

HOW SECONDARY AGRICULTURAL EDUCATION TEACHERS DESCRIBE THEIR WORK

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Abstract

The purpose of this study was to describe how secondary agricultural education teachers in California perceive their job responsibilities. Q Method was used to examine a theoretical structure to determine the various ways teachers' view their work. Participants in the study were 23 secondary agricultural education teachers from the Central and San Joaquin California Agricultural Teachers Association regions of California. The researcher purposefully selected the subjects used in this study. Each participant completed a 36-item Q-sort about what their actual job is like and what would their ideal job be like. The statistical software package PQ Method 2.0 was used to analyze the data. Data analysis involved the sequential application of three sets of statistical procedures including correlation, factor analysis, and computation of factor scores.

Introduction

Agricultural education at the secondary level, when compared to other vocational education programs, is a unique part of the total vocational education program. Agricultural education teachers have additional teacher responsibilities such as Supervised Agricultural Experience (SAE) programs, and the National Future Farmers of America (FFA) Organization. Added teacher responsibilities, along with the community leadership role secondary agricultural education teachers play, make agricultural education program responsibilities challenging. However, three components of the agricultural education program have remained consistent since the 1920s: classroom/laboratory instruction, SAE programs, and the FFA organization (National Research Council, 1988; Phipps & Osborne, 1988).

Over the years secondary agricultural education programs have been modified to meet changing school environments and societal demands. Additionally, agriculture's emphasis shift away from production to processing and marketing has played a role in changing agricultural education programs. The result has been a demand for more agricultural education instructors with a wider variety of skills.

Theoretical Framework

During the 1980s the national reports, Nation At Risk (National Commission on Excellence in Education, 1983) and Understanding Agriculture: New Directions for Education (National Research Council [NRC] Committee on Agriculture in Secondary Schools, 1988) called for major revisions to educational programs. Aspects of those revisions included ability of educators to solve problems, adapt new technology, demonstrate effective leadership skills, and possess solid command of core skills. Other aspects related to more flexibility in curriculum and program design, and the requirements and activities of programs and more responsibilities. Education (National Research Council's Committee on Agriculture in Secondary Schools, (NRC) 1988) called for major revisions to educational programs. Aspects of those revisions included ability of educators to solve problems, adapt new technology, demonstrate effective leadership skills, and possess solid command of core skills. Other aspects related to more flexibility in curriculum and program design, and the requirements and activities of programs and more responsibilities.

In response, state departments of education and local school systems implemented innovative programs such as School-to-Career, Tech Prep and Craftsmanship 2000. The National FFA Organization created additional programs such as Computers in Agriculture, Agricultural Sales contest, and the Agriscience Student Recognition program. State FFA associations developed more specific programs adding complexity and opportunity to the range of agricultural education teacher responsibilities. The state of Washington FFA Association administered an Agriscience Team contest and Natural Resources skills contest to enhance program offerings. The state of Pennsylvania Department of Education promoted aquaculture as an agricultural production option. Job Interview contests were added to the career development events in California.

Lockwood (1976) concluded that the list of teacher responsibilities grew to the point that there are more activities than time to do them. Goode and Stewart (1981) noted during the last 18 years at least eight time-consuming activities were added to the list of agricultural education teacher responsibilities in Iowa. "The growth of agricultural education program offerings are a mixed blessing; on one hand, students benefit by having more choices, and on the other hand, teachers must constantly incorporate more responsibilities while developing new skills to keep technically updated" (Ennis, 1991 p. 3).

The NRC committee (1988) concluded that some vocational agriculture teachers spent inordinate time preparing students for FFA activities. According to the NRC, these teachers tended to place less emphasis on delivering agricultural instruction in the classroom, updating curricula, or involving the business community in the vocational

agriculture program. "In many vocational programs, a principal focus of class time and extracurricular activity is preparing students to compete in traditional, production-oriented FFA contests and award programs" (NRC, p. 43).

The job duties of secondary agricultural educators have similarly evolved and increased. As the job duties have generally changed over time, other professional issues have arisen as well. Crucial issues face the field of agricultural education today, such as job satisfaction, burnout rates, and retention of secondary agricultural education teachers. Agricultural education programs have consistently changed over the last decade, yet minimal research existed on the impact to teacher job responsibilities since Juergenson's (1965) survey of agriculture teacher job duties.

