**Significant at .01.

increase their knowledge of SOE placement programs they have a tendency to decrease their program planning score. As students learn more about SOE placement programs they may recognize to a greater extent the need for specific planning steps.

The relationship between the SOE placement program attitude score and the SOE placement program planning score was positive, but weak. This relationship was depicted by a correlation coefficient of .024. Therefore, there was a slight tendency for students to achieve a higher program planning score as their attitude toward SOE placement programs increased.

Relations between independent and dependent variables

The final step in the correlational analyses of these data was to compute the relationships between the teacher/school independent variables and the dependent variables. The coefficients of correlation reported in Table 26 disregards any treatment effect. Five of the correlations between the independent variables and knowledge score were positive, two were negative. However, all were weak correlations
ranging from -.147 to .271. The highest coefficients computed were between the knowledge score and: (1) number of days normally spent teaching sophomore students about SOE placement programs, and (2) number of days spent this year teaching sophomores about SOE placement programs. These positive relationships indicate the more days teachers spent teaching about SOE placement programs, the higher the students scored on the knowledge test.

Table 26. Coefficients of correlation between teacher/school independent variables and dependent variables

<table>
<thead>
<tr>
<th>Independent Variable</th>
<th>Knowledge Score</th>
<th>Attitude Score</th>
<th>Planning Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total years taught vo ag</td>
<td>-.024</td>
<td>.124</td>
<td>-.099</td>
</tr>
<tr>
<td>Years taught vo ag present school</td>
<td>-.018</td>
<td>.110</td>
<td>-.078</td>
</tr>
<tr>
<td>Number of students in vo ag</td>
<td>.163</td>
<td>.352</td>
<td>.013</td>
</tr>
<tr>
<td>Number of students with SOE placement programs</td>
<td>.146</td>
<td>.263</td>
<td>.146</td>
</tr>
<tr>
<td>Number of class preparations</td>
<td>.098</td>
<td>.026</td>
<td>-.095</td>
</tr>
<tr>
<td>Months of agribusiness experience</td>
<td>-.147</td>
<td>.072</td>
<td>.091</td>
</tr>
<tr>
<td>Normal number of days of SOE placement instruction in Vo Ag II</td>
<td>.219</td>
<td>.372*</td>
<td>.209</td>
</tr>
<tr>
<td>Number of days of SOE placement instruction this year in Vo Ag II</td>
<td>.271</td>
<td>.146</td>
<td>.226</td>
</tr>
</tbody>
</table>

*Significant at .05.
Comparison of the SOE placement program attitude score with teacher/school variables produced one significant, but relatively weak correlation. As the days of instruction about SOE placement programs normally provided increased, the students attitude scores tended to increase. The correlations between the teacher/school variables and attitude score were all positive, but relatively weak.

Five of the correlations between teacher/school independent variables and the SOE placement program planning scores were positive. The correlations between program planning score and: (1) total years taught vocational agriculture, (2) years taught vocational agriculture in present school, and (3) number of class preparations were negative; however not significant. Again, the correlation coefficients were relatively low.

Summary of correlational analyses

Coefficients of correlation were computed between variables in the study. The matrix of correlation coefficients showed that a few significant relationships existed. These relationships indicated: (1) as years of teaching vocational agriculture increases, experience working in agribusiness decreases; (2) the more class preparations a teacher has, the fewer number of students they will have involved with SOE placement programs; and (3) as the student enrollment in vocational agriculture increases, so does the number of students with SOE placement programs.
Dependent variables, knowledge score and attitude score, were highly intercorrelated. Coefficients of correlation between the independent/dependent variables were generally positive. A significant relationship was found between the normal number of days spent teaching sophomore students about SOE placement programs and student attitude toward SOE placement programs.
Supervised occupational experience (SOE) placement programs are an effective method of preparing students for agricultural occupations. The importance of providing students with classroom instruction on the procedures followed in conducting these programs has been established through research. In addition, research has identified content that should be included in the vocational agriculture curriculum when SOE placement programs are used as a teaching-learning method. An instructional packet on preparing students for SOE placement programs was developed to assist vocational agriculture teachers in working with students to select and plan SOE placement programs.

This study was designed to: (1) identify personal and situational characteristics of sophomore vocational agriculture students in selected schools in central Iowa; (2) identify professional and situational characteristics of vocational agriculture teachers in selected schools in central Iowa; (3) determine the effectiveness of the instructional packet in preparing students to select and plan SOE placement programs; (4) determine if relationships exists between selected student variables and student knowledge of SOE placement programs, student attitude toward SOE placement programs, and student planning of SOE placement programs; (5) determine relationships among selected teacher/school characteristics
and scores on a SOE placement program knowledge inventory, a SOE placement program attitude inventory, and a SOE placement program planning inventory.

Sophomore vocational agriculture classes in the North Central and South Central Vocational Agriculture/FFA Districts in Iowa during the 1982-83 school year served as the population for this research. A random sample of 40 schools (classes) were selected to participate in the study. Twenty schools were then randomly assigned to the experimental treatment group and 20 schools to the control treatment group. Twenty-nine of the schools completed the experiment and furnished data to report the results; usable data were collected from the 15 experimental treatment schools and the 14 control treatment schools. The remaining 11 schools could not participate in the experiment because of scheduling problems.

The research procedure was experimental with a posttest control group design. The independent variable that was manipulated by the researcher was the degree to which teachers had access to the instructional packet on SOE placement programs. Two levels of the experimental variable were used: (1) The experimental treatment group was provided the instructional packet. (2) The control treatment group was provided with a list of problem areas, study questions, suggested references, and learner needs outlined in the instructional packet; they were also provided a reference explaining legal regulations pertaining to SOE placement programs. These teachers were instructed to use materials and
methods they would ordinarily use to teach their sophomore students about SOE placement programs. The experimental and control treatment groups were closely monitored during the experiment through on-site visitations and telephone conversations.

Six instruments were developed to collect the research data: (1) a questionnaire to elicit personal and situational data from students; (2) a questionnaire to elicit professional and situational data from vocational agriculture teachers; (3) an inventory to measure student knowledge of SOE placement programs; (4) an inventory to measure student attitude towards SOE placement programs; (5) an inventory to measure the degree to which students had selected and planned their individual SOE placement program; and (6) an instrument to assess teacher ratings of the instructional packet.

Data collected were analyzed to: (1) determine if significant relationships existed between student personal and situational characteristics and treatment group; (2) determine if significant differences existed for professional and situational characteristics of teachers between the two treatment groups; (3) determine if significant differences existed for scores on the SOE placement program knowledge inventory, SOE placement program attitude inventory, and SOE placement program planning inventory between the experimental and control treatment groups; (4) determine if relationships existed between scores on the dependent variables and the students location of residence, present type of SOE program, desired employment experience before high school
graduation, plans to attend a vocational school, college, or university, and occupational plans upon completion of their formal education; and (5) determine if significant relationships existed between teacher/school characteristics and scores on the dependent variables.

Conclusions

Based on the findings from the sample, the following conclusions concerning sophomore vocational agriculture classes in the North Central and South Central Vocational Agriculture/FFA Districts in Iowa were drawn. Conclusions are grouped in five sections by the objectives of the study.

1. Inferential analysis indicated that students in the two treatment groups were similar in regards to background and future plans. Over 60 percent of the students enrolled in the sophomore vocational agriculture class lived on a farm, 23 percent lived in town, and 11 percent lived in a rural area. Similarly, 57 percent of the students had production SOE programs while 16 percent worked on a farm other than the home farm. Almost 50 percent of the students wanted to obtain employment experience in a production agriculture occupation before graduating from high school. Almost 50 percent of the students wanted to obtain employment experience in a production agriculture occupation before graduating from high school. Almost 50 percent of the students wanted to obtain employment experience in a production agriculture occupation before graduating from high school. Sixty-five percent of the students planned to continue their formal education after graduating from high school. Thirty-seven percent planned to enter production agriculture, and 32 percent planned to pursue off-farm agricultural
occupations. These findings differ from earlier research studies and indicate that a larger number of sophomore vocational agriculture students are interested in obtaining employment experience in agricultural occupations.

2. Vocational agriculture teachers in the two treatment groups were similar in regards to professional and situational variables. On the average, teachers had 9.75 years of teaching experience of which 7.9 years had been in their present position, and 30 months of work experience in an off-farm agribusiness since high school graduation. Teachers had an average of 4.2 class preparations per day, 43 students enrolled in vocational agriculture, and 16.5 students with SOE placement programs. These findings indicate random selection of teachers from the accessible population. Earlier research investigations have revealed that the average tenure for vocational agriculture teachers is nine years; similarly, teachers average 4.3 class preparations per day.

Experimental treatment group teachers appeared satisfied with the quality and value of the instructional packet. Teachers indicated the most valued components were the supplemental materials, problem area outlines, and interest approaches. Furthermore, they commented that the packet was easy to use, valuable in assisting students with SOE placement programs, and effective in reducing teacher preparation time. As a result,
experimental group teachers spent significantly more days teaching sophomore vocational agriculture students about SOE placement programs. This indicates the instructional packet was valuable to vocational agriculture teachers in preparing students for SOE placement programs.

3. There was no significant difference in SOE placement program knowledge scores, SOE placement program attitude scores, nor SOE placement program planning scores between the experimental and control treatment groups.

Individual analysis of the three dependent variable data gathering instruments revealed acceptable coefficients of reliability. Other analytic procedures provided evidence that the instruments were statistically acceptable.

Based on the assumptions, procedures, and sample utilized in the study, the instructional packet was not found to be any more effective in preparing sophomore vocational agriculture students for SOE placement programs than the procedures used by the control group teachers. Perhaps this resulted from providing the control group teachers with materials related to the instructional packet in order to design the experiment. In addition, the duration of time between the treatment and the posttest measurements could have been lengthened to allow time for expected outcomes (dependent variables) to be observed in the students.
4. Significantly higher knowledge scores were achieved by students living on a farm than by those living in a city or town, students with production SOE programs than those with on-farm placement SOE programs, students with occupational aspirations in production agriculture than those undecided about their occupational plans, students that planned to continue their formal education than by those who did not. Students desiring employment experience in production agriculture possessed a more positive attitude toward SOE placement programs than students interested in agricultural processing. Students with off-farm SOE placement programs achieved significantly higher program planning scores than students with no SOE program. These findings indicate that students engaged in production agriculture were more knowledgeable and possessed a more positive attitude about SOE placement programs than other students. In addition, students with a production agriculture background appeared to be more interested in pursuing SOE placement programs.

5. There was a highly significant relationship between the number of students enrolled in vocational agriculture and the number of students with SOE placement programs. Similarly, a significant positive correlation existed between the number of days normally spent teaching sophomore students about SOE placement programs and the attitude score.
The SOE placement program knowledge score was highly correlated with the SOE placement attitude score. These findings indicate a tendency for students to score higher on the knowledge test as their attitude toward SOE placement programs increased; or inversely, for students' attitudes toward SOE placement programs to increase as their knowledge of SOE placement programs increased. Both SOE placement program knowledge score and the SOE placement program attitude score were weakly correlated with the SOE placement program planning score.

Recommendations

The findings of this research identified characteristics of sophomore vocational agriculture students and their teachers, analyzed teacher evaluations of the instructional packet, determined differences between experimental and control treatment groups, determined differences between the dependent variables and selected independent variables, and revealed relationships among selected variables. The following recommendations, based on these findings, should be given consideration by those responsible for the administration, supervision, and operation of vocational agriculture programs.

1. Teacher educators and state supervisors of Agricultural Education should emphasize to teachers the importance of utilizing various types of SOE programs to meet the needs of all vocational agriculture students.
2. Teachers should provide all vocational agriculture students instruction about SOE placement programs. Furthermore, they should encourage junior and senior vocational agriculture students with occupational objectives related to agribusiness to select, plan, and implement SOE placement programs.

