

Problems Facing Beginning Agriculture Teachers

Brian E. Myers, University of Florida
James E. Dyer, University of Florida
Shannon G. Washburn, University of Florida

Abstract

One of the most pressing issues facing agricultural education as a profession is the shortage of qualified teachers to fill existing and future secondary agricultural education programs (Camp, Broyles, & Skelton, 2002; Connors, 1998). This shortage is perpetuated by at least two major factors. First, agricultural teacher education programs at colleges and universities are not graduating an adequate number of individuals to fill all available positions. Secondly, a large number of agriculture teachers leave the profession early in their careers (Camp et al.). In many cases teachers who leave the profession early feel that they are ineffective due to being overwhelmed (Bennett, Iverson, Rohs, Langone, & Edwards, 2002).

The purpose of this study was to develop a consensus listing of the major problems facing beginning agricultural education teachers. By gaining a better understanding of the major problems beginning agricultural education teachers face, pre-service teacher education programs in agricultural education as well as professional development programs for current teachers of agriculture and be adapted.

This study utilized the Delphi method to develop this listing of major problems. An expert panel of teacher with three or less years of experience was established. This panel identified eleven major issues facing beginning agriculture teachers. The top five, as rated by the beginning teachers, were organizing an effective alumni chapter, organizing an effective advisory committee, organizing and planning FFA chapter events and activities, the management of student discipline in the classroom, and recruiting and retaining alumni members.

Introduction

One of the most pressing issues facing agricultural education as a profession is the shortage of qualified teachers to fill existing and future secondary agricultural education programs (Camp, Broyles, & Skelton, 2002; Connors, 1998). This shortage is perpetuated by at least two major factors. First, agricultural teacher education programs at colleges and universities are not graduating an adequate number of individuals to fill all available positions. Secondly, a large number of agriculture teachers leave the profession early in their careers (Camp et al.). In many cases teachers who leave the profession early feel that they are ineffective due to being overwhelmed (Bennett, Iverson, Rohs, Langone, & Edwards, 2002).

A number of studies have been conducted in agricultural education to identify the professional development needs of both secondary agricultural education teachers in general, and beginning agriculture teachers specifically. One common issue identified by beginning teachers is classroom and behavior management (Joerger, 2002; Joerger & Boettcher, 2000; Mundt, 1991; Mundt & Connors, 1999; Shippy, 1981; Talbert, Camp, & Heath-Camp, 1994; Veenman, 1984). Other issues include motivating students to learn (Garton & Chung, 1996, 1997; Joerger, 2002; Mundt & Connors, 1999; Veenman, 1984), preparing FFA applications and preparing for FFA events (Birkenholz & Harbstreet, 1987; Edwards & Briers, 1999; Garton & Chung, 1996, 1997; Joerger, 2002), and working with agricultural education support groups (i.e., alumni, advisory committee, and parents) (Edwards & Briers, 1999; Garton & Chung, 1996; Joerger, 2002; Mundt & Connors, 1999).

Overall, the literature base indicates that most of the issues and/or needs of beginning teachers of agriculture deal with the classroom instruction component of the complete agricultural education program. In general, beginning teachers have felt more comfortable and competent in working with the FFA component (Birkenholz & Harbstreet, 1987; Garton & Chung, 1996, 1997; Joerger, 2002).

Joerger (2002) and Birkenholz and Harbstreet (1987) noted that there is a lack of consensus among beginning agriculture teachers concerning their professional development needs. They opined that this lack of agreement is precipitated by the wide variety of situations in which the beginning teacher finds himself or herself. Joerger recommended that an assessment of the needs of beginning agricultural education teachers be conducted on a regular basis. He further recommended that the information gathered from this routine assessment be used to design professional development programs for beginning teachers of agriculture.