The teacher's roles and responsibilities, including entry-level requirements, should be delineated in a job description or similar document at the time of employment by the school. Professional roles and responsibilities include such areas as knowledge of subject matter; earning and maintaining current teaching credentials; reviewing and selecting curriculum materials; designing instruction and planning lessons; monitoring and assessing student learning; communicating with parents; maintaining records of student learning; fulfilling applicable laws and government regulations; and participating in professional service and staff development activities (Scrivens, 1997). The requirements for managing those professional skills and responsibilities within the context of the three agricultural education areas may be overwhelming, potentially leading to problems of recruitment and retention of secondary agricultural education teachers. Teachers of secondary agricultural education must possess or develop the abilities required to perform the many duties involved in conducting a successful program of agricultural education.

The agriculture teachers' job responsibilities, as articulated by Phipps and Osborne, (1988) and the professional development requirements for teachers in general, as described by Scrivens, (1997) form the theoretical structure for job responsibilities defined as the foundation for this study.

It seems apparent that an important aspect for discovery is the perception of secondary agricultural education teachers toward their job duties, especially in terms of relationship to the secondary agricultural education program.

Background of Methodology

Q methodology was first developed in the 1930's by William Stephenson (1953) and was described as an instrumental and philosophical approach to the study of subjectivity. Teacher subjectivity was considered synonymous with personal viewpoint, beliefs, experience, and background. Performing a Q-sort was an evaluation for which right answers did not exist. Stimuli were placed in significant order from the standpoint of the person completing the sort. In this study, understanding of teacher beliefs and judgments was derived from use of statements about job responsibilities. The ordering of statements by the individuals reflected differences in importance each statement had for that person. Thus, a picture of the viewpoint toward job responsibilities of each individual was revealed. The data resulting from the statements arranged by each teacher were analyzed to yield useful statistics for the interpretation of meaning.

In Q methodology, the research variable becomes the people performing the Q-sorts, not the various Q-sort statements. Factor analysis conducted with Q methodology was considered to be appropriate in determining what people perceive related to the subject being studied. Teachers associated with a certain factor were assumed to have a common perspective, or to form clusters of persons, according to the similarity in their rank ordering of the statements or items (Stephenson, 1953).

Recognizing the factor analytic model in Q methodology represented the sorts of people, increasing the number of persons on any factor had little impact on the results. Thus, the results were expected to be valid for other persons of the same potential type (Brown, 1980). Persons of a particular outlook would be expected to load highly on the same factor. For example, in this research, the results applied only to teachers participating in the study. However, one might conjecture that secondary agricultural education teachers of similar age, gender, and years of teaching experience from other states held similar beliefs about their job responsibilities.

The concourse comprises the raw materials for Q methodology. The flow of communicability surrounding any topic is referred to as a "concourse". A concourse can be collected in a number of ways. The two most typical methods were reviewing literature and/or interviewing people and jotting down or recording what they say. A study of public opinions, would necessitate interviewing representatives of those segments of the society apt to have something to say about the issue. The concourse is where the sample statements were developed to be administered in a Q sort (Brown, 1993). The number of statements used in a Q sort may be as large as the investigator pleases (Stephenson, 1953) with most researchers concerned with statements that put variability of meaning among the items so that extreme positions do not dominate the sort. Kerlinger, (1986) wrote that sorters can handle up to 90 or 100 statements and recommended between 50 and 100. The more complex, the fewer statements should be used, according to Kerlinger.

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Q methodology (McKeown & Thomas, 1988) enabled respondents to communicate a point of view from an internal frame of reference. Following data analysis, the statements composing each of the Q-data factor arrays described the meaning of likeness or unlikeness to the subjects loading on that factor. Interpretations of factors extends beyond statistical analysis to theoretical criteria. This includes using interview data, previous literature, and researcher interpretations (Brown, 1980).

Problem Statement

The National Research Council's (1988) study on agricultural education in the secondary schools reported finding that secondary agricultural education teachers were spending too much time on FFA and not enough on classroom instruction. Additionally, state education departments and local school systems implementation of more programs based on the national reports, A Nation At Risk and Understanding Agriculture have increased job responsibilities for teachers in agricultural education programs. A study was needed because little is known about how secondary agricultural education teachers perceive their job responsibilities.

Purpose

The purpose of this research was to describe perceptions of selected California secondary agricultural education teachers in the Central and San Joaquin regions concerning their job responsibilities.

Research Question

How do selected agricultural education teachers describe their work?

Methodology/Procedures

Twenty-three secondary agricultural education teachers were invited by the researcher to represent regional areas in California based on gender, age, years of teaching experience and agriculture department size. Thirteen respondents represented the Central region and ten respondents represented the San Joaquin region. The two selected regions employed the highest number of secondary agricultural education teachers within the state of California.