3. Teachers should spend an adequate number of days teaching students about SOE placement programs so that students are familiar with the procedures used in conducting these programs.

4. Vocational agriculture teachers should be provided opportunities to obtain employment experience in agribusiness occupations.

5. Vocational agriculture teachers should establish written guidelines for students with SOE placement programs.

6. The SOE placement program attitude inventory and SOE placement program planning inventory could serve as a reliable measure of student attitude and planning of SOE placement programs. However, the SOE placement knowledge inventory should be lengthened in an attempt to increase its overall reliability.

7. In-service education should be provided to teachers concerning the use of the SOE placement program instructional packet. Similarly, prospective teachers should be introduced to the instructional packet during their preservice education.

8. Future instructional materials should be developed using the problem solving approach.
Recommendations for further research

1. A follow-up study of these students to determine long term effects of the SOE placement program instructional packet on their involvement in SOE placement programs should be conducted.

2. The three instruments used to measure the dependent variables should be further analyzed.

3. Experimental investigations of concepts, procedures, and materials in vocational agriculture should be conducted whenever feasible. These investigations should be personally monitored by the researcher to insure that treatment is being administered.
REFERENCES


Bigo, Charles H. 1979. Entry level competency needs of the Utah feed, seed, and grain as perceived by vocational agriculture educators and industry. M.S. Thesis. Library, Utah State University, Logan, Utah.


Byler, Bennie L. 1975. Analysis of Factors Related to the Educational Plans of Iowa Vocational Agriculture Students. Agricultural Education Department, Iowa State University, Ames, Iowa.


Byler, Bennie L. and Duane Kaas. 1976. A Study of Factors Associated With the Occupational Plans of Iowa Vocational Agriculture Students. Agricultural Education Department, Iowa State University, Ames, Iowa.


Center for Research and Leadership Development in Vocational and Technical Education. 1965. Summary of Research Findings of Off-Farm Agricultural Occupations. The Ohio State University, Columbus, Ohio.


Horner, James T., Roland L. Peterson, and Leo M. Harvill. 1969. An Experimental Evaluation of Approaches to Preparing High School Students for Agricultural Occupations Other Than Farming and Principles Versus Traditional Approach to Teaching Vocational Agriculture. Department of Agricultural Education, University of Nebraska, Lincoln, Nebraska.


Kahler, Alan A. 1974. Organizational and Instructional Problems of Beginning Teachers of Vocational Agriculture. Agricultural Education Department, Iowa State University, Ames, Iowa.


Lindsey, Sarah J. 1978. Supervised occupational experiences in production agriculture for students with limited opportunity. M.S. Thesis. Library, The Ohio State University, Columbus, Ohio.


McMillion, Martin B. 1966. A Study in Communication Between High School Teachers of Vocational Agriculture and Socio-Economically Disadvantaged Youth by the use of Semantic Differential. Staff Study. Agricultural Education Division, Vocational and Technical Education Department, University of Illinois, Urbana, Illinois.


Oen, Urban T. 1966. Procedures employed by teachers in conducting off-farm cooperative work experience programs. M.S. Thesis. Library, The Ohio State University, Columbus, Ohio.


Stevens, Glenn. 1965. Summary of Research Findings of Off-Farm Agricultural Occupations. The Center of Research and Leadership Development in Vocational and Technical Education. The Ohio State University, Columbus, Ohio.


Wallace, Harold R. 1970. Review and Synthesis of Research on Cooperative Vocational Education. Eric Clearinghouse on Vocational and Technical Education. The Ohio State University, Columbus, Ohio.


Williams, David L. 1977. A Study of Supervised Occupational Experience Programs of Iowa Vocational Agriculture Students. Agricultural Education Department, Iowa State University, Ames, Iowa.


Williams, David L. 1983b. Teachers Perceptions of Agribusiness Supervised Occupational Experience Programs in Iowa. Agricultural Education Department, Iowa State University, Ames, Iowa.

Williams, David L. 1983c. Parents Perceptions of Agribusiness Supervised Occupational Experience Programs in Iowa. Agricultural Education Department, Iowa State University, Ames, Iowa.

ACKNOWLEDGEMENTS

A successful graduate program is the result of efforts from many individuals. Realistically, one cannot begin to recognize everyone that contributes to such an endeavor. However, it is indeed appropriate to recognize individuals that had a major impact on this authors' graduate program. The author expresses gratitude to the following individuals:

Dr. David L. Williams - for his leadership, encouragement, and assistance throughout the graduate program; for chairing the graduate committee. Dr. Williams is to be commended for the skillful guidance and direction he provided.

Dr. Thomas A. Hoerner - for his valuable encouragement, cooperation, and advice throughout the graduate program; for being himself and insisting on quality performance; for going beyond the call of duty to allow the author to grow professionally.

Dr. Harold R. Crawford - for his professional council and advice; for involving the author in a variety of departmental activities and teaching him that all endeavors - personal, professional, and social - deserve one's best effort.

Dr. Victor A. Bekkum - for his assistance and cooperation throughout the graduate program; for his friendship; for serving on the graduate committee.

Dr. Anton J. Netusil - for his outstanding presentations in
statistics that enabled the author to grasp a working knowledge of these valuable tools; for his assistance in analyzing data; for serving on the graduate committee.

Dr. Rex A. Thomas - for his assistance in computational analysis.

Dee Van De Pol - for her countless hours of typing and words of encouragement throughout the graduate program; for her friendship.

To my children Eric and Jennifer for their understanding, love and never ending enthusiasm.

And especially to my wife Bonnie, for her love, encouragement, and especially her patience and understanding.
APPENDIX A: CORRESPONDENCE

<table>
<thead>
<tr>
<th>Correspondence</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Letter to Superintendents of Randomly Selected Schools</td>
<td>125</td>
</tr>
<tr>
<td>Superintendent Response Postcard</td>
<td>126</td>
</tr>
<tr>
<td>Letter to Potential Control Treatment Group Teachers</td>
<td>127</td>
</tr>
<tr>
<td>Letter to Potential Experimental Treatment Group Teachers</td>
<td>129</td>
</tr>
<tr>
<td>Teacher Response Postcard</td>
<td>131</td>
</tr>
<tr>
<td>Telephone Correspondence to Control Schools</td>
<td>132</td>
</tr>
<tr>
<td>Information Sheet for Control Schools</td>
<td>134</td>
</tr>
<tr>
<td>Telephone Correspondence for Experimental Schools</td>
<td>135</td>
</tr>
<tr>
<td>Information Sheet for Experimental Schools</td>
<td>137</td>
</tr>
<tr>
<td>Informational Letter to Control Teachers</td>
<td>138</td>
</tr>
<tr>
<td>Informational Letter to Experimental Teachers</td>
<td>140</td>
</tr>
<tr>
<td>Letter to Control Treatment Group Teachers with Directions for Posttest</td>
<td>141</td>
</tr>
<tr>
<td>Letter to Experimental Treatment Group Teachers with Directions for Posttest</td>
<td>143</td>
</tr>
</tbody>
</table>
TO: Superintendents of Randomly Selected Schools

The Agricultural Education Department at Iowa State University is initiating a study funded by the Iowa Agriculture Experiment Station to evaluate the effectiveness of instruction pertaining to preparing students for supervised occupational experience placement programs in vocational agriculture. Your school was randomly selected to participate in this study from all schools offering vocational agriculture in the North and South Central Districts of Iowa.

We ask your permission to contact your vocational agriculture instructor about participating in the study. He would be asked to make slight modifications in the instructional program, to collect data from the vocational agriculture students pertaining to selecting and planning supervised occupational experience placement programs, and to provide demographic information. With your approval we shall contact your vocational agriculture instructor. We think this study will help your vocational agriculture department as well as the others throughout Iowa.

Please use the enclosed stamped postcard to give us your response so we can plan the next step of the research project. If you have any questions, indicate on the postcard or call us at (515)294-1320 or 294-5872.

Sincerely,

John W. Slocombe
Graduate Student
Agricultural Education Dept.

David L. Williams
Professor
Agricultural Education Dept.

Enclosure: Return Postcard
Yes, you have my permission to contact our vocational agriculture instructor about participating in the project pertaining to preparing students for supervised occupational experience placement programs.

No, we do not wish to participate in this project at this particular time due to the following reason:

(Superintendent's Signature)  (Date)

(Name of School District)
September 1, 1982

TO: Vocational Agriculture Instructors in Randomly Selected Schools

The Agricultural Education Department at Iowa State University is initiating a project funded by the Iowa Agriculture Experiment Station to study student preparation for supervised occupational experience placement programs in agribusiness and on farms. Your department was randomly selected to participate in this study from all schools offering vocational agriculture in the North and South Central Districts in Iowa. Your superintendent has already given us permission to contact you about participating in this study.

We will be trying to determine the factors that contribute to the selection, planning, and starting of a SOE placement programs by sophomore vocational agriculture students.

More specifically, we ask that you meet the following criteria:

1. Teach your sophomore students a unit on preparing for SOE placement programs between October 4 and November 26, 1982. A suggested unit outline would be provided.

2. Direct students in completing evaluation forms immediately after the unit is taught.

3. Complete an evaluation form yourself. When possible, a project staff member would arrange a visit to your department while the unit is being taught.

We feel this study will help your vocational agriculture department as well as other programs throughout Iowa. Our ultimate goal is to produce a tested instructional packet on preparing students for SOE placement programs for use by teachers like yourself. Please rest assured that we are not evaluating you or your school. All data gathered will be reported in group summary form. We would, however, give you feedback on the information given by your students.
Please use the enclosed stamped postcard to give us your response so we can plan the next step of the project. If you have any questions, indicate on the postcard or call us at (515) 294-1320 or 294-5872.

Sincerely,

John Slocombe
Graduate Student
Agricultural Education Dept.

David L. Williams
Professor
Agricultural Education Dept.

JS/DLW/dv
Enclosure: Return Postcard
TO: Vocational Agriculture Instructors in Randomly Selected Schools

The Agricultural Education Department at Iowa State University is initiating a project funded by the Iowa Agriculture Experiment Station to study the effectiveness of an instructional packet developed to prepare sophomore students for SOE placement programs through planned part-time employment in agribusiness and on farms. Your department was randomly selected to participate in this study from all schools offering vocational agriculture in the North and South Central districts in Iowa. Your superintendent has already given us permission to contact you about participating in the study.

We will be trying to determine the factors that contribute to the selection, planning, and starting of SOE placement programs by sophomore vocational agriculture students.

More specifically, we ask that you meet the following criteria:

1. Teach a unit on preparing students for SOE placement programs using the instructional packet which we will provide. We would furnish the instructional materials – teaching plans, learning activities, student handout masters, transparency masters, filmstrips, etc., and ask that you teach the unit for approximately fifteen days to your sophomore students between October 4 and November 26, 1982.

2. Direct students in completing evaluation forms immediately after the unit is taught.

3. Complete an evaluation form yourself. When possible, a project staff member would arrange to visit your department while the unit is being taught.
We feel this study will help your vocational agriculture department as well as others throughout Iowa. Our ultimate goal is to produce a tested instructional packet which can be distributed to all Iowa vocational agriculture teachers. Please rest assured that we are not evaluating you or your school. All data gathered will be reported in group summary form. We would, however, give you feedback on the information given by your students.

Please use the enclosed stamped postcard to give us your response so we can plan the next step of the project. If you have any questions indicate on the postcard or call us at (515) 294-1320 or 294-5872.

Sincerely,

John Slocombe
Graduate Student
Agricultural Education Dept.

David L. Williams
Professor
Agricultural Education Dept.