Whereas great variability has been reported in the issues and/or needs of beginning agriculture teachers, additional research in this area is needed for the profession as a whole to gain a better understanding of the problems facing beginning teachers. The understanding of these problems is a critical first step in improving the retention rate of new teachers. Heath-Camp and Camp (1990) reported that 15% of new vocational teachers leave the profession after the first year and that almost 50% leave within six years. Other researchers (Garton & Chung, 1996; Mundt & Connors, 1999) have shown that by understanding the problems facing beginning teachers, university faculty and state agricultural education staff can modify pre-service programs and develop inservice programs to address these issues.

This study was guided by motivation-hygiene theory (Herzberg, Mausner, & Snyderman, 1959). Herzberg defined hygiene factors as those items when adequate in a job, placate workers. It is the presence of these problems or hygiene factors, which can cause dissatisfaction. Berns (1990) suggested that this dissatisfaction could lead to teachers of agricultural education leaving the profession.

Purpose and Objective

The purpose of this study was to develop a consensus listing of the major problems facing beginning agricultural education teachers. The main objective of this study was to identify the major problems facing agriculture teachers as they begin their careers. An expert panel of beginning agriculture teachers was used to complete the objective of the study.

Methods/Procedures

This statewide study used the Delphi technique to identify problems that beginning agriculture teachers face in their first three years as a teacher. Delp, Thesen, Motiwalla and Seshadri (1977) described the Delphi technique as a group process used to solicit, collate, and direct expert responses toward reaching consensus. Helmer (1966) described the Delphi technique as a method of substituting computed consensus for an agreed-upon majority opinion.

The population for this study consisted of 41 beginning secondary teachers of middle and high school agriculture in a southern state. Stufflebeam, McCormick, Binkerhoff, and Nelson (1985) noted the Delphi technique is especially effective in obtaining consensus among a purposively selected group of experts. In this instance, the individuals who have the needed information (e.g., the “experts”) were considered to be the beginning teachers themselves. Dalkey (1969) stated that the reliability was greater than .80 when Delphi group size was larger than 13.

The study used a series of three mailed questionnaires. Moore (1987) noted that a series of mailed questionnaires was the typical methodology of the Delphi technique. The first round of the study used a questionnaire with the open-ended question: “What are the major problems faced by beginning teachers of agriculture?” An open-ended question was used to facilitate the generation of a wide array of response categories. Responses were then categorized by the researchers to produce items for a second round questionnaire. Questionnaires were validated using a panel of university teacher educators and agriculture teachers not included in the study. Fifty areas were identified as being problematic from round one and from a review of the literature base.

In the second questionnaire, respondents were asked to rate the items identified in round one on a five-point Likert-type scale (1 = Strongly Disagree, 2 = Disagree, 3 = Uncertain, 4 = Agree, 5 = Strongly Agree). From second-round responses the list of categories was reduced to 17.

The third questionnaire sought to determine consensus. Panel members were asked to indicate whether they agreed or disagreed with each of the 17 statements, and to provide

comments if they could not agree with the summary findings. Consensus was reached on 11 of the 17 items in this round. As noted by McCampbell and Stewart (1992), most Delphi studies reach consensus at the third round.

Analysis of Data

Data were analyzed using descriptive statistics. Data collected using Likert-type scales were treated as interval data and reported as means and standard deviations for classification purposes (Clason & Dormody, 1994). Nominal data were reported using frequencies and percentages.

Results

The single objective of this study sought to identify the problems facing beginning agriculture teachers. To accomplish this objective a Delphi technique of obtaining group consensus was used. As with all Delphi studies, the first round of the study used a questionnaire with an open-ended question to produce a wide array of response categories. Twenty-one respondents replied to the question, meeting Dalkey's (1969) requirement of a minimum of 13 usable responses. Twelve major categories of problems were identified in the first round (see Table 1). No single category was identified by all respondents as a problem they faced as a beginning teacher.