Respondents were selected from the California agricultural education directory. In each region, diversity in terms of gender, age, years of teaching experience, and agriculture department size were considered for each invitation. Upon selection, the researcher contacted each subject by telephone to request participation in the study. Appointments were scheduled with teachers agreeing to participate. All 23 invitations were accepted. Before taking part in the research, each respondent completed a consent form. The individuals were informed of the study's purpose and assured confidentiality, anonymity and the right to withdraw at any time.

Q method adapted well to studying perceptions of secondary agricultural education teachers' job duties and responsibilities. "Q method is an important and unique approach to the study of psychological, sociological, and educational phenomena" (Kerlinger, 1973, p. 58 - 59). This study used Q methodology to measure teachers' point of view regarding their job responsibilities.

A Q sort was designed using a triarchic theoretical structure constructed by combining Phipps and Osborne (1988) and Scrivens (1997). Twenty California and Oklahoma secondary agricultural education teachers were interviewed. Each individual was asked to list their duties as a classroom/lab teacher, FFA advisor, SAE supervisor, and any other job duties.

The population of potential statements regarding the topic of interest was called a concourse in Q methodology (Brown, 1980). Because the concourse was drawn from several sources and in-depth interviews, it was considered a hybrid, utilizing a naturalistic and theoretical framework (McKeown & Thomas, 1988). The theory depicted was a combination of Scriven's (1997) teacher's professional responsibility descriptions, and Phipps and Osborne's (1988) description of agricultural education teacher's job responsibilities. Using interview data from secondary agricultural education teachers and the literature descriptions, a theoretical structure was determined to represent secondary agricultural education teacher duties. The three areas of classroom/lab instruction, SAE & FFA, and administrative/professionalism represent this triarchic structure.

A total of 156 statements were pooled together from interviews, the research, and literary sources. The researcher categorized the statements into the three areas based on the theoretical structure. A panel of secondary agricultural education teachers reviewed all 156 statements for the following criteria: (1) representation of the construct; (2) non-redundant statements; (3) full range of opinions or ideas represented in the construct; and (4) use of language familiar among agricultural education teachers. Content analysis of all statements produced twelve statements for each category in classroom/lab instruction, FFA/SAE, and administration/professionalism.

Table 1
Q-sort Statements

1. Develop unique educational opportunities for special population students.
2. Develop good working relationships with other teachers, staff, and administrators.
3. Infuse employability skills/workplace applications throughout the curriculum.
4. Utilize curriculum, materials, and resources that are culturally sensitive and free from gender bias.
5. Create and manage an attractive and functional learning environment.
6. Incorporate a variety of teaching methods into instruction.
7. Integrate more computer/technology based materials into the curriculum.
8. Identify each student's learning style and individualize instruction accordingly.
9. Collaborate with other academic and vocational teachers.
10. Connect classroom lesson plans with work-site learning & on-the-job experiences.
11. Assist students to use available resources in solving problems, decision-making and critical thinking.
12. Utilize quality student assessment strategies.
13. Plan and assist with the chapter FFA program of activities.
14. Coach a variety of Career Development Event teams (judging teams).
15. Direct all FFA community service projects and activities.
16. Supervise all student SAE projects.
17. Participate in FFA activities at sectional, regional, and state levels.
18. Coordinate annual FFA chapter banquet.
19. Assist students with their recordbooks.
20. Infuse school-to-work concepts into student organization activities.
21. Assist students with their projects at livestock show.
22. Direct livestock selection for students' projects.
23. Encourage students to participate in FFA activities.
24. Showcase student achievements.
25. Expand recruitment strategies to reach all student populations.
26. Modify programs to meet local job opportunities.
27. Conduct follow-up studies to track former students.
28. Maintain effective advisory committee meetings throughout the year.
29. Attend school board meetings on a regular basis.
30. Search for grants and funding for program enhancement.
31. Continue formal education and other professional development opportunities.
32. Complete self-assessment processes and plan for modification.
33. Participate periodically in business and industry experiences.
34. Provide leadership in professional organizations.
35. Write articles for professional publications.
36. Network at every possible opportunity about the program.

A panel of secondary agricultural education teachers pilot tested the Q-sort. As a result of the pilot study, modifications were made to enhance clarity and simplify statements to improve the instrument's readability. The statements were placed on cards to be sorted according to the Q-sort form board, which was constructed with a range of nine columns with frequencies of 2 - 4 - 4 - 5 - 6 - 5 - 4 - 4 - 2.

