PROFESSIONAL ROLES AND RESPONSIBILITIES OF INDUCTION TEACHERS: AN ASSESSMENT OF TEACHING COMPETENCIES IN FIRST YEAR TEACHERS

Abstract

The purpose of this study was to identify challenges faced by induction-year teachers in Texas. Mean weighted discrepancy scores were used to determine teaching competencies that are most challenging. The target population for the study was induction teachers in Texas during the 2005-2006 school year (N = 98). A census was conducted and 73 teachers responded resulting in a 77% response rate. Data were collected using an electronic questionnaire administered over the internet. The questionnaire contained three parts. Part one sought to determine teachers perceived level of importance of 44 teaching competencies representing five effective teaching competency categories. Part two of the instrument sought to determine the teachers perceived level of preparation on the same competencies and categories. The final section of the instrument sought to describe demographic characteristics of participants. Mean weighted discrepancy scores were calculated to identify priority concerns for teacher competencies and categories.

Introduction

Education has been frequently described as a profession that eats its young (Halford, 1998). The cannibalistic reputation has been earned by the alarming rate at which the profession looses teachers in the early career stages. As many as 15% of new teachers leave the profession during the first or second year (Darling-Hammond, 1997). As many as half of all teachers reportedly leave by the end of their sixth year (Marso & Pigge, 1997). The complexity of this issue has been compounded by legislative reform challenging school districts to provide "highly qualified" teachers. Even more alarming is the trend that those with the most potential for success are among the most likely to leave the profession (Rosenholtz, 1989).

As researchers have studied the phenomena surrounding the early careers of teachers, we have seen a shift in language and thought (Lawson, 1992). Early career teachers have been frequently referred to as beginning teachers, a term that referenced merely a point in a career. More common today is the term induction-year teacher, indicating the early years are a process of transformation from program graduate to member of a profession. With the growing recognition of the impact of teacher induction, our approach has moved from a "sink or swim" mentality (Darling-Hammond & Sclan, 1996) to providing formal induction programs aimed at reducing the attrition rate of new teachers as well as improving the teaching capabilities (Weiss & Weiss, 1999). Glaringly evident in this transition is the importance of the induction experiences of teachers.

As a result of the growing importance placed on the early career experiences of teachers, a variety of research in agricultural education has been focused toward problems related to teacher retention (Walker, Garton, & Kitchel, 2004; Kelsey, 2006;and others), teacher preparation (Dormody & Torres, 2002; Graham & Garton, 2003; and others), induction programs (Joerger & Boetcher, 2000; Greiman, Birkenholz, & Stewart, 2003; Peiter, Terry, & Cartmell, 2003), and problems and challenges (Mundt & Connors, 1999; Roberts & Dyer, 2004; Myers,

Dyer, & Washburn, 2005). The common thread of all of these studies is they have explored the activities, competencies, situations, and opportunities that make secondary agricultural education uniquely challenging. Talbert, Camp, and Heath-Camp (1994) found that agriculture teachers were faced with requirements that were unique to the nature of agriculture programs and not experienced by teachers in other subject areas. Walker, Garton, and Kitchel (2004) concluded that the numerous responsibilities associated with the profession contributed to the decision to leave the profession.

Myers, Dyer, and Washburn (2005) suggested the first steps to improve teacher retention were to understand problems faced by beginning teachers. Early work by Fuller (1969) proposed a developmental framework for evaluating teacher concerns. Fuller suggested that teacher concerns were related to three distinct areas; self, task and impact. According to Fuller's model, as teachers develop, the types of concerns they experience change. Their initial concerns relate to self and deal with issues of confidence and efficacy. As teachers gain confidence, their concerns become more focused on the tasks they are expected to accomplish. Finally, teacher concerns move to questions of impact and are more focused on the growth and success of the student. Hillison (1977) found that first-year teachers began the year initially focused on concerns of self but ended the year focused on concerns related to tasks.

Agriculture teachers require a unique set of competencies. Researches have grouped those competencies into a variety of categories. Shippy (1981) identified 10 competency categories representing 246 teaching competencies. The categories of competencies were program planning, development, and evaluation; planning of instruction; execution of instruction; evaluation of instruction; student vocational organizations; supervised occupational experience; management; guidance; school-community relations; and professional role and development.

