

PROFESSIONAL COMPETENCIES NEEDED BY BEGINNING TEACHERS OF AGRICULTURE/AGRIBUSINESS

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Agriculture/agribusiness programs in the nation's public schools have changed considerably during the past 15 years. These changes resulted in large measure from the Federal Vocational Education Act of 1963 and its amendments in 1968, 1972, and 1976. The passage of these acts provided many new opportunities in the eight program categories of agriculture/agribusiness education, for which many teachers had not been adequately prepared.

Since 1963 when traditional agriculture production programs were expanded into the eight program categories, the demand for agriculture/agribusiness teachers has been increasing. Teacher education institutions in Delaware and other states have attempted to meet this increased demand. However, the traditional teacher education programs may need to adopt some new ideas and approaches to improve the quantity and quality of teachers they produce.

Competency-based teacher education (CBTE) with its emphasis on the identification, development, and assessment of specific skills for teaching appears to be one viable approach to modernizing traditional teacher education and certification programs.

Purpose of the Study

A study to determine the professional competencies needed by beginning teachers of agriculture/agribusiness education in Delaware was the focus of this recently completed research project (Shippy, 1979).

The specific objectives of this study were:

1. To identify the professional competencies needed by beginning teachers of agriculture/agribusiness education as perceived by two selected groups of agriculture/agribusiness teachers and a group of local school supervisors of agricultural education programs in Delaware.
2. To compare the perceptions of the two groups of teachers and the group of local school supervisors regarding the professional education competencies needed by beginning teachers of agriculture/agribusiness education in Delaware.
3. To compare the perceptions of the teachers, according to selected demographic characteristics, regarding the pro-

professional competencies needed by beginning teachers of agriculture/agribusiness education in Delaware.

Procedures

The population for this study consisted of all inexperienced (N=19) and all experienced teachers (N=28) of agriculture/agribusiness education and local school supervisors (N=21) of agriculture programs in Delaware. Inexperienced teachers were defined as teachers with five or fewer years of teaching experience and experienced teachers had six or more years of teaching experience. Local school supervisors were the local building principals or supervisors of vocational education who served as the immediate supervisor of the agriculture/agribusiness teacher.

A research instrument containing 240 professional competencies was developed using a list of 384 vocational teacher competencies (Cotrell, *et. al.*, 1972) and a list of professional competencies needed by vocational instructors in agriculture (Matteson *et. al.*, 1974).

The teacher competencies were divided into the following categories:

- I. Program Planning, Development, and Evaluation
- II. Planning of Instruction
- III. Execution of Instruction
- IV. Evaluation of Instruction
- V. Student Vocational Organization
- VI. Supervised Occupational Experience
- VII. Management
- VIII. Guidance
- IX. School-Community Relations
- X. Professional Role and Development

The instrument was administered to the two teacher groups and the supervisor group from March through May of 1979. Each group was asked to indicate the degree of need of each competency for entry-level employment as a beginning teacher of agriculture/agribusiness education in Delaware. A five-point Likert-type scale was used for the rating process. A rating of five (5) was considered high need for the competency. A questionnaire to collect pertinent demographic data about the teachers was also developed and administered.

To analyze data pertaining to objective one, means were determined for the two teacher groups and the local school supervisor group. Analysis of variance, using the .05 probability level, was used to analyze the data pertaining to objective two. The t-test was used to analyze the demographic data collected for objective three, with the .05 level of significance as the critical standard.

The data from this study provided information that facilitated the redirection of the undergraduate program in Agricultural Education at the University of Delaware into a competency-based format.

Findings

1. The two groups of teachers and the group of supervisors indicated that at least average competence was necessary for 246 of the 250 competencies included in this study. Only four competencies were rated less than 3.0 (instrument scale average). Table 1 presents the top three competencies in each of the ten competency categories in this study.
2. The two groups of teachers and the group of supervisors perceived the competency level necessary for a beginning teacher of agriculture/agribusiness education primarily the same for 235 competencies. Only 15 of the 240 competencies were rated significantly different at the .05 level by the three groups surveyed.
3. Size of agriculture department, number of different students taught each day, previous enrollment in vocational agriculture in high schools, and FFA experience in high school had influence upon the teachers' views concerning the importance of professional education competencies. The hypothesis--there is no significant difference in the perceptions of teachers of agriculture regarding the need by beginning teachers for each of the 250 professional competencies:
 - a. between those who teach in one or two teacher departments (N=21) and those who teach in three or more teacher departments (N=26) was rejected for 39 competencies.
 - b. between those who teach 60 or fewer (N=22) and those who teach 61 or more (N=25) different students each day was rejected for 51 competencies.
 - c. between those who were enrolled in vocational agriculture in high school (N=23) and those who were not (N=24) was rejected for 19 competencies.
 - d. between those who had FFA experience in high school (N=21) and those who had none (N=26) was rejected for 21 competencies.
4. The two groups of teachers and the group of supervisors placed approximately the same emphasis on the importance of the professional competencies. The findings of this study show that inexperienced teachers rated 103 competencies 4.00 or higher, experienced teachers rated 116 competencies 4.00 or higher, and supervisors rated 114 competencies 4.00 or higher.