The researcher administered the Q-sort to individual teachers during August and September 1998. After consent forms were secured, the researcher proceeded with an oral presentation. Conditions of Instruction/Record Sheets were distributed and each subject was instructed to complete the six demographic questions before proceeding to the next part. The subjects were instructed to sort the statements based on two conditions of instruction: 1) "What is your actual job like?" and, (2) "What would you want your ideal job to be like?" Teachers began by forming a three pile general sort for the first condition of instruction.

Statements most like their job were placed in a pile on the right. Statements most unlike their job were placed in a pile on the left. Statements that fell in between or had no particular meaning to the subject were placed in a center pile. When this process was completed, teachers moved the statements from the three piles onto the Q-sort form board were given oral directions based on a particular order. The order to the statements chosen from each pile was based on the distribution of spaces on the Q sort form board, starting with the most like and then the most unlike. Alternating Q-sort statements from each pile working towards the center column of the Q-sort form board.

Once teachers placed each statement on the Q-sort form board, the statement numbers were recorded onto the condition of instruction/record sheet. Subjects were instructed to clear the boards in preparation for the second condition of instruction - "What would you want your ideal job to be like?" Instructions were repeated as for the first condition of instruction.

After the second condition of instruction was completed, the subjects recorded their answers for the post Q-sort summary question on their condition of instruction/record sheet. Upon completion of answering the post Q-sort summary question, the researcher also collected field notes during the interview. Initially, a cassette tape recorder

Table 3
Factor 1: Intracurricular-oriented Q-sort Grid

| | | | | | | | | | | |
|----------------|------|------|------|------|-----|------|------|------|------|--------------|
| | | | | 31 | | | | | | |
| | | | 36 | 3 | 11 | | | | | |
| | 1 | 33 | 8 | 34 | 30 | 6 | 16 | | | |
| | 7 | 4 | 26 | 25 | 2 | 22 | 19 | | | |
| 24 | 27 | 10 | 20 | 12 | 15 | 14 | 13 | 23 | | |
| 35 | 29 | 32 | 9 | 28 | 5 | 21 | 18 | 17 | | |
| Most Unlike | (-4) | (-3) | (-2) | (-1) | (0) | (+1) | (+2) | (+3) | (+4) | Most Like |

The Q-sort statement items distinguishing the Academic-centered indicated the position of the Q-sort statements was quite different from the position of the statements on any of the other theoretical factor arrays. This factor clustered around statements dealing with responsibilities related to classroom instruction, student learning styles, and student achievement.

Most-like statements representing respondents' beliefs included: (6) Incorporate a variety of teaching methods into instruction; (8) Identify student learning styles & individual instruction; (17) Participate in FFA activities at sectional, regional, & state levels; (30) Showcase student achievements; (31) Continue formal education and other professional development opportunities; and (23) Encourage students to participate in FFA activities.

Table 4
Factor 2: Academic-centered Q-sort Grid

| | | | | | | | | | | |
|----------------|------|------|------|------|-----|------|------|------|------|--------------|
| | | | | 9 | | | | | | |
| | | | 20 | 25 | 36 | | | | | |
| | 35 | 16 | 34 | 19 | 2 | 3 | 17 | | | |
| | 4 | 12 | 33 | 13 | 14 | 11 | 30 | | | |
| 29 | 27 | 18 | 28 | 7 | 1 | 24 | 31 | 6 | | |
| 22 | 21 | 32 | 15 | 10 | 24 | 5 | 23 | 8 | | |
| Most Unlike | (-4) | (-3) | (-2) | (-1) | (0) | (+1) | (+2) | (+3) | (+4) | Most Like |

The Q sort statement items distinguishing the vocational-based indicated the position of the Q-sort statements was quite different from the position of the statements on any of the other theoretical factor arrays. This factor clustered around statements dealing with responsibilities related to community activities, involvement with local businesses and industries, work place skills, and learning experiences.

Most like statements representing the respondents beliefs included: (10) Coordinate meaningful work-site learning/job shadowing/on-the-job training/practicum experience; (2) Develop good working relationships with other teachers, staff, and administrators; (26) Modify program to meet local job opportunities; (17) Assist students with their recordbooks; and (33) Participate periodically in business & industry experiences.