Enclosure: Return Postcard
Yes, I would be willing to assist in the development of an Instructional Packet on SOE Placement Programs. I will meet the criteria presented in your letter.

No, I do not wish to participate in this project at this particular time due to the following reason:

_____________________________________________________________________________

(Teacher's Signature)  (Date)

(Name of the School District)
Control School Telephone Correspondence

(Vo Ag Instructor's Name) this is John Slocombe in agricultural education at Iowa State University. First of all, I want to thank you for returning the card expressing your willingness to participate with us in our project to study student preparation for SOE placement programs. We believe this study will be quite beneficial to your students and future students in vocational agriculture in Iowa. Consequently we are excited about it.

As we indicated in our earlier letter, we ask that you teach a normal unit on preparing students to enter a SOE placement program between October 4th and November 26, 1982. For your convenience, we will supply you with suggested study questions for three problem areas, a listing of student needs and three recommended references one week before you propose to teach the unit. You can use these materials anyway you desire.

The recommended references include the:

1. Student Handbook of the Future Farmers of America (FFA), and
2. A filmstrip and audiotape titled, "Utilizing Supervised Occupational Experience Programs," available from the IAVIM Center, 208 Davidson Hall, Iowa State University, Ames, IA.

Do you presently have both of these references in your department? An additional reference that we will supply explains legal regulations for students participating in SOE placement programs.
To enable us to mail materials on time, I need to know the dates you will be teaching your SOE placement unit. How many students do you have in your sophomore class where this unit will be taught?

Immediately after the unit is taught, we ask that you direct your students in completing evaluation forms along with yourself. To allow these materials to arrive before the end of your unit, I will contact you one week after you have started to teach your unit to determine the appropriate mailing date. Additional directions will be included with all evaluation forms you receive.

__, we are certainly looking forward to working with you on this exciting project. If you have any questions please do not hesitate to call. Thank you for your cooperation.
Information Sheet For Control School

Vo Ag Instructor:______________________________________________________

Name of School District:_______________________________________________

Phone:_______________________________________________________________

Date:______________________________________________________________

1. References available in vocational agriculture department:
   ___Yes ___No   Student Handbook of the FFA.
   ___Yes ___No   Utilizing SOE Programs - Filmstrip and audi-tape.

2. Dates the SOE Placement unit will be taught:
   ___________________ , 1982 to ___________________ , 1982
   (Beginning Date)       (Ending Date)

3. Number of students in the sophomore class where the SOE
   placement unit will be taught:________________________

4. Date posttest instruments will be administered:_______ , 1982.

5. Date to mail posttest instruments: ____________, 1982.
Experimental School Telephone Correspondence

__________, this is John Slocombe in agricultural (Vo Ag Instructor's Name) education at Iowa State University. First of all, I want to thank you for returning the card expressing your willingness to participate with us in our project to study the effectiveness of an instructional packet on selecting, planning, and starting of SOE placement programs by sophomore vocational agriculture students.

As we indicated in our earlier letter, we ask that you teach a unit on preparing students for SOE placement programs using the instructional packet which we will provide between October 4th and November 26, 1982. The instructional packet which includes: problem areas, situation statements, study questions, interest approaches, learner needs, learning activities, conclusions, and evaluation criteria, will arrive in your department one week before you plan to teach the unit. The references for the packet include the:

1. Student Handbook of the Future Farmers of America (FFA), and

2. A filmstrip and audio tape titled, "Utilizing Supervised Occupational Experience Programs," available from the IAVIM Center, 208 Davidson Hall, Iowa State University.

Do you presently have both of these references in your department? An additional reference that we will supply with the packet explains legal regulations for students participating in SOE placement programs.
To enable us to mail you the packet on time, I need to know the dates you will be teaching the SOE placement unit. How many students do you have in your sophomore class where the unit will be taught?

Immediately after the unit is taught, we ask that you direct your students in completing evaluation forms along with yourself. To allow these materials to arrive before the end of your unit, I will contact you one week after you have started to teach the unit to determine the appropriate mailing date. Additional directions will be included with all evaluation forms you receive.

, we are certainly looking forward to working with you on this exciting project. If you have any questions please do not hesitate to call. Thank you for your cooperation.
Information Sheet for Experimental Schools

Vo Ag Instructor: ________________________________

Name of School District: ________________________________

Phone: ________________________________

Date: ________________________________

1. References available in vocational agriculture department.
   __ Yes  __ No  Student Handbook of the FFA
   __ Yes  __ No  Utilizing SOE Programs - filmstrip and audiotape

2. Dates the SOE placement unit will be taught:
   ______________, 1982 to ______________, 1982
   (Beginning Date)  (Ending Date)

3. Number of students in the sophomore class where the SOE placement unit will be taught: ______________

4. Date posttest instruments will be administered: ____________, 1982

5. Date to mail posttest instruments: ______________, 1982.
DATE:

TO: Vocational Agriculture Instructor

Thank you for your willingness to participate in the project to study student preparation for supervised occupational experience (SOE) placement programs in vocational agriculture. As indicated in earlier correspondence, we ask that you teach your sophomore students a unit on preparing for SOE placement programs between October 4 and November 26, 1982. For your convenience we have enclosed study questions, learner needs, and references for three problem areas pertaining to selecting, planning, and starting SOE placement programs.

Placement for employment experiences in agricultural businesses and on farms widens the scope of SOE programs which are available to vocational agriculture students. SOE placement programs are available in many forms, including placement in agribusiness, placement on farms, and placement on a school farm, in a greenhouse or agricultural mechanics laboratory, or in a community facility.

SOE placement programs also widen the scope of the vocational agriculture curriculum, providing opportunities to meet the needs of a diverse student population and to prepare students for entrance into an array of agricultural occupations. Therefore, preparatory instruction in selecting, planning and starting SOE placement programs should be provided. A suggested unit outline is enclosed for your use in teaching the unit.

Immediately after the unit is taught, we ask that you direct your students in completing evaluation forms, and that you complete one also. Necessary evaluation forms and information will be mailed at a later date.
We are looking forward to working with you in this effort to improve student preparation for SOE placement programs. If you have any questions or concerns, call us at (515) 294-1320 or 294-5872.

Sincerely,

John W. Slocombe
Graduate Student
Agricultural Education Dept.

Dr. David L. Williams
Professor
Agricultural Education Dept.

JWS/DLWdv
Enclosure: Unit Outline
DATE:

TO: Vocational Agriculture Instructor

Thank you for your willingness to participate in the project to study the effectiveness of an instructional packet on selecting, planning and starting supervised occupational experience (SOE) placement programs by sophomore vocational agriculture students. Enclosed is the instructional packet to be used in teaching the unit, "Preparing For Supervised Occupational Experience Placement Programs," between October 4 and November 26, 1982.

Before beginning instruction in this unit, it is important to carefully review the introduction of the packet (pp. iv). We ask that you utilize the six steps listed at the bottom of this page to familiarize yourself with what you will be teaching to your sophomore vocational agriculture students. In addition, we ask that you proceed through each problem area, utilizing the learning activities provided. Learner needs are identified in several of the activities provided. These are areas where the subject matter can be applied directly to needs of the students.

Immediately after the unit is taught, we ask that you direct your students in completing evaluation forms along with yourself. Necessary evaluation forms and information will be mailed at a later date.

We sincerely appreciate your cooperation in this important effort to improve student preparation for SOE placement programs. If you have any questions or concerns, call us at (515) 294-1320 or 294-5872.

Sincerely,

John W. Slocombe
Graduate Student
Agricultural Education Dept.

Dr. David L. Williams
Professor
Agricultural Education Dept.

JWS/DLW/dv
Enclosure: Instructional packet
Once again thank you for your valuable assistance in conducting this study. As we indicated in our earlier correspondence, we ask that you collect information from your students immediately after teaching your unit on preparing for SOE placement programs. Enclosed are sufficient copies of the form to be completed by your students (yellow) and one for you the instructor (green). Please use the following directions:

DIRECTIONS:

1. Please administer the form (yellow) to your students immediately after teaching your unit. Approximately 45 minutes will be needed for the students to respond to all four parts of the form.

2. Please have your students fill in their name on the form (yellow). Inform the students that their responses will be combined with other vocational agriculture students and their identity will be strictly confidential.

3. The directions for completing all parts of the form (yellow) should be self-explanatory to the students. However, please explain the directions and example listed in PART II. Please emphasize to your students that they should respond to each question or statement on the form.

4. Please supervise your students to independently complete the form (yellow) and ensure they are doing the following:

   PART I: Reading the directions carefully and marking only one answer per question.

   PART II: Responding to each concept by placing a mark on every numbered line.

   PART III & IV: Reading the directions carefully and responding to all questions as truthfully as possible

5. Please complete the form included for you (green).
6. Collect all forms — one from each student and yours — and mail them back to us in the envelope provided.

Again thank you for your assistance in conducting this study to improve student preparation for SOE placement programs. I am looking forward to receiving the materials from you, and will provide you feedback on the information collected in the near future.

Sincerely,

John W. Slocombe
Graduate Student
Agricultural Education Dept.

David L. Williams
Professor
Agricultural Education Dept.

JWS/DLW/dv
Enclosures
DATE:

TO: Vocational Agriculture Instructor

Once again thank you for your valuable assistance in conducting this study. As we indicated in earlier correspondence, we ask that you collect information from your students immediately after teaching your unit on preparing for SOE placement programs. Enclosed are sufficient copies of the form to be completed by your students (yellow) and two for you the instructor (green and pink). Please use the following directions:

DIRECTIONS:

1. Please administer the form (yellow) to your students immediately after teaching your unit. Approximately 45 minutes will be needed for the students to respond to all four parts of the form.

2. Please have your students fill in their name on the form (yellow). Inform the students that their responses will be combined with other vocational agriculture students and their identity will be strictly confidential.

3. The directions for completing all parts of the form (yellow) should be self-explanatory to the students. However, please explain the directions and example listed in PART II. Please emphasize to your students that they should respond to each question or statement on the form.

4. Please supervise your students to independently complete the form (yellow) and ensure they are doing the following:

   PART I: Reading the directions carefully and marking only one answer per question.

   PART II: Responding to each concept by placing a mark on every numbered line.

   PART III & IV: Reading the directions carefully and responding to all questions as truthfully as possible.

5. Please complete the two forms included for you (green and pink).
6. Collect all forms — one from each student and two from you — and mail them back to us in the envelope provided.

Again thank you for your assistance in conducting this study to improve student preparation for SOE placement programs. I am looking forward to receiving the materials from you, and will provide you feedback on the information collected in the near future.

Sincerely,

John W. Slocombe
Graduate Student
Agricultural Education Dept.

David L. Williams
Professor
Agricultural Education Dept.