The most commonly identified category of problems dealt with classroom and behavior management of students. Thirteen of the twenty-one respondents identified this as a major problem faced by beginning teachers. Advising the local FFA chapter was also identified as a major problem that beginning teachers must address. Other major problems identified by a number of beginning teacher include: curriculum development and lesson planning, managing paperwork and finances, working with parents, teachers, and administrators, time and stress management, lack of resources and management of resources, and recruitment of students and alumni.

Table 1

Round One: Major Problems Faced by Beginning Agriculture Teachers (n = 21)

Problem	Responses
Behavior/Classroom management	13
Advising the FFA chapter	12
Curriculum development & lesson planning	11
Managing paperwork and finances	9
Working with parents, teachers, and administrators	8
Time & stress management	6
Lack of resources / management of resources	5
Recruitment of students and alumni	5
Working with special needs students	3
Lack of professional development opportunities	1
Obtaining certification	1
Lack of knowledge on liability	1

In round two of this study, respondents were asked to rate their level of agreement on 50 Likert-type items that were developed based on the individual statements made by respondents in round one and by consulting previous research conducted in this area (Garton & Chung, 1996, 1997; Mundt & Connors, 1999). Respondents were asked to make comments on statements found on the questionnaire and/or include additional statements.

As in round one, 21 beginning teachers completed and returned the round two questionnaire. Results of round two are displayed in Table 2. It was determined a priori that all items with means equal to or greater than 3.50 would be retained for round three. Seventeen items from the questionnaire were retained for the next round.

The highest level of agreement in this round was reached on “lack of preparation time at beginning of school year” ($M = 4.10$). Also having a mean greater than 4.0 were the statements “being technically competent in all areas of agriculture” ($M = 4.05$) and “management of student discipline in the classroom” ($M = 4.05$).

Interestingly, “management of student discipline” was rated near the top of the list of problems in this round, whereas a related item, “development of classroom rules,” was rated near the bottom ($M = 2.67$) and “developing classroom procedures” was rated near the middle ($M = 3.05$) of the list of problems. Furthermore, beginning teachers disagreed that developing working relationships with state agricultural education staff, school administrators, school guidance counselors, other teachers in their schools, and other agriculture teachers were problems faced by beginning teachers. These statements had means ranging from 2.57 to 2.86.

As indicated by the high standard deviations, much variability existed in levels of agreement. Round two standard deviations ranged from a low of .77 for “supervising students in laboratory activities” ($M = 3.24$) to a high of 1.39 for “dealing with the reputation (positive or negative) of the previous agriculture teacher” ($M = 3.60$), indicating that some items are problems in virtually all programs, whereas others are program-specific.

Table 2

Round Two: Level of Agreement with Problems Facing Beginning Agriculture Teachers (n = 21)

Problem	M	SD
Lack of preparation time at beginning of school year	4.10	1.09
Being technically competent in all areas of agriculture	4.05	1.16
Management of student discipline in the classroom	4.05	.80
Balancing work and personal life	3.95	1.32
Making ESE/Special education accommodations	3.90	1.04
Organizing an effective alumni chapter	3.76	.89
Lack of structured curriculum for specific courses	3.76	.83
Time management	3.76	.94
Managing stress	3.76	1.14
Organizing and planning FFA chapter events and activities	3.75	1.07
Recruiting and retaining alumni members	3.70	.98

(table continues)

Table 2 (continued)