Subsequent studies used variations of these groupings either expanding or collapsing the categories. Roberts and Dyer (2004) developed a model of characteristics related to effective teacher behavior. Results of their Delphi process yielded 40 characteristics that an effective agriculture teacher should possess. Those characteristics were categorized into eight groups; instruction, FFA, SAE, community relations, marketing, professionalism/professional growth, program planning/management, and personal qualities. For this study, those categories were compressed to represent five competency groupings: program panning/management, instruction, FFA/SAE, community relations/marketing, and professional growth/responsibilities.

While problems and challenges are not necessarily synonymous with in-service needs, they do seem to be related. Mundt and Connors (1999) stated that problems of first year teachers could be translated to in-service needs. Borich (1980) advocated that a discrepancy model for needs assessment served multiple purposes, including summative evaluation for determining the level at which competencies were obtained. Those competencies that lack appropriate development surface through the needs assessment model as task related concerns (Fuller, 1969).

The literature has provided a rich and consistent insight into competencies of priority for induction teachers, most notably through needs assessments. Researchers in agricultural education have long sought to identify the in-service needs of beginning teachers (Hillison, 1977;

Shippy, 1981; Garton & Chung, 1996; Edwards & Briers, 1999; Layfield & Dobbins, 2002, Duncan, et al., 2006).

The value of these needs assessments may extend beyond programming in-service education and serve to identify those challenges associated with induction teaching. However, competencies assessed are often adjusted to fit the needs of the state model studied. The result is a lack of consistency in the competencies assessed. Garton and Chung (1996) assessed beginning teacher needs in Missouri by comparing importance and competence on 50 teacher related competencies. Findings from the study identified competencies in instruction, program planning, and program administration as areas of high need for in-service development.

Edwards and Briers (1999) compiled 163 teaching related competencies to assess the needs of beginning teachers in Texas. They reported mixed findings on teacher competencies by the type of assessment used. The authors further recommended the use of mean weighted discrepancy rankings for identifying priority competencies.

In a needs assessment of South Carolina teachers, Layfield and Dobbins (2002) evaluated 50 teaching competencies. Their findings supported the work of Garton and Chung (1996), identifying six common competencies as high need. Common competencies between the studies were use of advisory committees, developing SAE opportunities, preparing degree applications, and supervising SAE programs.

Even more recently, Duncan, Ricketts, Peake, and Uessler (2006) used the needs assessment design to assess preparation needs of teachers in Georgia. Sixty-three items focused around three thematic areas; technical agriculture, teaching and learning, and program management. Again, common competencies were identified, such as motivating students to learn, managing student behavior, and preparing award applications. The study additionally revealed priority areas not previously identified, most notably advising students about post-secondary education in agriculture.

Purpose and Objectives

The purpose of this study was to identify challenges faced by induction-year teachers in Texas. The following research objectives were generated to focus and guide the direction of the study.

1. Describe demographic characteristics (age, gender, level of education, program type, future plans for teaching) of induction year teachers.
2. Describe the perceived level of importance, the perceived level of preparation, and the mean weighted discrepancy score for teaching related competencies.
3. Describe the perceived level of importance, the perceived level of preparation, and the mean weighted discrepancy score for teaching competency areas (program planning/management, instruction, FFA/SAE, community relations/marketing, and professional growth/responsibilities).

Methods and Procedures

This study employed a descriptive survey design. The target population for this descriptive survey study was induction-year (first year) teachers in Texas. A frame was developed utilizing membership information from the state professional organization for agriculture teachers. The frame was analyzed for omissions and duplications. A total of 98 subjects were identified. A census was conducted and 73 participants completed the survey instrument for a response rate of 77%. Findings from this study represent the accepting sample (N = 73) and caution should be used in interpreting the findings beyond those who participated.

Data were collected using an internet questionnaire. The internet application was made available to participants during the second week of June, after all aspects of the school year had been completed. Subjects were contacted up to six times using a modification of Dillman's (2002) Tailored Design method. A pre-notice was sent to inform subject of the forthcoming questionnaire and to verify e-mail addresses. Following the pre-notice, subjects were sent an internet link directing them to an online questionnaire. As many as four follow-up reminders were sent to those who had not responded at approximately 7-day intervals. A final contact was made by phone, when possible, to encourage participation in the study.