JWS/DLW/dv
Enclosures
APPENDIX B: SCHOOLS AND VOCATIONAL AGRICULTURE TEACHERS PARTICIPATING IN THE STUDY
Geographic Location of Schools Participating in the Study

E = Experimental
C = Control
## Schools and Vocational Agriculture Teachers Participating in the Study

### Control Treatment

<table>
<thead>
<tr>
<th>School</th>
<th>Teacher</th>
</tr>
</thead>
<tbody>
<tr>
<td>Buffalo Center-Rake</td>
<td>Dean A. Gerzema</td>
</tr>
<tr>
<td>Centerville</td>
<td>David D. Karns</td>
</tr>
<tr>
<td>Clarke</td>
<td>Leland Dolecheck</td>
</tr>
<tr>
<td>Dexfield</td>
<td>Lyle Stewart</td>
</tr>
<tr>
<td>Dows</td>
<td>Lori Walla</td>
</tr>
<tr>
<td>Garner-Hayfield</td>
<td>Robert Baumgard</td>
</tr>
<tr>
<td>Knoxville</td>
<td>Brent A. Hanna</td>
</tr>
<tr>
<td>Moulton-Udell</td>
<td>John Tippett</td>
</tr>
<tr>
<td>Nevada</td>
<td>Tom Hensley</td>
</tr>
<tr>
<td>Northeast Hamilton</td>
<td>Craig Classon</td>
</tr>
<tr>
<td>Northwood-Kensett</td>
<td>Ivan Turner</td>
</tr>
<tr>
<td>Rolfe</td>
<td>Dennis Adkisson</td>
</tr>
<tr>
<td>Stuart-Menlo</td>
<td>Daniel Wilson</td>
</tr>
<tr>
<td>Wayne</td>
<td>Robert Shelton</td>
</tr>
</tbody>
</table>

### Experimental Treatment

<table>
<thead>
<tr>
<th>School</th>
<th>Teacher</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ackley-Geneva</td>
<td>David Holm</td>
</tr>
<tr>
<td>Ankeny</td>
<td>Cherylann Neptin</td>
</tr>
<tr>
<td>CAL</td>
<td>Gary Keehn</td>
</tr>
<tr>
<td>Chariton</td>
<td>M. Leroy Corder</td>
</tr>
<tr>
<td>Corwith-Wesley</td>
<td>Thomas Elwood</td>
</tr>
<tr>
<td>Des Moines</td>
<td>Hamed M. Baig</td>
</tr>
<tr>
<td>Hampton</td>
<td>David Flint</td>
</tr>
<tr>
<td>Mingo</td>
<td>J. Robert Leonard</td>
</tr>
<tr>
<td>Pella</td>
<td>Mark Williams</td>
</tr>
<tr>
<td>Rudd-Rockford-Marble Rock</td>
<td>Leslie Ausen</td>
</tr>
</tbody>
</table>
Experimental Treatment Continued

<table>
<thead>
<tr>
<th>School</th>
<th>Teacher</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sentral</td>
<td>Marvin Carlson</td>
</tr>
<tr>
<td>Seymour</td>
<td>Carter Heitmeyer</td>
</tr>
<tr>
<td>Southeast Polk-Runnels</td>
<td>James Appleget</td>
</tr>
<tr>
<td>Twin Cedars</td>
<td>Lee Daub</td>
</tr>
<tr>
<td>Ventura</td>
<td>Gary Loos</td>
</tr>
</tbody>
</table>
APPENDIX C: INSTRUCTIONAL UNIT OUTLINE AND REFERENCE PROVIDED TO CONTROL GROUP TEACHERS
INSTRUCTIONAL UNIT OUTLINE

Title of Unit: Preparing for Supervised Occupational Experience (SOE) Placement Programs

Desired Student Outcomes: After teaching this unit, students will be able to identify and plan SOE programs that include employment on farms and in agribusiness that will enhance their learning in vocational agriculture. To accomplish this unit objective, it is recommended that three problem areas be taught. The following problem areas with study questions, references and, learner needs for each are provided:

1. Problem Area I - Identifying Opportunities for a SOE placement program.
2. Problem Area II - Planning SOE Placement Programs.
3. Problem Area III - Starting SOE Placement Programs.
PROBLEM AREA I - Identifying Opportunities for a SOE placement program.

Study Questions:
1. What is a SOE placement program? How can it help me?
2. What are the main occupational areas and jobs in agriculture?
3. What are the qualifications needed for agricultural jobs in the community?
4. How should classroom-laboratory instruction and the FFA compliment and support SOE placement programs?
5. What opportunities exist for SOE placement programs in the community?

References and Instructional Materials:
2. "Utilizing Supervised Occupational Experience Programs," filmstrip and audiotape, IAVIM, 208 Davidson Hall, Iowa State University, Ames, Iowa 50011. (Frames number 4 through 23 only.)
3. Other references identified by the teacher may be used.

Learner Needs:
1. Awareness of occupational roles.
2. Experiences to provide information about careers and/or specific occupations.
3. Participation in the planning of one's own activities.
5. Abstract thinking.
6. Adult models.
7. Receptiveness to others' points of view.
PROBLEM AREA II - Planning SOE Placement Programs

Study Questions:
1. What are the elements of an effective SOE placement program?
2. Why is employment experience in agriculture valuable?
3. What is required to be a successful student employee?
4. What are the alternatives for SOE placement programs?
5. What legal regulations pertain to SOE placement programs?

References and Instructional Materials:
3. Other references identified by the teacher may be used.

Learner Needs:
1. Awareness of tasks people perform in various jobs.
2. Experience interacting with people in the business world.
3. Awareness of difference among individuals.
PROBLEM AREA III - Starting SOE Placement Programs

Study Questions:
1. Why is student information important to an employer?
2. How is a job application made?
3. How is a job interview conducted?
4. What should a SOE placement program agreement include?
5. What should a SOE experience plan include?
6. What records are required for a SOE placement program?
7. How can student progress in a SOE placement program be determined?

References and Instructional Materials:
Teacher may use any references desired.

Learner Needs:
1. Development of human relations and communicative skills.
2. Development of abstract thinking.
Legal Regulations
Pertaining to SOE Placement Programs

The Fair Labor Standards Act (FLSA) sets wage and hour employment standards that affect most workers in the United States, including young people. The standards affecting young workers vary for different age groups and for farm and nonfarm work.

Nonfarm Work

If you are 16 or 17 years old, you may work in any occupation except those declared generally hazardous by the Secretary of Labor. The 17 Hazardous Occupations Orders deal with the following:

1. Manufacturing or storing explosives
2. Driving a motor-vehicle and being an outside helper
3. Coal mining
4. Logging and sawmilling
5. Power-driven wood-working machines
6. Exposure to radioactive substances and to ionizing radiations
7. Power-driven hoisting apparatus
8. Power-driven metal-forming, -punching, and -shearing machines
9. Mining, other than coal mining
10. Slaughtering, or meat packing, processing, or rendering
11. Power-driven bakery machines
12. Power-driven paper-products machines
13. Manufacturing brick, tile, and related products
14. Power-driven circular saws, band saws, and guillotine shears
15. Wrecking, demolition, and ship-breaking operations
16. Roofing operations
17. Excavation operations.

*In certain cases, the law provides exemptions for apprentices and student learners.

If you are 14 or 15 years old, you may work in office, clerical, and sales jobs.
You may also work in a number of jobs in retail, food-service, and gasoline-service establishments. Some examples are:

- Cashiering, price marking, and tagging (by hand or machine)
- Assembling orders, packing, and shelving
- Bagging and carrying out orders
- Kitchen work
- Cleanup work
- Car washing and polishing
- Operating gas pumps and performing other courtesy services
- Cleaning vegetables and fruits, and wrapping, sealing, labeling, weighing, pricing, and stocking goods.

But you may not work:

- During school hours
- Before 7 a.m. or after 7 p.m. (9 p.m. from June 1 through Labor Day)
- More than 18 hours during school weeks
- More than 3 hours on school days
- More than 40 hours on nonschool weeks
- More than 8 hours on nonschool days

At any age, you may:

- Deliver newspapers
- Act or perform in motion pictures or in theatrical, radio, or television productions
- Work for your parents, except in manufacturing, mining, or hazardous nonfarm jobs.

Farm Work

If you are 16 years old, you may work at any time in any farm job.
If you are 14 or 15 years old, you may work outside school hours in any farm job except those declared hazardous by the Secretary of Labor.

If you are 12 or 13 years old, you may work outside school hours in non-hazardous farm jobs with your parent’s written consent, or you may work on a farm where your parents are employed.

If you are younger than 12 years old, you may work outside school hours in nonhazardous farm jobs with your parent’s written consent on farms where the employees do not have to receive the minimum wage.

At any age, you may work in any farm job on a farm that your parents own or operate.

Minimum Wage

If you work in a job covered by the Fair Labor Standards Act, you must be paid the same minimum wage and overtime pay as older workers, unless the law says otherwise.

Age Certificates

When you apply for an employment or age certificate, be sure to take documented proof of your age, such as a birth certificate.

Civil Penalty

Employers who violate the FLSA child labor provisions or any regulation issued under them may be subject to a civil money penalty up to $1,000 for each violation.

State Child Labor Laws

State and federal child labor laws sometimes differ. In such cases, the one providing more protection or setting the higher standard applies.

For more information, contact the Wage and Hour Division office nearest you. They are listed in most phonebooks under: U.S. Government, Department of Labor, Employment Standards Administration.
APPENDIX D: A SAMPLE OF INSTRUCTIONAL MATERIALS PROVIDED TO EXPERIMENTAL GROUP TEACHERS
PROBLEM AREA II

PLANNING SOE PLACEMENT PROGRAMS

Contents

Problem and Outline.........................1
TM-1 Agricultural Occupations of Interest to Class Members.........6
INFO-2 SOE Placement Programs at _____ High School........7
ACT-3 Successful SOE Placement Programs ......................8
KEY ..............................................9
TM-4 SOE Placement Programs Require Cooperation..........10
TM-5 Personal Qualities Desired by Employers .........11
ACT-6 Developing Occupational Abilities Through SOE Placement Programs........12
ACT-7 Utilizing SOE Programs (Worksheet). ...............13
TM-8 Time for SOE Placement Program. ..................14
INFO-9 Legal Regulations Pertaining to SOE Placement Programs........15
ACT-10 Knowing the Employment Law for Young Workers...17
KEY ..............................................18
TM-11 Key Legal Regulations .........................19
TM-12 SOE is Planned Student Participation in Agricultural Occupations......20
Situation:

Students in the class where this problem area is taught have reviewed the main occupational areas in agriculture. They have identified jobs within the various occupational areas and examined the qualifications needed for jobs of special interest to them. They have studied how SOE placement programs can contribute to their learning in vocational agriculture. Class members have participated in activities to identify opportunities for SOE placement programs in the community and discussed how such programs could help prepare them for jobs in agriculture. This problem area will allow students to discover that successful SOE placement programs must be carefully planned.

Study Questions:

1. What are the elements of an effective SOE placement program?
2. Why is employment experience in agriculture valuable?
3. What is required to be a successful student employee?
4. What are the alternatives for SOE placement programs?
5. What legal regulations pertain to SOE placement programs?

References and Instructional Materials:


Learner Needs:

Many learner needs could be met as a result of instruction related to this problem area. However, the following learner needs should be emphasized through the interest approach and learning activities:

1. Awareness of tasks people perform in various jobs (Interest Approach).
2. Experience interacting with people in the business world (TM-5).
3. Awareness of difference among individuals (TM-14).

Interest Approach:

Using the jobs described on the "Agribusiness Position Available" Bulletin board (learning activity 3C in problem area I), direct a class discussion to answer the following questions:

1. What tasks do people perform in the jobs?
2. Where could a person gain experience in performing the tasks?

Use TM-1 to identify possible employing businesses for jobs of interest to class members.

Learning Activities:

1. Introduce some important characteristics of SOE placement programs by directing students to read INFO-2 and complete ACT-3. In a class discussion, review the key points of ACT-3. Answers should be similar to those on ACT-3(Key). Use TM-4 to emphasize to the class the importance of the student, the teacher, the parent(s) and the
employer in planning and conducting an effective SOE placement program.

2. Using the jobs described on the "Agribusiness Position Available" bulletin board, direct a class discussion on the qualities needed by people working in those jobs. Using TM-5, discuss the personal qualities an employer would like to see in a student-employee. In the discussion, ask "Why is the quality important to being a successful student-employee?" and "How can the quality be demonstrated at work?" Conclude by discussing the following statement: "More employees lose their jobs because of poor personal qualities than because of a lack of technical skills."

3. Using ACT-6, direct students to identify the abilities they would like to develop through SOE placement programs. In a class discussion, ask some of the students to share the abilities they identified. Discuss agricultural occupations where these abilities are needed and why they would be needed. (Emphasize to the class that the 30 abilities listed on ACT-6 were the ones most commonly developed by students in SOE agribusiness placement programs as identified through research at Iowa State University.)