Problem	M	SD
Dealing with the reputation (positive or negative) of the previous agriculture teacher	3.60	1.39
Organizing an effective advisory committee	3.57	1.03
Completing school paperwork	3.57	1.08
Completing teacher certification	3.52	1.25
Developing a well rounded program	3.52	.98
Completing FFA paperwork	3.48	1.08
Organizing and managing the facility	3.43	.98
Recruiting business partners	3.43	.98
Working with parents of students	3.40	.94
Preparation of FFA Career Development Event teams	3.38	.97
Adjusting to individual student needs (i.e., learning styles, special education needs)	3.38	.86
Acquiring current educational resources	3.33	1.06
Keeping agricultural department and/or FFA financial records	3.33	1.02
Developing a department and/or FFA budget	3.33	.86
Learning to prioritize	3.29	1.01
Developing lesson plans	3.29	1.06
Supervising students in laboratory activities (i.e., greenhouse, land labs, agriscience laboratory, etc.)	3.24	.77
Recruiting students into the agricultural education program	3.24	.94
Developing relevant Supervised Agricultural Experience (SAE) programs for students	3.22	1.00
Managing relevant Supervised Agricultural Experience (SAE) programs for students	3.19	1.03
Lack of knowledge on liability	3.19	1.21
Organizing and completing effective FFA fundraising activities	3.19	1.03
Dealing with students taking agriculture courses only for science credit	3.05	1.32
Recruiting non-traditional students into the program	3.05	1.12
Developing classroom procedures	3.05	.97
Allowing time for professional development activities	2.95	1.12
Planning daily activities	2.95	.97
Developing a working relationship with university faculty	2.95	1.20
Keeping up with technology	2.90	1.22
Integrating science into the agriculture curriculum	2.90	1.17
Developing a working relationship with state agricultural education staff	2.86	1.20
Developing a working relationship with school administrators	2.86	1.24
Identifying the focus of the FFA chapter	2.86	.91
Developing a working relationship with school guidance counselors	2.76	1.30
Developing a working relationship with other teachers in the school system	2.70	1.17
Developing classroom rules	2.67	.91
Developing a working relationship with other agriculture teachers	2.57	1.36
Selection of FFA chapter officers	2.55	1.05
Understanding state standards	2.33	.86

In round three of this study participants were asked to provide a dichotomous indication of whether they agreed or disagreed that each of the items listed were problems facing beginning agriculture teachers. As in other rounds, panel members were asked to provide comments if they disagreed with the item as being a problem facing beginning teachers of agriculture, or if the item could be further explained to reach consensus. Twenty-seven of the panel members responded in this round.

Panel members identified eleven items as major problems facing beginning agriculture teachers (see Table 3). The level of consensus was established a priori at 66%. It was determined that if two-thirds of beginning teachers believed an item was a major problem, that issue should be addressed.

No single issue was agreed upon by all panel members as a major problem facing beginning teachers. The highest level of agreement was reached on organizing an effective alumni chapter (85.2%). Over 81% of the panel members agreed that four additional issues were major problems facing beginning teachers. These four issues were: organizing an effective advisory committee, organizing and planning FFA chapter events and activities, the management of student discipline in the classroom, and recruiting and retraining alumni members.

Table 3

Round Three: Level of Agreement with Problems Facing Beginning Agriculture Teachers (n=27)

<u>Problem</u>	<u>% Agree</u>
Organizing an effective alumni chapter	85.2
Organizing an effective advisory committee	81.5
Organizing and planning FFA chapter events and activities	81.5
Management of student discipline in the classroom	81.5
Recruiting and retaining alumni members	81.5
Making ESE/Special education accommodations	77.8
Managing stress	74.1
Balancing work and personal life	70.4
Lack of preparation time at beginning of school year	70.4
Time management	70.4
Developing a well rounded program	66.7
Lack of structured curriculum for specific courses	63.0
Dealing with the reputation (positive or negative) of the previous agriculture teacher	61.5
Completing school paperwork	59.3
Being technically competent in areas of agriculture pertinent to courses offered in my program	51.9
Preparing materials for a substitute teacher	37.0
Completing teacher certification requirements	37.0

Conclusions/Implications

This study identified eleven major problems faced by beginning agriculture teachers. The top five, as rated by the beginning teachers, were “organizing an effective alumni chapter,” “organizing an effective advisory committee,” “organizing and planning FFA chapter events and activities,” “management of student discipline in the classroom,” and “recruiting and retaining alumni members.” All of these issues were reported in previous attitudinal studies (Birkenholz & Harbstreit, 1987; Edwards & Briers, 1999; Garton & Chung, 1996, 1997; Joerger, 2002; Joerger & Boettcher, 2000; Mundt, 1991; Mundt & Connors, 1999; Shippy, 1981; Talbert et al., 1994).