A thorough review of literature related to needs assessments of beginning teachers led to the development of the survey instrument. Teaching competencies were identified from previous studies (Hillison, 1977, Shippy 1981, Mundt & Connors, 1999; Garton & Chung, 1996; Edwards & Briers, 1999; Roberts & Dyer, 2004; Myers, Dyer, & Washburn, 2005). Competencies were included based on relevance to induction teachers in Texas. The competencies were grouped into the eight categories of effective agriculture teachers (Roberts & Dyer). Several groups were collapsed because of the small number of competencies identified in that area. Forty-four competencies were identified in five modified effective teacher competency categories; program planning/management, instruction, FFA/SAE, community relations/marketing, and professional growth/responsibilities.

The questionnaire contained three parts. Part one consisted of 44 items related to five professional roles. For each individual competency, participants were asked to rate their perception of the importance of that competency on a Likert-type scale ranging from 1 = not important to 5 = very important. Part two of the instrument contained an identical listing of those 44 competencies. For each individual competency, participants were asked to rate their perceived level of preparation for that competency on a Likert-type scale ranging from 1 = not prepared to 5 = very prepared. The final section of the questionnaire contained items that sought to identify demographic characteristics of the participants.

The instrument was reviewed for content and face validity by a panel of experts (n = 7) consisting of teacher educators in agricultural education and practicing secondary agriculture teachers. The instrument was pilot tested with second-year agriculture teachers (n = 22). Reliability analysis of pilot data yielded a Chronbach's alphas ranging from .89 to .96. Descriptive statistics were used to analyze demographic characteristics. Data were described using measures of central tendency and variability.

Objective two was analyzed using mean weighted discrepancy scores (MWDS). The MWDS were calculated for each competency using a three step process. First, discrepancy scores were

determined by subtracting level of preparation from level of importance. Second, discrepancy scores were weighted by multiplying the discrepancy score by the mean level of importance for the item. Finally, weighted discrepancy scores were averaged yielding a MWDS. Items were ranked according the MWDS. Objective three was analyzed by calculating grand means for level of importance, level of preparation, and MWDS for each of the teaching competency areas. Data were analyzed in SPSS v. 14.0.

Findings

The first objective sought to describe demographic characteristics of induction-year teachers. Summary statistics were calculated for each of these attributes (Table 1). The average age of participants was 26 (*SD* = 4.47) and ranged from 22 to 46. There were slightly more males (*n* = 39, 53%) than females (*n* = 34, 47%). Most (*n* = 59, 81%) reported their highest degree earned as a bachelor's degree, while fourteen (19%) had earned a master's degree. Thirty-seven percent (*n* = 27) reported teaching in a single teacher department. The remaining 63 percent indicated they taught in a two teacher (*n* = 31, 43%), three teacher (*n* = 11, 15%), four teacher (*n* = 3, 4%) or five teacher (*n* = 1, 1%) department. A strong majority (*n* = 69, 94%) indicated they planned to continue teaching the next year. Two teachers (3%) indicated they did not plan to teach and two additional teachers (3%) indicated they were undecided at the time data were collected.

Table 1
Demographic Characteristics of Participants (n = 73)

Characteristic	Frequency	Percent	*M*	*SD*	Range
Gender					
Male	39	53			
Female	34	47			
Highest degree earned					
Bachelor's	59	81			
Master's	14	19			
Program type					
Single teacher	27	37			
Multiple teacher	46	63			
Plan to continue teaching					
Yes	69	94			
No	2	3			
Undecided	2	3			
Age			26	4.47	22-46

Objective two sought to describe the perceived level of importance, the perceived level of preparation, and the MWDS for teaching related competencies. Table 2 displays a summary of the mean level of importance, mean level of perception, and MWDS. Individual competencies have been listed by rank order according to the MWDS.