4. Discuss with the class the SOE placement programs of older and former students. Describe some of the experiences students gained through their on-the-job training. Ask the class: "What are the alternative ways for you to gain employment experience?" Prepare students to view frames 33-45 (accompanying audio tape available) from the film strip entitled "Utilizing Supervised Occupational Experience Programs" by reviewing ACT-7. After showing the frames from the filmstrip,

---

discuss ACT-7. Use TM-8 in discussing possible time arrangements for SOE placement programs.

5. Inform the class that state and federal labor regulations must be followed for employment. Supervise students in the reading of INFO-9 and in completing ACT-10. After the supervised study, discuss ACT-10. Use TM-11 to emphasize the key legal regulations pertaining to student employment.

Conclusion:

Use TM-12 to illustrate that SOE placement programs provide opportunities for students to participate in agricultural occupations to gain depth and variety of experience. Discuss the statement: "SOE is planned student participation in agricultural occupations."

Evaluation:

Evaluate the outcomes of instruction in this problem area by observing each student's ability to:

1. Discuss the elements of an effective SOE placement program.
2. Explain why placement experience in agriculture is valuable.
3. List and discuss personal qualities needed to be a successful student employee.
4. Identify alternatives for SOE placement programs.
5. Name legal regulations pertaining to SOE placement programs.

Optional Learning Activities:

1. Lead a discussion that allows students to identify "good" or "bad" characteristics of employees in business firms where they do business. Discuss how each characteristic may influence the operation of the business.
CLASSROOM-LABORATORY INSTRUCTION, SOE PLACEMENT PROGRAMS, AND FFA RELATIONSHIPS

DIRECTIONS: The three headings below show the three components of vocational agriculture. Your job, now, is to fill in the blanks with activities, topics, projects, awards, etc., so that all three parts are related. As you go down the worksheet, the going gets tougher. Work independently of your classmates, and then we'll compare answers. There may be more than one correct answer and some answers may be used more than once. Stick to a SOE placement program, rather than a SOE ownership program, frame of reference. Pages 34 and 79-103 of the Student Handbook of the FFA can be used in completing the FFA portion of this worksheet.

<table>
<thead>
<tr>
<th>CLASSROOM-LABORATORY INSTRUCTION</th>
<th>SOE PLACEMENT PROGRAM</th>
<th>FFA</th>
</tr>
</thead>
<tbody>
<tr>
<td>Breeds of Swine</td>
<td>Hog Buyer</td>
<td>Ag. Sales &amp;/or Service Proficiency Award</td>
</tr>
<tr>
<td>Retail Meat Cuts</td>
<td></td>
<td>Meats Judging Contest</td>
</tr>
<tr>
<td>Soil Profiles</td>
<td>Co-op Feed Salesperson</td>
<td>Soil &amp; Water Mngt. Proficiency Award</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Public Speaking Contest</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Ag. Electrification Proficiency Award</td>
</tr>
<tr>
<td>Plant Propagation</td>
<td>Veterinarian's Asst.</td>
<td>Turf &amp; Landscape Mngt. Proficiency Award</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Carburetors</td>
<td>Floral Designer</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Horse Trainer</td>
<td></td>
</tr>
<tr>
<td>Food Quality</td>
<td></td>
<td>Ag. Processing Proficiency Award</td>
</tr>
<tr>
<td>Fence Row Management</td>
<td></td>
<td>Forest Management Proficiency Award</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Outdoor Recreation</td>
</tr>
<tr>
<td>Depreciation</td>
<td></td>
<td>Farm Business Mngt. Contest</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
SOE Placement Programs
Require Cooperation

PARENT(S)

STUDENT

EMPLOYER  TEACHER
FORMAT FOR A LETTER OF APPLICATION

(Applicant's address)
(city, state, and zip code)
(date)

(Name of potential employer)
(Title)
(Name of company)
(Address of company)
(city, state, zip code of company)

Dear ________________:

In Wednesday's edition of ________________ I noticed your advertisement for ________________ (name the job). Please consider this letter as my application for that job.

I am a sophomore at ________________ High School where I have been actively involved in vocational agriculture for the past two years. During this time I have raised pure-bred Yorkshire hogs and corn. I have learned a great deal from my experiences and enrollment in vocational agriculture. I have also been active in the local FFA chapter. Enclosed is a copy of my VITA that will provide you with more details of my background and experiences.

I would appreciate the opportunity to interview for the job. I can be reached at 455-6487 after 3:15 p.m. or by mail at the address listed above. Thank you for your time and consideration.

Sincerely,

Enclosure

Signed by applicant
APPENDIX E: MONITORING OF TREATMENT
Observations of School Visitation  
Control Schools

School name: Dexfield Community High School  
Redfield, Iowa

Vo ag teacher: Lyle Stewart

Date visited: November 4, 1982

Number of students: 9

Class activity: After class role was taken, Mr. Stewart directed the students to the high school computer room. Students utilized the three Apple III computers to run their individual career selection program.

Summary of observation:

This is the fourth day the class had been studying about SOE placement programs. Yesterday the class filled out the written portion of the CETA career selection program. Today, students appeared enthused about finding out the results of the program by using the microcomputer. Mr. Stewart summarized the various types of agricultural careers at the end of the class period.

School name: Nevada Community High School  
Nevada, Iowa

Vo ag teacher: Tom Hensley

Date visited: November 15, 1982

Number of students: 8

Class activity: Students broke up into three groups to discuss the importance of records in SOE placement programs. Approximately five minutes later, each group elected a spokesperson to write their solutions on the chalk board. Then, Mr. Hensley led the class in a discussion about appropriate records to keep when involved in a SOE placement program. He utilized several transparencies to convey his ideas, then completed the lesson by relating the importance of these records to FFA proficiency award applications.
Summary of observations:

Mr. Hensley had been following the problem area outline very closely. In fact, they were almost half-way through the three problem areas. Yesterday the class took a field trip and visited one students' production SOE program. The overall attitude of the students was good; they appeared enthusiastic about learning the importance of keeping accurate records when involved in a SOE placement program.

School name: Stuart-Menlo Community High School
Stuart, Iowa

Voc teacher: Dan Wilson

Date visited: November 4, 1982

Number of students: 15

Class activity: Students were not involved in any learning activities. Mr. Wilson led the class in a discussion about the components of a SOE placement program. He appeared to be following the study questions in problem area II of the materials provided very closely. He provided students with a copy of the handout regarding legal regulations pertaining to SOE placement programs. Then they discussed the implications of the handout to their local communities.

Summary of observations:

Overall the class appeared to be interested in learning how to establish individual SOE placement programs. Mr. Wilson received numerous questions regarding the procedures for selecting a cooperating employer. The class was very interesting.
Observations of School Visitations
Experimental Schools

School name: Ankeny Community High School
Ankeny, Iowa

Vo Ag teacher: Cherylann Neptin

Date visited: October 19, 1982

Number of students: 28

Class activity: Problem Area I - Involved all students in playing "The Job Description Squares." (student activity #9)

Summary of observations:

The classroom was set up in the format of the television show "Hollywood Squares." Mrs. Neptin possessed a very positive attitude toward the materials in the instructional packet. Students were assigned various responsibilities for conducting the game; then Mrs. Neptin split the class into groups and got the game started. Students were very enthusiastic and showed a strong interest in learning about off-farm agricultural occupations. To summarize, Mrs. Neptin handed out a copy of all the questions and related various occupations to present opportunities in Polk County.

School name: Des Moines Community High School
Des Moines, Iowa

Vo Ag teacher: Hamed Baig

Date visited: October 19, 1982

Number of students: 10

Class activity: Problem Area II

1. Discussed with students how to apply for a job and the components of a job application (Transparency #6)

2. Students completed the application for employment (Activity #5).

3. Students were assigned to read "Preparing For An Interview." (Information Sheet #7).
4. Students conducted mock interviews using the sample interview questions provided (Activity #8).

5. Students were asked to evaluate their partners interview (Activity #9).

Summary of observations:

Mr. Baig had already completed problem areas I and II. He discussed the components of a job application with the students, then asked them to complete the employment application in the packet. Several students were planning to apply for jobs in the near future so they had several questions regarding what information should be included. Mr. Baig asked the students to exchange papers and evaluate the employment applications. Overall students were fairly interested in this activity.

The students split up into pairs of two and conducted sample interviews. Following these mock interviews, they evaluated each other using the evaluation sheet provided in the instructional packet. Mr. Baig indicated the instructional packet was ideal for his situation because several students are presently applying for jobs.

School name: Southeast Polk Community High School
Runnells, Iowa

Vo Ag teacher: Jim Appleget

Date visited: October 19, 1982

Number of students: 10

Class activity: Problem Area II:

1. Discussed the components of a successful SOE placement program (Activity Sheet #3).

2. Summarized the major points using the transparency, "SOE Placement Programs Require Cooperation" (Transparency #4)

Summary of observations:

Mr. Appleget indicated he was receiving excellent student response to the instructional packet. Students displayed a very positive attitude in class when discussing the make up of a good SOE placement program. Mr. Appleget used numerous examples to help students relate to the discussion. Position announcements developed by each student (Activity in Problem Area I) were posted on the bulletin board.
Record of Telephone Conversation  
Control Schools

Name of school: Buffalo Center-Rake  
Vo ag teacher: Dean Gerzema  
Number of calls: 3  
Date of call: November 2, 1982  
Summary of conversation: Dean plans to begin teaching the unit on SOE placement programs on November 15, 1982.

Date of call: November 11, 1982  
Summary of conversation: Dean plans to finish teaching the unit by November 19, 1982. He indicated students were not real enthused about this area of SOE.

Date of call: November 28, 1982  
Summary of conversation: Dean has not received the posttest instruments. I told him I would mail out another set today.

Name of school: Centerville  
Vo ag teacher: David Karns  
Number of calls: 2  
Date of call: October 25, 1982  
Summary of conversation: David has received the materials and plans to start teaching the unit on October 27, 1982.

Date of call: November 2, 1982.  
Summary of conversation: David plans to complete the unit on November 8, 1982. I told him posttest instruments would be mailed.

Name of school: Clarke  
Vo ag teacher: Leland Dolecheck
Number of calls: 2

Date of call: October 20, 1982

Summary of conversation: Leland has been teaching the unit for three days. He indicated students were quite positive about SOE placement programs. He plans to complete the unit by November 1, 1982.

Date of call: November 5, 1982

Summary of conversation: Leland was administering the posttest instruments today. Overall he felt quite positive about the unit.

Name of school: Dexfield

Vo ag teacher: Lyle Stewart

Number of calls: 3

Date of call: October 22, 1982

Summary of conversation: Lyle began teaching the unit on October 25, 1982. He indicated the unit was hard to teach due to a lack of instructional materials in this area. He was following the outline provided and planned to spend another week on the unit. Plans were discussed for the researcher to visit his sophomore vocational agriculture class.

Date of call: October 29, 1982

Summary of conversation: Confirmed plans to visit Lyle's sophomore vocational agriculture class on November 4, 1982.

Date of Call: November 12, 1982

Summary of conversation: Lyle has completed Problem Area III and planned to administer the posttest instruments on November 15, 1982.

Name of school: Dows

Vo ag teacher: Lori Wallan
Number of calls: 2

Date of call: October 25, 1982

Summary of conversation: Lori has just started to teach the unit. We discussed the fact that she did not have to follow the outline provided. She thought she would complete the unit around November 5, 1982.

Date of call: November 17, 1982

Summary of conversation: Lori indicated she has completed the unit and plans to administer the posttest instruments on November 19, 1982.