Major problems facing beginning teachers vary greatly from teacher to teacher. This discrepancy is most likely due to the vast variability of situations beginning teachers find themselves in once they begin teaching. This finding concurs with that of Birkenholz and Harbstreit (1987) and Joerger (2002).

Not all of the problems identified in this study had been identified as problems of beginning teachers in previous studies. Previous research reported the most pressing issues as primarily dealing with classroom issues such as classroom management, curriculum development, and lesson planning (Birkenholz & Harbstreit, 1987; Edwards & Briers, 1999; Garton & Chung, 1996, 1997; Mundt, 1991; Mundt & Connors, 1999; Shippy, 1981; Talbert et al., 1994; Veenman, 1984). Although beginning teachers in these studies listed similar issues to those found in this study, support group issues were a new finding. In fact, three of the top five major problems facing beginning agriculture teachers deal with support groups. These are groups that, by their own definitions, are designed to assist and lighten the load for teachers. This finding has implications for pre-service agriculture teacher education and professional development programs. Beginning teachers may believe that the establishment of an alumni group and advisory council is important, yet not feel as though they have the knowledge to organize and lead the groups. It is recommended that agriculture teacher education programs continue to emphasize the value of advisory groups, and to expand curricula to include information on how to manage such organizations for the greatest benefit for all that are involved. Professional development programs that focus on assisting beginning teachers in establishing support groups should also be established cooperatively among university teacher education programs, state staff in agricultural education, and state FFA alumni organizations. Further research is needed in describing and determining the role and usefulness of support groups in agricultural education.

Support groups such as alumni groups and advisory committees have a long and celebrated history within agricultural education. These groups *can be* a powerful part of the complete agricultural education program. Both agriculture teachers and support group members must be made aware of how they can work together to build and maintain outstanding secondary agricultural education programs.

Recommendations

University teacher education faculty and state staff need to gain a better understanding of how to best address the major problems facing beginning agriculture teachers. By doing so, changes can be made in pre-service teacher education programs and professional development can be delivered to current teachers. Programs to address these issues should be jointly coordinated by university teacher education faculty, state agricultural education staff, and professional teacher organizations. By working cooperatively, it is hoped that limited resources of time and funding could be pooled to have the greatest positive impact.

Further research is also needed to investigate how properly addressing these problems affects the teacher retention and teacher shortage problems. Anecdotal evidence would suggest that assisting beginning agriculture teachers address the major problems they face would positively affect teacher retention, however, empirical studies are needed to investigate their effectiveness. These evaluations should measure the effectiveness of programs designed to assist beginning teachers in addressing problems, and what effect this assistance had on beginning teachers' decision to stay in the profession. Furthermore, studies investigating the impact knowledge of such beginning teacher support programs have on pre-service teachers' decision to enter the profession are also warranted. These investigations should be conducted on a state-wide as well as national level. Doing so would allow the profession to gain greater insight on any trends that might appear.

References

- Bennett, P. N., Iverson, M. J., Rohs, F. R., Langone, C. A., & Edwards, M. C. (2002). *Job satisfaction of agriculture teachers in Georgia and selected variables indicating their risk of leaving the teaching profession*. Paper presented at the Southern Agricultural Education Research Conference, Orlando, FL.
- Berns, R. G. (1990). *The relationship between Vocational Teacher job satisfaction and teacher retention using discriminant analysis*. Paper presented at the Annual Convention of the American Vocational Association, Cincinnati, OH.
- Birkenholz, R. J., & Harbstreit, S. R. (1987). Analysis of the inservice needs of beginning vocational agriculture teachers. *The Journal of the American Association of Teacher Educators in Agriculture*, 28(1), 41-49.
- Camp, W. G., Broyles, T., & Skelton, N. S. (2002). *A National Study of the Supply and Demand for Teachers of Agricultural Education in 1999-2001*. Blacksburg, VA: Virginia Polytechnic Institute and State University.
- Clason, D. L., & Dormody, T. J. (1994). Analyzing data measured by individual Likert-type items. *Journal of Agricultural Education*, 35(4), 31-35.