Table 5
Factor: 3 Vocational-based Q-sort Grid

| | | | | | | | | | | |
|----------------|------|------|------|------|-----|------|------|------|------|--------------|
| | | | | 7 | | | | | | |
| | | | 1 | 28 | 11 | | | | | |
| | 4 | 31 | 30 | 27 | 3 | 23 | 2 | | | |
| | 29 | 15 | 24 | 17 | 20 | 16 | 26 | | | |
| 34 | 14 | 18 | 25 | 9 | 32 | 13 | 19 | 10 | | |
| 35 | 36 | 5 | 8 | 22 | 12 | 6 | 33 | 21 | | |
| Most Unlike | (-4) | (-3) | (-2) | (-1) | (0) | (+1) | (+2) | (+3) | (+4) | Most Like |

The NRC report revealed that teachers placed less emphasis on delivering agricultural instruction in the classroom, updating curricula, or involving the business community in the vocational agriculture program (NRC, 1988). Also, the FFA component tended to dominate the entire secondary agricultural education program.

Secondary agricultural education teachers have changed their perspective from the focus of the FFA to other aspects of the program since 1988. Based on the findings of this study, teachers were concerned about being better

classroom teachers and being involved with business, industry and community needs. They believed their real job was intracurricular-oriented (SAE/FFA) but, they revealed that their ideal job was to be more academic-centered and strive to be a better classroom teacher. Some teachers stated they lacked time to be an effective classroom teacher or they viewed themselves as a poor classroom teacher because of the demands from FFA and SAE activities.

Implications/Discussion

This study revealed secondary agricultural education teachers hold varying perceptions of what is important regarding their job responsibilities. Types of opinions at issue for teachers varied on items associated with classroom/lab instruction, FFA & SAE activities, and professional/administrative duties. Three theoretical factor arrays were generated and each illustrated a teacher profile.

Phipps and Osborne (1988) and Scrivens (1997) described job responsibilities defined as the theoretical foundation for this study. Q method was used to determine respondents' opinions about their job responsibilities. The triarchic structure represented three areas of a secondary agricultural education program, which include: classroom/lab instruction, SAE & FFA, and administrative/professionalism. The results of the findings yielded three profiles: intracurricular-oriented, academic-centered, and vocational-based.

Factor 1: Intracurricular-oriented

Most female teachers from the Central region believed their real job focused on being intracurricular-oriented, but viewed their ideal job to be academic-centered. Female teachers viewing their real job as intracurricular-oriented had between three and six years of teaching experience and ranged in age from 28 to 41 years. Some male teachers viewed both their real job and their ideal job to be the same and typically were employed in large teacher sized departments.

Other teachers felt that the FFA and SAE activities were overly demanding of their time and consumed a majority of classroom instruction time. Most were concerned about being or becoming better classroom teachers.

Some teachers believed the FFA and SAE components of the program were based on meeting the criteria for the California Agriculture Incentive Grant. They needed to meet the criteria which allotted money to the program. Teachers viewed incentive grant money driving the program and believed they had no choice in determining how much time should be spent on FFA and SAE activities. Furthermore, some teachers believed the measure of success, as viewed by their peers, was the number of FFA/SAE competitive events their students were involved in and/or won. Those reactions indicated teachers felt the need to compete in many FFA activities and SAE, but they would prefer to have their own choice.

Factor 2: Academic-centered

Most female San Joaquin teachers viewed their real job to be academic-centered and most female Central region teacher viewed their ideal job to be academic-centered. Most female teachers in the study were under 40 years of age. This indicated that there are philosophical differences between female teachers in the Central and San Joaquin regions. Overall, most of the female agriculture teachers viewed their real and ideal jobs to be more academically focused with less emphasis in the SAE and FFA components of the program. They believed academics to be more important to students than the intracurricular activities.

The teachers tended to put emphasis and concern on being a better classroom teacher. They seemed to strive for a balanced program incorporating FFA and SAE experiences to enhance classroom instruction, rather than the intracurricular activities dominating the program.

Factor 3: Vocational-based

Typically, male teachers from multiple teacher departments in the Central region having more than 20 years of teaching experience viewed their real job to be vocational-based. Male teachers in the San Joaquin region with 27 to 32 years of teaching experience and employed in large teacher departments viewed their ideal job to be vocational-based. This indicated that older male teachers perceived the focus of the program to incorporate community service, meet local business needs and provide students with job skills. In comparing these teachers' viewpoint to agricultural education of the 1990's it could be concluded that older teachers still hold the 1970's and 1980's perception of their programs. The changes that have occurred to secondary agricultural education in the 1990's seem to draw away from the vocational aspect of the 1980's and 1970's era. Teachers felt that being involved in the community was important, but there has been less emphasis on community service activities which these older teachers still felt was an important aspect of their job.

The secondary agricultural education teachers agreed their job responsibilities existed in the three profiles. They shared common job responsibilities among the triarchic structure, but held a different viewpoint about the realm of their profession.

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