Name of school: Garner-Hayfield

Vo ag teacher: Robert Baumgard

Number of calls: 3

Date of call: October 29, 1982

Summary of conversation: Bob has received the problem set outline and reference. He had to rearrange his teaching schedule; so he will begin teaching the unit on November 2, 1982.

Date of call: November 5, 1982

Summary of conversation: Bob began teaching the unit today; he plans to finish next Friday. Posttest instruments were mailed today.

Date of call: November 15, 1982

Summary of conversation: Bob plans to complete the posttest instruments on November 16, 1982.

Name of school: Knoxville

Vo ag teacher: Brent Hanna

Number of calls: 2

Date of call: October 25, 1982
Summary of conversation: Brent has been teaching the unit for three days. He indicated student attitudes were positive and felt he would complete the unit by November 5, 1982.

Date of call: November 4, 1982

Summary of conversation: Brent plans to administer the posttest instrument on November 10, 1982.

Name of school: Moulten-Udell

Vo ag teacher: John Tippett

Number of calls: 2

Date of call: October 18, 1982

Summary of conversation: John plans to begin teaching the unit on October 25, 1982. He indicated there were 12 students in his sophomore vocational agriculture class where the unit would be taught.

Date of call: November 1, 1982

Summary of conversation: John has taught the unit for five days. He plans to complete the unit on November 9, 1982.

Name of school: Nevada

Vo ag teacher: Tom Hensley

Number of calls: 2

Date of call: November 10, 1982

Summary of conversation: Tom has taught the unit for three days. Plans were discussed for the researcher to visit his sophomore class.

Date of call: November 19, 1982.

Summary of conversation: Tom has finished teaching the unit and mailed the posttest instruments today.
Name of school: Northeast-Hamilton

Vo ag teacher: Craig Classon

Number of calls: 3

Date of call: October 11, 1982

Summary of conversation: Craig plans to postpone teaching the unit until November 1, 1982.

Date of call: November 5, 1982

Summary of conversation: Craig will finish teaching the unit by November 11, 1982.

Date of call: November 9, 1982

Summary of conversation: Craig has not received the posttest instruments, I mailed him a second set today.

Name of school: Northwood-Kensett

Vo ag teacher: Ivan Turner

Number of calls: 2

Date of call: October 14, 1982

Summary of conversation: Ivan started teaching the unit yesterday and plans to finish it by October 21, 1982.

Date of call: October 29, 1982.

Summary of conversation: Ivan finished teaching the unit on October 27, 1982, and felt it was quite beneficial to the students. Posttest instruments were administered today and will mail them back.

Name of school: Rolfe

Vo ag teacher: Dennis Adkisson

Number of calls: 2

Date of call: October 27, 1982
Summary of conversation: Dennis has 16 students enrolled in his sophomore vocational agriculture class. He plans to complete teaching the unit by November 3, 1982.

Date of call: November 16, 1982

Summary of conversation: Dennis will administer the posttest instruments on November 17, 1982.

Name of school: Stuart-Menlo

Vo ag teacher: Dan Wilson

Number of calls: 3

Date of call: October 18, 1982

Summary of conversation: Dan has just started to teach the unit on SOE placement programs.

Date of call: October 25, 1982

Summary of conversation: We discussed plans to visit his sophomore vocational agriculture class on November 4, 1982.

Date of call: November 30, 1982

Summary of conversation: Dan has administered the posttest instruments and will mail them today.

Name of school: Wayne

Vo ag teacher: Robert Shelton

Number of calls: 2

Date of call: October 8, 1982

Summary of conversation: Bob plans to start teaching the unit on October 15, 1982.

Date of call: October 22, 1982.

Summary of conversation: Bob plans to complete the unit by October 29, 1982. He felt SOE placement programs were not appropriate for his community.
Record of Telephone Conversation
Experimental Schools

Name of school: Ackley-Geneva
Vo ag teacher: David Holm
Number of calls: 2
Date of call: October 25, 1982
Summary of conversation: Dave plans to spend two weeks teaching the packet starting on October 27, 1982.

Date of call: November 10, 1982
Summary of conversation: Dave was overwhelmed by the students' interest in SOE placement programs. He plans to mail the posttest instruments by November 12, 1982.

Name of school: Ankeny
Vo ag teacher: Cherylann Neptin
Number of calls: 2
Date of call: October 15, 1982
Summary of conversation: Cherylann started to teach the instructional packet on October 13, 1982. Plans were discussed for the researcher to visit one of her sophomore vocational agriculture classes on October 19, 1982.

Date of call: November 16, 1982
Summary of conversation: Cherylann plans to administer the posttest instruments on November 17, 1982.

Name of school: CAL
Vo ag instructor: Gary Keehn
Number of calls: 2
Date of call: November 8, 1982
Summary of conversation: Gary has been teaching the instructional packet for three days.

Date of call: November 19, 1982

Summary of conversation: Gary plans to administer the posttest instrument November 22, 1982.

Name of school: Chariton

Vo ag teacher: M. Leroy Corder

Number of calls: 2

Date of call: October 25, 1982

Summary of conversation: Leroy has reviewed the packet and plans to start teaching the unit on November 1, 1982.

Date of call: November 17, 1982

Summary of conversation: Leroy plans to finish teaching the instructional packet on November 19, 1982.

Name of school: Corwith-Wesley

Vo ag teacher: Thomas Elwood

Number of calls: 2

Date of call: November 9, 1982

Summary of conversation: Tom has started to teach the unit and anticipates completing it on November 26, 1982.

Date of call: November 26, 1982

Summary of conversation: Tom plans to mail the completed posttest instruments today.

Name of school: Des Moines

Vo ag teacher: Hamed Baig

Number of calls: 2

Date of call: October 11, 1982
Summary of conversation: Hamed started teaching the packet on October 4, 1982. Plans were discussed for the researcher to visit his sophomore vocational agriculture class on October 19, 1982.

Date of call: October 25, 1982

Summary of conversation: Hamed administered the posttest instruments on October 22, 1982.

Name of school: Hampton

Vo ag teacher: David Flint

Number of calls: 2

Date of call: November 8, 1982

Summary of conversation: Dave started to teach the instructional packet on November 4, 1982 and plans to finish on November 19, 1982.

Date of call: November 29, 1982

Summary of conversation: Dave felt the instructional packet was very effective and quite convenient to use. He administered the posttest instruments on November 24, 1982 and mailed them today.

Name of school: Mingo

Vo ag teacher: J. Robert Leonard

Number of calls: 2

Date of call: October 12, 1982

Summary of conversation: Bob was pleased with the instructional packet. He has completed Problem Area I.

Date of call: November 5, 1982

Summary of conversation: Bob mailed the completed posttest instruments on November 4, 1982.
Name of school: Pella
Vo ag teacher: Mark Williams
Number of calls: 3
Date of call: November 5, 1982
Summary of conversation: Mark plans to start teaching the instructional packet around November 15, 1982.

Date of call: November 18, 1982
Summary of conversation: Mark has not started teaching the instructional packet but plans to begin on November 22, 1982.

Date of call: November 30, 1982
Summary of conversation: Mark will finish teaching the instructional packet on December 3, 1982. He felt the instructional packet was very effective in motivating students about SOE placement programs.

Name of school: Rudd-Rockford-Marble Rock
Vo ag teacher: Leslie Ausen
Number of calls: 2
Date of call: October 28, 1982
Summary of conversation: Les started to teach the instructional packet today.

Date of call: November 12, 1982
Summary of conversation: Les has completed Problem Areas I and II and plans to finish teaching the unit by November 19, 1982.

Name of school: Sentral
Vo ag teacher: Marvin Carlson
Number of calls: 2
Date of call: October 11, 1982
Summary of conversation: Marvin is teaching Problem Area II and plans finish the unit by October 19, 1982.

Date of call: October 25, 1982
Summary of conversation: Marvin administered the posttest instruments on October 22, 1982. He felt the instructional packet greatly reduced preparation time.

Name of school: Seymour
Vo ag teacher: Carter Heitmeyer
Number of calls: 2

Date of call: November 1, 1982
Summary of conversation: Carter started to teach the instructional packet on October 29, 1982 and plans to finish by November 11, 1982.

Date of call: November 16, 1982
Summary of conversation: Carter administered the posttest instruments on November 15, 1982. He lost the instructional packet evaluation instrument so I mailed him a second one.

Name of school: Southeast Polk - Runnels
Vo ag teacher: James Appleget
Number of calls: 2

Date of call: October 11, 1982
Summary of conversation: Jim completed Problem Area II today. Plans were discussed for the researcher to visit his sophomore vocational agriculture class on October 19, 1982.

Date of call: November 5, 1982
Summary of conversation: Jim has not finished teaching the instructional packet, however has received the posttest instruments.
Name of school: Twin Cedars
Vo ag teacher: Lee Daub
Number of calls: 2
Date of call: October 11, 1982
Summary of conversation: Lee started teaching the instructional packet on October 7, 1982.

Date of call: October 25, 1982
Summary of conversation: Lee administered the posttest instruments on October 24, 1982. He felt the instructional packet was necessary for all vocational agriculture teachers in Iowa.

Name of school: Vinton
Vo ag teacher: Gary Loos
Number of calls: 2
Date of call: October 18, 1982
Summary of conversation: Gary started to teach Problem Area II today.
Date of call: November 16, 1982
Summary of conversation: Gary mailed the posttest instruments today. He felt Problem Area I was repetitive from the production SOE packet.
APPENDIX F: INSTRUMENTS FOR DATA COLLECTION

Preparing for Supervised Occupational Experience Placement 183
Teacher/School Demographic Data 189
Preparing for Supervised Occupational Experience Placement Programs - Instructional Packet Evaluation 190
PREPARING FOR SUPERVISED OCCUPATIONAL EXPERIENCE PLACEMENT

Please complete each of the following four parts

PART I

Directions: The following multiple choice questions are related to selecting, planning, and starting supervised occupational experience (SOE) placement programs. Read each item carefully and mark with an "x" the best answer. Please mark only one answer per question.

1. SOE placement programs benefit:
   - (1) the vo ag department and local businesses.
   - (2) the local, state, and national FFA.
   - (3) you - the student, the school curriculum, and the community.
   - (4) livestock, crops, and agricultural machinery.

2. After a student interviews for a SOE placement job, the student should:
   - (1) discuss the interview with employees of the business.
   - (2) telephone the employer the next day to check on the job.
   - (3) write a follow-up letter to the employer.
   - (4) wait to be contacted by the employer.

3. Accurate records of your SOE placement program allows:
   - (1) your teacher to assign a grade.
   - (2) your employer to analyze your experiences.
   - (3) your employer and teacher to evaluate your progress.
   - (4) you to apply for FFA degrees and awards.

4. The best way people learn to perform tasks and jobs is by:
   - (1) listening to someone explain how to do them.
   - (2) watching and observing someone doing them.
   - (3) doing them and working with someone who knows.
   - (4) reading books and attempting to perform them.

5. When applying for a job employers obtain information about you primarily from:
   - (1) your high school records.
   - (2) a job application and an interview.
   - (3) your former employer(s).
   - (4) your personal references.

6. Which of the following is most important in developing a SOE placement program?
   - (1) agribusiness people where you are employed.
   - (2) experience plan for the job.
   - (3) your parents.
   - (4) vocational agriculture class.

7. When applying for a job, the first step is to:
   - (1) ask the employer for an interview.
   - (2) telephone the employer to give your qualifications.
   - (3) submit a letter of application.
   - (4) discuss the job with employees of the business.

8. Assistance in planning your SOE placement program should come mainly from:
   - (1) your teacher, parents, and employer.
   - (2) your teacher and parents.
   - (3) your fellow FFA members, officers, and committee chairman.
   - (4) your teacher, employer, and guidance counselor.