- Connors, J. J. (1998). A regional Delphi study of the perceptions of NVATA, NASAE, and AAAE members of critical issues facing secondary agricultural education programs. *Journal of Agricultural Education, 39*(1), 37-47.
- Dalkey, N. C. (1969). *The Delphi method: An experimental study of group opinion*. Santa Monica: The Rand Corporation.
- Delp, P., Thesen, A., Motiwalla, J., & Seshadri, N. (1977). *Delphi: system tools for project planning*. Columbus: National Center for Research in Vocational Education, The Ohio State University.
- Edwards, M. C., & Briers, G. E. (1999). Assessing the inservice needs of entry-phase agriculture teachers in Texas: A discrepancy model versus direct assessment. *Journal of Agricultural Education, 40*(3), 40-49.
- Garton, B. L., & Chung, N. (1996). The inservice needs of beginning teachers of agriculture as perceived by beginning teachers, teacher educators, and state supervisors. *Journal of Agricultural Education, 37*(3), 52-58.
- Garton, B. L., & Chung, N. (1997). An assessment of the inservice needs of beginning teachers of agriculture using two assessment models. *Journal of Agricultural Education, 38*(3), 51-58.
- Heath-Camp, B., & Camp, W. G. (1990). Induction experiences and needs of beginning vocational teachers without teacher education backgrounds. *Occupational Education Forum, 19*(1), 6-16.
- Helmer, O. (1966). *Social technology*. New York: Basic Books.
- Herzberg, F., Mausner, B., & Snyderman, B. (1959). *The motivation to work*. New York: John Wiley.
- Joerger, R. M. (2002). A comparison of the inservice education needs of two cohorts of beginning Minnesota agricultural education teachers. *Journal of Agricultural Education, 43*(3), 11-24.
- Joerger, R. M., & Boettcher, G. (2000). A description of the nature and impact of teaching events and forms of beginning teacher assistance as experienced by Minnesota agricultural education teachers. *Journal of Agricultural Education, 41*(4), 106-117.
- McCampbell, W. H. & Stewart, B. R. (1992). Career ladder programs for vocational education: Desirable characteristics. *Journal of Vocational Education Research, 17*(1), 53-68.
- Moore, C. M. (1987). *Group techniques for idea building*. Newbury Park: Sage Publications.
- Mundt, J. (1991). The induction year - A naturalistic study of beginning secondary teachers of agriculture in Idaho. *Journal of Agricultural Education, 32*(1), 18-23.

- Mundt, J. P., & Connors, J. J. (1999). Problems and challenges associated with the first years of teaching agriculture: A framework for preservice and inservice education. *Journal of Agricultural Education*, 40(1), 38-48.
- Shippy, R. D. (1981). Professional competencies needed by beginning teachers of agriculture/agribusiness. *The Journal of the American Association of Teacher Educators in Agriculture*, 22(1), 29-34.
- Stufflebeam, D. L., McCormick, C. H., Binkerhoff, R. O., & Nelson, C. O. (1985). *Conducting educational needs assessments*. Boston: Kluwer Nijhoff Publishing.
- Talbert, B. A., Camp, W. G., & Heath-Camp, B. (1994). A year in the lives of three beginning agriculture teachers. *Journal of Agricultural Education*, 35(2), 31-36.
- Veenman, S. (1984). Perceived problems of beginning teachers. *Review of Educational Research*, 54(2), 143-178.