Table 2
Importance, Preparation, and MWDS of Teaching Competencies (n = 73)

Rank	Teaching Competency	Importance[a]	Preparation[b]	MWDS

1	Develop a budget	4.01	2.78	4.95
2	Work cooperatively with parents	4.67	3.64	4.80
3	Recruit students for program	4.63	3.64	4.57
4	Employ a variety of teaching methods	4.75	3.79	4.56
5	Supervise fundraising activities	4.49	3.51	4.43
6	Communicate program information to parents	4.23	3.26	4.12
7	Advise the FFA chapter	4.70	3.84	4.06
8	Work cooperatively with administrators	4.60	3.74	3.97
9	Maintain condition/environment of class and lab	4.71	3.86	3.68
10	Maintain public relations program	4.41	3.60	3.57
11	Assess student learning	4.64	3.88	3.56
12	Assist students in award and degree applications	3.77	2.82	3.56
13	Prepare students for CDE's	4.47	3.68	3.49
14	Teach record keeping skills	3.88	3.03	3.29
15	Integrate SAE/work-based learning into curriculum	4.10	3.29	3.26
16	Organize FFA leadership activities	4.37	3.69	3.17
17	Provide SAE/work-based learning opportunities	4.00	3.27	2.90
18	Conduct a needs assessment	3.68	2.93	2.78
19	Solicit business and industry support	4.00	3.33	2.68
20	Manage tools, supplies, materials, and equipment	4.52	3.93	2.66
21	Establish classroom procedures	4.34	3.74	2.62
22	Work cooperatively with other faculty and staff	4.42	3.88	2.42
23	Develop a program of activities	3.92	3.30	2.42
24	Organize and maintain an advisory committee	3.05	2.38	2.05
25	Conduct SAE visits	4.27	3.81	1.99
26	Address special learning needs	4.12	3.67	1.86
27	Teach and enforce student behavior expectations	4.50	4.04	1.79
28	develop a course outline	4.25	3.84	1.75
29	Analyze course evaluation data	3.51	3.03	1.68
30	Develop performance objectives	4.11	3.71	1.63
31	Participate in professional meetings	4.18	3.85	1.60
32	Integrate academic and technical course elements	3.88	3.49	1.49
33	Participate in school open houses	4.10	3.74	1.46
34	Maintain occupational certifications	4.30	3.97	1.41
35	Select reference materials	3.93	3.58	1.40
36	Prepare instructional areas	4.40	4.10	1.33
37	Participate in staff meetings	3.95	3.69	1.19
38	Join professional organizations	4.21	3.93	1.15
39	Continue formal professional education	4.16	3.90	1.08
40	Perform campus duties	3.76	3.45	0.98
41	Conduct community presentations	3.44	3.38	0.19
42	Create a course syllabus	3.92	3.92	0.00
43	Serve on campus committees	3.18	3.26	-0.26
44	Develop lesson plans	3.95	4.12	-0.70

[a]Scale: 5=Very Important, 4= Important, 3=Somewhat Important, 2=Of little importance, 1=Not Important.
[b]Scale: 5=Very Prepared, 4=Prepared, 3=Somewhat Prepared, 2=Slightly Prepared, 1=Not Prepared.

Of the forty-four competencies, eight of the competencies were rated as very important, 34 competencies were rated as important, and two competencies were rated as somewhat important. The top five competencies ranked by perceived level of importance were employ a

variety of teaching methods (4.75) followed by maintain condition/environment of class and lab (4.71), advise the FFA chapter (4.70), work cooperatively with parents (4.67), and assess student learning (4.64). The five competencies with lowest mean level of importance were organize and maintain an advisory committee (3.05), serve on campus committees (3.18), conduct community presentations (3.44), analyze course evaluation data (3.51), and conduct needs assessment (3.68).

Teachers rated their level of preparation for twenty-nine of the competencies as prepared. Additionally, the level of preparation was rated as somewhat prepared for fourteen items and the level of preparation for one item was rated as slightly prepared. Ranked by perceived level of preparation (Table 2), the top five competencies were develop lesson plans (4.12), followed by prepare instructional areas (4.10), teach and enforce student behavior expectations (4.04), maintain occupational certifications (3.97), and manage tools, supplies, materials, and equipment (3.93). Items ranking the lowest on mean perceived level of preparation were organize and maintain an advisory committee (2.38), develop a budget (2.78), assist with award and degree applications (2.82), conduct a needs assessment (2.93), and analyze course evaluation data (3.03).

MWDS combined perceived levels of importance with levels of preparation to identify the competencies that have the highest weighted difference when average among the sample. Items with higher MWDS are those with the greatest need for development. Seven items had a MWDS of 4.0 or greater indicating the competencies providing the most challenge to induction teachers (Table 2). Develop a budget ranked highest (4.95) followed by work cooperatively with parents (4.80), recruit students for program (4.57), and employ a variety of teaching methods (4.56). Other items ranking above 4.0 were supervise fundraising activities (4.43), communicate program information to parents (4.23), and advise the FFA chapter (4.06).