Table 1

MEAN SCORES OF THE TOP THREE PROFESSIONAL COMPETENCIES IN EACH OF THE TEN COMPETENCY CATEGORIES AS RATED BY AGRICULTURE TEACHERS AND PROGRAM SUPERVISORS IN DELAWARE, 1979

Category and Competency	Mean Score
<i>I. Program Planning, Development, and Evaluation</i>	
1. Develop and write general objectives for the vocational agriculture program offerings.	4.34
2. Identify the competencies needed for entry into an agriculture occupation.	4.31
3. Participate in the identification of the school's vocational agriculture program purposes and goals.	4.29
<i>II. Planning of Instruction</i>	
1. Plan the content of a lesson.	4.56
2. Determine student needs and interests.	4.46
3. Plan the summary of a lesson.	4.43
<i>III. Execution of Instruction</i>	
1. Give an assignment in a clear and concise manner.	4.51
2. Reinforce learning.	4.44
3. Direct students in applying problem-solving techniques.	4.43
<i>IV. Evaluation of Instruction</i>	
1. Formulate a system of grading consistent with school policy.	4.57
2. Establish criteria for student performance.	4.38
3. Determine students' grades based on related instruction and laboratory or on-the-job experience.	4.35
<i>V. Student Vocational Organization</i>	
1. Provide advice for student entries in state and national FFA contests.	4.18
2. Conduct an organizational meeting for the local FFA chapter.	4.16
3. Acquaint prospective members and their parents with the purposes, activities, and values of the FFA.	4.15
<i>VI. Supervised Occupational Experience</i>	
1. Make instructional visits to students concerning their projects.	4.18
2. Supervise students in identifying and planning appropriate projects.	4.13
3. Select and supervise student use of an appropriate record system.	4.04

Table 1, Continued

Category and Competency	Mean Score
<i>VII. Management</i>	
1. Uphold school standards of expected student behavior.	4.65
2. Provide approved safety apparel and devices for vocational agriculture students assigned to hazardous equipment.	4.63
3. Carry out approved disciplinary action when warranted.	4.63
<i>VIII. Guidance</i>	
1. Demonstrate a regard for and an interest in students as individuals.	4.49
2. Develop constructive working relationships among students.	4.43
3. Demonstrate personal concern for the student.	4.43
<i>IX. School-Community Relations</i>	
1. Maintain working relationships with the school administration and faculty.	4.50
2. Maintain working relationships with the school supporting staff.	4.26
3. Maintain good relations with other schools.	3.94
<i>X. Professional Role and Development</i>	
1. Maintain the ethical standards expected of a professional educator.	4.35
2. Keep up-to-date through reading professional literature.	4.32
3. Acquire new occupational skills and information needed to keep pace with technological advancement in vocational agriculture.	4.26

Recommendations

The following recommendations are made as a result of this study:

1. The 246 competencies rated 3.00 or higher in this study should be incorporated into agricultural education curricula used by teacher educators.
2. Appropriate instructional materials should be adapted or developed for each of the 246 competencies.

3. Methods should be developed for measuring the competence of students in performing the competencies identified in this study.
4. Teacher educators should periodically evaluate the professional competency needs of beginning teachers of agriculture/agribusiness education so that the pre-service teacher preparation programs can be updated as needed.

Comparison to Similar Studies

This study identified 246 professional competencies needed by beginning teachers of agriculture/agribusiness in Delaware. Many were similar to the competencies identified in research conducted by Hawk (1977) and Witmer (1979) in Pennsylvania and by Moore and Bender (1975) in Ohio. Two hundred and twelve of the 246 competencies were also identified in the Pennsylvania research projects, and 1979 of the 246 competencies were also identified in the Ohio study. Although the competencies were expressed differently, there were also similarities with studies conducted in Florida, Texas and Wisconsin.

Perhaps enough research has been completed on the identification and validation of professional competencies needed by beginning teachers. The job facing teacher educators at the present time is how to use the CBTE materials currently available and how to adapt them for effective educational development of prospective teachers. This would appear to be a prime area for future research.

References

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