9. Legal regulations pertaining to SOE placement programs are established by:
   - (1) the U.S. and State Departments of Labor.
   - (2) your employer and vocational agriculture teacher.
   - (3) the Internal Revenue Service.
   - (4) the Occupational Safety and Health Act (OSHA).

10. The purpose of your SOE placement experience plan is to:
    - (1) list your past accomplishments in school and on-the-job.
    - (2) allow FFA activities and on-the-job experiences to be coordinated.
    - (3) meet the requirements of the Internal Revenue Service.
    - (4) identify experiences to be obtained on-the-job.

11. Which of the following is NOT a recommended practice to use during an interview?
    - (1) expressing your interest and enthusiasm about the job.
    - (2) expressing your qualifications for the job.
    - (3) controlling the conversation during the interview.
    - (4) greeting the interviewer with a firm handshake.

Turn the page and continue
12. Waiting on customers in a feed store would be an experience in an:
   (1) agricultural products occupation.
   (2) agricultural mechanics occupation.
   (3) agricultural production occupation.
   (4) agricultural supplies and service occupation.

13. To repair gasoline and diesel engines are qualifications for a:
   (1) tractor set-up mechanic.
   (2) agricultural machinery dealer.
   (3) agricultural machinery parts person.
   (4) tractor mechanic.

14. Your performance in a SOE placement program should be evaluated by:
   (1) your teacher, employer, and school principal.
   (2) the student, teacher, and employer.
   (3) your parents and the vocational agriculture teacher.
   (4) your teacher, guidance counselor, and employer.

15. Work as an apprentice electrician would qualify a student to apply for a FFA proficiency award in:
   (1) agricultural electrification.
   (2) agricultural mechanics.
   (3) agricultural supplies and services.
   (4) home and farmstead improvement.

16. Important factors to consider in selecting a SOE placement program are:
   (1) your interests, your experiences, and existing opportunities.
   (2) FFA degree requirements, proficiency awards, and judging contests.
   (3) your interests, amount of wages, and job opportunities.
   (4) the desires of your parents, teachers, and employer.

17. The goals you have for a SOE placement program should be written:
   (1) in your vocational agriculture classnotes.
   (2) on the job application you prepared.
   (3) on your employment agreement.
   (4) in your Agricultural Experience Program Record.

18. Which of the following should students accomplish through SOE placement programs?
   (1) develop occupational skills
   (2) acquire a knowledge of agricultural occupations
   (3) develop positive work habits
   (4) all of the above

19. Important people involved in supervising your SOE placement program are:
   (1) FFA committee chairpersons and the teacher.
   (2) your employer and teacher.
   (3) the principal and guidance counselor.
   (4) your parents and teacher.

20. Your SOE placement program agreement should be developed to:
   (1) emphasize what will be learned at the SOE placement site.
   (2) provide practice filling out forms and applications.
   (3) allow coordination of instruction at school and on-the-job.
   (4) record understandings between the student, parents, teacher, and employer.

21. The primary purpose of a SOE placement program is to help you:
   (1) gain planned experiences in an occupation.
   (2) receive recognition for achievements.
   (3) earn money for college or personal expenses.
   (4) make a contribution to the success of a business.

22. According to the Fair Labor Standards Act, students participating in SOE placement programs should receive:
   (1) a donation for the FFA fund.
   (2) minimum wage.
   (3) one-half the minimum wage.
   (4) no pay for work performed.

23. Records of your SOE placement program should be recorded at the:
   (1) end of each day.
   (2) end of each semester.
   (3) end of each week.
   (4) end of each month.

24. Work as a veterinarian's assistant would require classroom instruction in:
   (1) nutrient requirements.
   (2) food quality.
   (3) cattle diseases.
   (4) breeds of livestock.
PART II

DIRECTIONS: Please evaluate each of the following concepts listed in BOLD PRINT by marking an "x" on each line at the location which describes your TRUE feelings. PLEASE MARK EVERY LINE USING ONLY ONE MARK PER LINE.

EXAMPLE OF THE CORRECT WAY TO MARK YOUR RESPONSES:

I FEEL THAT SOE PROGRAMS ARE:


A MARK HERE WOULD INDICATE YOU FEEL THAT SOE PROGRAMS ARE IMPORTANT.


A MARK HERE WOULD INDICATE YOU FEEL THAT SOE PROGRAMS ARE NOT NECESSARILY CHALLENGING OR UNCHALLENGING.


A MARK HERE WOULD INDICATE YOU FEEL THAT SOE PROGRAMS ARE TOTALLY MEANINGLESS.

PLACE A MARK ON EACH NUMBERED LINE

I FEEL THAT AN AWARENESS OF AGRICULTURAL OCCUPATIONS IS:


I FEEL THAT PLANNED EMPLOYMENT EXPERIENCE IN A SELECTED AREA OF AGRICULTURE IS:


DID YOU PLACE A MARK ON EACH NUMBERED LINE?

Turn The Page And Continue
I feel that vocational agriculture SOE Placement Programs are:

1. Uninteresting: __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ ___
PART III

DIRECTIONS: The following are items that you may or may not have done yet in planning your SOE placement program. Please answer each question by marking an "X" on the line under "YES" or "NO". This is NOT a test, and there are no right or wrong answers. Please answer TRUTHFULLY and HONESTLY.

HAVE YOU?

<table>
<thead>
<tr>
<th>YES</th>
<th>NO</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td>1.</td>
<td>Reviewed your previous agricultural experiences?</td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td>2.</td>
<td>Studied the employment opportunities in your community?</td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td>3.</td>
<td>Discussed your plans for a SOE placement program with your parent(s) or guardian(s)?</td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td>4.</td>
<td>Reviewed the way your SOE placement program will be evaluated?</td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td>5.</td>
<td>Identified a desirable place of employment in agriculture?</td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td>6.</td>
<td>Discussed job opportunities with the employer at your desired employment site?</td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td>7.</td>
<td>Prepared a personal information sheet?</td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td>8.</td>
<td>Prepared a letter of application for an employer?</td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td>9.</td>
<td>Completed a job application for an employer?</td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td>10.</td>
<td>Completed a job interview with an employer?</td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td>11.</td>
<td>Prepared a follow-up letter for an employer?</td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td>12.</td>
<td>Discussed your training agreement with your employer, parents, and vocational agriculture teacher?</td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td>13.</td>
<td>Prepared a training agreement for your SOE placement program?</td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td>14.</td>
<td>Discussed the goals of your SOE placement program with your employer, parents, and vocational agriculture teacher?</td>
</tr>
</tbody>
</table>

PART IV

DIRECTIONS: Please answer each of the following questions with an "X" or fill in the blank provided. Please be as accurate as possible and respond to all questions.

1. Where do you live?
   _____ (1) In a city or town
   _____ (2) In a rural area, but not a farm
   _____ (3) On a farm

2. What is your high school grade classification?
   _____ (1) Ninth grade
   _____ (2) Tenth grade
   _____ (3) Eleventh grade
   _____ (4) Twelfth grade

3. Including this year, how many years of high school vocational agriculture have you had?
   _____ (1) One year
   _____ (2) Two years
   _____ (3) Three years
   _____ (4) Four years

4. Including this year, how many years have you been an FFA member?
   _____ (1) One year
   _____ (2) Two years
   _____ (3) Three years
   _____ (4) Four years
   _____ (5) None

5. What type of supervised occupational experience program do you presently have? (Mark one)
   _____ (1) Raising animals and/or crops
   _____ (2) Working on a farm other than home farm
   _____ (3) Working in an off-farm agricultural business
   _____ (4) Working with projects using school land, greenhouse, shop, or other school facilities.
   _____ (5) Other (please list)
   _____ (6) None (I do not have a supervised occupational experience program.)

Turn The Page And Continue
6. If you had a choice, which of the following would you most prefer to have employment experience in before completing high school? (Please mark one.)

(1) Raising crops and/or livestock on a farm
(2) Assembling or repairing machinery
(3) Manufacturing lumber from trees
(4) Growing and/or selling seedlings or plants for landscaping.
(5) Supplying farmers with livestock feed, crop chemicals, machinery parts, etc.
(6) Processing livestock for meat
(7) Caring and feeding for wild animals
(8) Determining the value of land, buildings, improvements, etc.
(9) Other (please describe)

7. Upon completion of high school do you plan to attend a vocational school, college, or university?
   (1) Yes
   (2) No

8. What occupation do you plan to enter upon completion of your formal education?

THANK YOU
PLEASE RETURN THIS FORM TO YOUR VOCATIONAL AGRICULTURE TEACHER
TEACHER/SCHOOL DEMOGRAPHIC DATA

DIRECTIONS: Please answer each of the following questions with an "X" or fill in the blank provided. Be as accurate as possible and please respond to all questions.

1. How many years have you taught vocational agriculture?
   ___ (1) Totally
   ___ (2) In your present school district

2. What is the highest degree you hold?
   ___ (1) B.S.
   ___ (2) M.S.
   ___ (3) Other (please specify)

3. How many students are presently enrolled in all vocational agriculture classes in your high school?
   ___ Students

4. How many of the above (Question 3) students currently have SOE placement (employment) programs?
   ___ Students

5. How many different day-school class preparations do you have each day?
   ___ Preparations

6. How many months of off-farm agribusiness experience have you had since high school graduation? (If none, write "0" in the blank provided.)
   ___ Month(s)

7. Have you taken a college course that focused on SOE placement programs in vocational agriculture?
   ___ (1) Yes
   ___ (2) No

8. How many teaching days do you normally spend with sophomores on selecting, planning, and starting SOE placement programs?
   ___ Teaching Days

9. How many teaching days did you devote to teaching your sophomores about selecting, planning, and starting SOE placement programs this year?
   ___ Teaching Days

10. Which of the following facilities do you have at your school for use by students to conduct SOE placement programs? (Check all that apply.)
    ___ (1) School farm
    ___ (2) Greenhouse
    ___ (3) Agricultural mechanics laboratory
    ___ (4) Other (Please describe.)

11. Do you have written guidelines, requirements, rules, standards, etc., for students with SOE placement programs?
    ___ (1) Yes
    ___ (2) No
PREPARING FOR SUPERVISED OCCUPATIONAL EXPERIENCE PLACEMENT PROGRAMS

Instructional Packet Evaluation

PART I

DIRECTIONS: Please evaluate the instructional packet by marking an "X" on each line at the location which describes your feelings about the packet in general.

I feel the INSTRUCTIONAL PACKET is:

UNAPPROPRIATE: ___: ___: ___: ___: ___: ___: ___: APPROPRIATE

INACCURATE: ___: ___: ___: ___: ___: ___: ___: ACCURATE

INEFFECTIVE: ___: ___: ___: ___: ___: ___: ___: EFFECTIVE

WORTHLESS: ___: ___: ___: ___: ___: ___: ___: WORTHWHILE

USELESS: ___: ___: ___: ___: ___: ___: ___: USEFUL

UNNECESSARY: ___: ___: ___: ___: ___: ___: ___: NECESSARY

INCOMPLETE: ___: ___: ___: ___: ___: ___: ___: COMPLETE

PART II

DIRECTIONS: Please respond to the following statements pertaining to each problem area of the instructional packet. If you feel that there is no value, write "1" on the blank in front of the statement under the correct problem area. If you feel there is great value, write "9" on the blank. Use any number from 1 to 9 to indicate the value of Problem Area I, II, and III for teaching students to prepare for SOE placement programs. Please respond to each statement using the following scale.