The third objective sought to identify the grand MWDS for competency categories. Grand means were calculated for level of importance, level of preparation and MWDS of competency categories (Table 3). Instruction had the highest grand mean for level of importance as well as level of preparation. Similarly, professional growth/responsibilities had the lowest grand mean for both level of importance and level of preparation. Competency categories, ranked by grand MWDS, were FFA/SAE (3.26), community relations/marketing (3.14), program planning/management (2.89), instruction (1.79), and professional growth/responsibilities (1.23).

Table 3
Grand Means of Importance, Preparation, and MWDS for Competency Categories (n = 73)

Rank	Teaching Competency	Importance	Preparation	MWDS
1	FFA/SAE	4.20	3.42	3.26
2	Community relations/marketing	4.06	3.32	3.14
3	Program planning/management	4.17	3.48	2.89
4	Instruction	4.24	3.83	1.79
5	Professional growth/responsibilities	4.03	3.74	1.23

Conclusions / Implications / Recommendations

The purpose of this study was to identify challenges faced by induction-year teachers in Texas. Identifying these challenges will enable teacher educators to provide assistance during the induction process. The demographic characteristics are important considerations as strategies are developed to assist teachers. The typical induction-year teacher in the study was 26 years old, had earned a bachelor's degree, taught in a multiple teacher department, and planned to continue teaching. Participants were as likely to be male as female. Relatively few teachers had earned their master's degree, placing the load of preparation on the undergraduate curriculum. As programs reduce credit requirements, the adequate preparation of teachers becomes even more challenging.

The frequency of multiple teacher departments also has implications. Teachers in multiple teacher programs have access to resources single teachers do not. Distributing responsibilities between fellow teachers may ease some of the concerns with induction. Conversely, teachers in single teacher programs need to be adequately prepared to face all facets of program responsibilities. The gender distribution among new teachers is reassuring. Kelsey (2006) indicated women face challenges entering the agriculture teaching profession. Findings from this study suggest women are securing teaching jobs at a near equal rate to men.

The accepting sample in this study overwhelmingly indicated they would continue teaching. The sample represented approximately 77% of induction-year teachers. This suggests induction-teachers are not discouraged from teaching from the challenges faced in their first year. However, some caution should be administered here. This study makes no attempt to generalize beyond the responding sample and only represents teachers that chose to participate. It is likely that teachers who planned not to continue teaching also chose not to participate in the study. Research is needed to investigate teachers who chose to leave the teaching profession.

Information provided by teachers in the study resulted in higher MWDS for seven items. Highest among those was develop a budget, followed by work cooperatively with parents, and recruit students for program. These concerns are not necessarily consistent with priorities in previous studies (Edward & Briers, 1999; Garton & Chung, 1996) yet may reflect the current climate of education. Teachers struggle to justify their financial allocations and struggle with budget expenditures, enrollment, and fundraising. Also evident is the need for positive marketing/public relations and communication with parents.

Lowest competencies according to MWDS were develop lesson plans, serve on campus committees, and create a course syllabus. It is important to note that develop lesson plans was ranked last and had a negative MWDS. One interpretation is that our teacher preparation programs are doing an adequate job of preparing teachers in this area.

Analysis of the areas of teacher competencies revealed the area with largest grand MWDS as FFA/SAE, followed by community relations/marketing. Undoubtedly, the nature of our programs, including FFA and SAE activities, provide challenges unique to agriculture teachers. While single competencies related to FFA/SAE may not reach the top, together they have a cumulative effect. While these topics may be part of the teacher education curriculum, the sequencing of topics may need revision to provide information at a more meaningful time in the program. In addition, teachers need help with priority areas during their induction years of

teaching. Help can come through induction programs, through mentoring arrangements, through in-service development, or through resources provided to teachers. The content of programs or resources should be designed to meet those concerns identified as priorities by induction teachers.

In contrast, professional development/responsibilities ranked last. That ranking was a function of two measures. First, as a group, those competencies received the lowest mean rating for importance. Second, the level of preparation was only lower than that of instruction, leading to the low MWDS. Ranking slightly ahead was the group related to instruction. Arguably, teacher preparation programs focus on these competencies more than any. In this study, teachers identified this area as the highest level of importance and followed with the highest level of preparation. This implies that our teacher preparation programs are meeting expectations for teaching related competencies.