<table>
<thead>
<tr>
<th>PROBLEM AREA</th>
<th>I</th>
<th>II</th>
<th>III</th>
</tr>
</thead>
<tbody>
<tr>
<td>WHAT IS/WAS THE VALUE OF:</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1. Problem area statements in identifying what was to be studied?</td>
<td>___</td>
<td>___</td>
<td>___</td>
</tr>
<tr>
<td>2. Situation statements in setting the stage for the instruction?</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. Study questions in focusing the direction of the problem area?</td>
<td>___</td>
<td>___</td>
<td>___</td>
</tr>
<tr>
<td>4. Learner needs statements in identifying opportunities to emphasize learning beyond the subject matter level?</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5. Interest approach activities in stimulating student interest in the problem area?</td>
<td>___</td>
<td>___</td>
<td>___</td>
</tr>
<tr>
<td>6. Learning activities in providing realistic experiences for students to acquire knowledge and understanding in each problem area?</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7. Conclusions in providing accurate responses to the problem statement?</td>
<td>___</td>
<td>___</td>
<td>___</td>
</tr>
<tr>
<td>8. Evaluation criteria in identifying important components of student achievement to be assessed?</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
191

<table>
<thead>
<tr>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
<th>9</th>
</tr>
</thead>
<tbody>
<tr>
<td>No Value</td>
<td>Little Value</td>
<td>Some Value</td>
<td>Much Value</td>
<td>Great Value</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**PROBLEM AREA**

I  II  III

9. Optional learning activities in providing additional strategies for teaching in each problem area?

10. Problem area outlines in decreasing the preparation time required to teach the unit?

11. Supplemental materials—information sheets, activities, transparency masters etc.—in providing subject matter for completing the study questions in each problem area?

12. The entire problem area for teaching students to prepare for SOE placement programs?

**PART III**

**DIRECTIONS:** Please record your suggestions for improving the instructional packet. If you have made suggestions on a page in the packet, you may want to attach a copy and so indicate.

**PROBLEM AREA I:**

________________________________________________________________________

________________________________________________________________________

**PROBLEM AREA II:**

________________________________________________________________________

________________________________________________________________________

**PROBLEM AREA III:**

________________________________________________________________________

________________________________________________________________________

________________________________________________________________________

WE APPRECIATE YOUR COOPERATION

THANK YOU!
APPENDIX G: ITEMS AND WEIGHTED VALUES USED IN DEVELOPING SOE PLACEMENT PROGRAM ANNING INSTRUMENT
DATE: September 20, 1982

TO:

FROM: John W. Slocombe
Graduate Student

We are attempting to identify items which would indicate that vocational agriculture students have planned for SOE placement programs. Your help is needed to identify these indicators. SOE placement programs feature employment experience in an agribusiness, on a farm, at a school farm or other facility, and/or other community location. This information will be used in an Iowa Agriculture Experiment Station study of SOE placement programs of vocational agriculture students.

DIRECTIONS: The items listed below are possible indicators that a student has selected and planned his/her SOE placement program. Please indicate the degree of importance you would attach to each of the items as an indicator of good student planning of his/her SOE placement program.

<table>
<thead>
<tr>
<th>No</th>
<th>Little Importance</th>
<th>Some Importance</th>
<th>Much Importance</th>
<th>Utmost Importance</th>
</tr>
</thead>
<tbody>
<tr>
<td>5</td>
<td>80</td>
<td>2</td>
<td>4</td>
<td>6</td>
</tr>
<tr>
<td>6</td>
<td>20</td>
<td>4</td>
<td>4</td>
<td>8</td>
</tr>
<tr>
<td>7</td>
<td>00</td>
<td>2</td>
<td>5</td>
<td>5</td>
</tr>
<tr>
<td>7</td>
<td>80</td>
<td>2</td>
<td>5</td>
<td>5</td>
</tr>
<tr>
<td>6</td>
<td>00</td>
<td>2</td>
<td>6</td>
<td>8</td>
</tr>
</tbody>
</table>

1. Identification of interests in agriculture.
2. Appraisal of previous agricultural experiences.
3. Establishment of occupational goals in agriculture.
4. Selection of agricultural skills to develop in a SOE placement program.
5. Identification of employment opportunities in agricultural occupations.
6. Identification of employment opportunities for a SOE placement program in the community.
7. Student has discussed with parent(s)/guardian(s) the possibility of an SOE placement program.
8. Awareness of vocational agriculture departmental guidelines and standards for SOE placement programs.

(Continued on back side)
*5.60 9. Awareness of evaluation methods and criteria for SOE placement programs.

*7.70 10. Identification of a desired place of employment for a SOE placement program.

7.00 11. Identification of experiences that could be gained at a specific SOE placement site.

5.20 12. Interviewed an employee of a business similar to the one where you desire to work.

*7.80 13. Contacted employer of the selected SOE placement site about possible job openings.

*7.00 14. Prepared personal information for a prospective employer.

*6.80 15. Submitted a letter of application to a prospective employer.

*6.80 16. Completed an employment application for a prospective employer.

*8.20 17. Completed a job interview with a prospective employer.

*6.00 18. Submitted a follow-up letter to an employer after a job interview.

6.20 19. Become acquainted with policies and procedures for an SOE placement program at a specific employment site.

5.00 20. Awareness of state and national labor laws for students employment.

*8.20 21. Discussed a training agreement with employer, parents, and vocational agriculture instructor.

*8.20 22. Prepared a training agreement for employment.

*7.80 23. Discussed an employment experience plan with employer, parents, and vocational agriculture instructor.


6.80 25. Establish a record keeping system for a SOE placement program.

6.20 26. Set goals for employment after high school graduation.

PLEASE RETURN TO: John W. Slocombe
Instructor
Agricultural Engineering Department
Iowa State University
212 Davidson Hall
Ames, IA 50011

*Items included in SOE placement program planning inventory
APPENDIX H: ITEM ANALYSES OF INDIVIDUAL ITEMS ON SOE PLACEMENT PROGRAM KNOWLEDGE INVENTORY, AND SOE PLACEMENT PROGRAM ATTITUDE INVENTORY
# Item Analysis of SOE Placement Program Knowledge Inventory

<table>
<thead>
<tr>
<th>Item Number</th>
<th>Difficulty</th>
<th>Discriminating Power</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>.91</td>
<td>.19</td>
</tr>
<tr>
<td>2</td>
<td>.42</td>
<td>.11</td>
</tr>
<tr>
<td>3</td>
<td>.63</td>
<td>.27</td>
</tr>
<tr>
<td>4</td>
<td>.87</td>
<td>.23</td>
</tr>
<tr>
<td>5</td>
<td>.49</td>
<td>.13</td>
</tr>
<tr>
<td>6</td>
<td>.22</td>
<td>.04</td>
</tr>
<tr>
<td>7</td>
<td>.77</td>
<td>.25</td>
</tr>
<tr>
<td>8</td>
<td>.56</td>
<td>.30</td>
</tr>
<tr>
<td>9</td>
<td>.63</td>
<td>.32</td>
</tr>
<tr>
<td>10</td>
<td>.57</td>
<td>.23</td>
</tr>
<tr>
<td>11</td>
<td>.84</td>
<td>.33</td>
</tr>
<tr>
<td>12</td>
<td>.82</td>
<td>.18</td>
</tr>
<tr>
<td>13</td>
<td>.73</td>
<td>.18</td>
</tr>
<tr>
<td>14</td>
<td>.53</td>
<td>.19</td>
</tr>
<tr>
<td>15</td>
<td>.81</td>
<td>.31</td>
</tr>
<tr>
<td>16</td>
<td>.73</td>
<td>.26</td>
</tr>
<tr>
<td>17</td>
<td>.58</td>
<td>.21</td>
</tr>
<tr>
<td>18</td>
<td>.76</td>
<td>.41</td>
</tr>
<tr>
<td>19</td>
<td>.68</td>
<td>.14</td>
</tr>
<tr>
<td>20</td>
<td>.37</td>
<td>.16</td>
</tr>
<tr>
<td>21</td>
<td>.78</td>
<td>.51</td>
</tr>
<tr>
<td>22</td>
<td>.78</td>
<td>.28</td>
</tr>
<tr>
<td>23</td>
<td>.31</td>
<td>.03</td>
</tr>
<tr>
<td>24</td>
<td>.55</td>
<td>.21</td>
</tr>
<tr>
<td>Item Number</td>
<td>Mean</td>
<td>Standard Deviation</td>
</tr>
<tr>
<td>-------------</td>
<td>------</td>
<td>--------------------</td>
</tr>
<tr>
<td>1</td>
<td>6.10</td>
<td>1.10</td>
</tr>
<tr>
<td>2</td>
<td>6.04</td>
<td>1.15</td>
</tr>
<tr>
<td>3</td>
<td>5.53</td>
<td>1.30</td>
</tr>
<tr>
<td>4</td>
<td>5.58</td>
<td>1.27</td>
</tr>
<tr>
<td>5</td>
<td>5.28</td>
<td>1.44</td>
</tr>
<tr>
<td>6</td>
<td>5.20</td>
<td>1.43</td>
</tr>
<tr>
<td>7</td>
<td>5.71</td>
<td>1.37</td>
</tr>
<tr>
<td>8</td>
<td>5.98</td>
<td>1.22</td>
</tr>
<tr>
<td>9</td>
<td>5.70</td>
<td>1.26</td>
</tr>
<tr>
<td>10</td>
<td>5.93</td>
<td>1.20</td>
</tr>
<tr>
<td>11</td>
<td>6.04</td>
<td>1.21</td>
</tr>
<tr>
<td>12</td>
<td>5.46</td>
<td>1.36</td>
</tr>
<tr>
<td>13</td>
<td>5.66</td>
<td>1.42</td>
</tr>
<tr>
<td>14</td>
<td>5.72</td>
<td>1.29</td>
</tr>
<tr>
<td>15</td>
<td>5.95</td>
<td>1.16</td>
</tr>
<tr>
<td>16</td>
<td>5.54</td>
<td>1.19</td>
</tr>
<tr>
<td>17</td>
<td>5.71</td>
<td>1.33</td>
</tr>
<tr>
<td>18</td>
<td>4.28</td>
<td>1.50</td>
</tr>
<tr>
<td>19</td>
<td>5.36</td>
<td>1.43</td>
</tr>
<tr>
<td>20</td>
<td>5.40</td>
<td>1.38</td>
</tr>
<tr>
<td>21</td>
<td>4.60</td>
<td>1.42</td>
</tr>
<tr>
<td>22</td>
<td>5.45</td>
<td>1.36</td>
</tr>
<tr>
<td>23</td>
<td>5.39</td>
<td>1.39</td>
</tr>
<tr>
<td>24</td>
<td>5.65</td>
<td>1.41</td>
</tr>
<tr>
<td>25</td>
<td>6.02</td>
<td>1.21</td>
</tr>
<tr>
<td>26</td>
<td>5.90</td>
<td>1.04</td>
</tr>
<tr>
<td>27</td>
<td>5.95</td>
<td>1.11</td>
</tr>
<tr>
<td>28</td>
<td>4.40</td>
<td>1.52</td>
</tr>
</tbody>
</table>
## Analysis of SOE Placement Program Attitude Inventory

<table>
<thead>
<tr>
<th>Item Number</th>
<th>Mean</th>
<th>Standard Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>29</td>
<td>5.34</td>
<td>1.18</td>
</tr>
<tr>
<td>30</td>
<td>6.03</td>
<td>1.23</td>
</tr>
<tr>
<td>31</td>
<td>6.03</td>
<td>1.24</td>
</tr>
<tr>
<td>32</td>
<td>6.24</td>
<td>1.15</td>
</tr>
<tr>
<td>33</td>
<td>6.06</td>
<td>1.19</td>
</tr>
<tr>
<td>34</td>
<td>5.66</td>
<td>1.38</td>
</tr>
<tr>
<td>35</td>
<td>6.24</td>
<td>1.13</td>
</tr>
<tr>
<td>36</td>
<td>6.24</td>
<td>1.27</td>
</tr>
</tbody>
</table>