Some concerns arise from the findings of this study. It is alarming that teachers indicated comparatively low levels of importance for such competencies as organizing and managing advisory committees and integrating academic and technical content. A possible explanation might be that teachers are simply unaware of the importance at this stage in their career. A stronger need for proficiency in these competencies may arise as their career progresses.

In 1981, Shippy recommended the periodical evaluation of competency needs. As such, additional research should be conducted to determine the appropriate competencies required of induction teachers. Additional sources should be included to determine competency needs. Inexperienced teachers are not necessarily in a position to recognize areas of greatest concern. Further investigation is needed to explore differences that may exist in priority areas between genders, program type, geographic location, and other characteristics.

References

Borich, G.D. (1980). A needs assessment model for conducting follow-up studies. *Journal of Teacher Education, 31* (3), 39-42.

Darling-Hammond, L. (1997). *Doing what matters most: Investing in quality teaching*. New York: National Commission on Teaching and America's Future.

Darling-Hammond, L., & Sclan, E. M. (1996). Who teaches and why. Dilemmas of building a profession for twenty-first century schools. In J. Sikula, T. J. Buttery, & E. Guyton (Eds.), *Handbook of research on teacher education* (2nd ed., pp. 67-101). New York: Macmillan.

Dillman, D. (2002). *Mail and internet surveys. The tailored design method* (2nd ed.). New York: John Wiley and Sons.

Dormody, T.J. & Torres, R.M. (2002). A follow-up study of agricultural education program graduates on teaching competencies. *Journal of Agricultural Education. 43* (4), 33-45.

Duncan, D.W.; Ricketts, J.C.; Peake, J.B.; & Uessler, J. (2006). Teacher preparation an in-service needs of Georgia agriculture teachers. *Journal of Agricultural Education. 47* (2). 24-35.

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.

Fuller, F.F (1969). Concerns of teachers: A developmental conceptualization. *American Educational Research Journal. 6*(2), 207-226.

Garton, B.G. & 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.

Graham, J.C. & Garton, B.G. (2003). Certification measures: Are they predictive of secondary agriculture teacher performance? *Journal of Agricultural Education. 44* (3), 54-65.

Greiman, B. C., Birkenholz, R. J., & Stewart, B. R. (2003). Providing psychosocial assistance for beginning agriculture teachers: The perception of formal mentors and novice teachers. *Proceedings of the 30th National Agricultural Education Research Conference*.

Joerger, R. & Boetcher, 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), 104-115.

Halford, J. M. (1998). Easing the Way for New Teachers. *Educational Leadership, (55)*5, 33-36.

Hillison, J. (1977). The concerns of agricultural education pre-service students and first year teachers. *Journal of Agricultural Education. 18* (3), 33-39.

Kelsey, K. D. (2006). Teacher attrition among women in secondary agricultural education. *Journal of Agricultural Education. 47* (3) 117-129.

Lawson, H.A. (1992). Beyond the new conception of teacher induction. Journal of Teacher Education, 43 (3), 163-172.

Layfield, K.D. & Dobbins, T.R. (2002). Inservice needs and perceived competencies of South Carolina agricultural educators. *Journal of Agricultural Education. 43* (4), 4655.

Marso, R. N., & Pigge, F. L. (1997). A longitudinal study of persisting and nonpersisting teachers' academic and personal characteristics. *The Journal of Experimental Education, 65*(3), 243-254.

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

Myers, B.E., Dyer, J.E. & Washburn, S.G. (2005). Problems facing beginning agriculture teachers. *Journal of Agricultural Education. 46* (3), 47-55.

Peiter, R.L., Terry, R.Jr., & Cartmell, D.D. (2003b). A state mandated induction program: Mentorship experiences for first year agricultural education teachers. *Proceedings of the 30th National Agricultural Education Research Conference*.

Roberts, T.G. & Dyer, J.E. (2004). Characteristics of effective agriculture teachers. *Journal of Agricultural Education. 45* (4), 82-95.

Rosenholz, S.J. (1989). Workplace conditions that affect teacher quality and commitment: Implications for teacher induction programs. *The Elementary School Journal. 89* (4), 420-439.

Shippy, R.D. (1981). Professional competencies needed by beginning teachers of agriculture/agribusiness. Journal of the Association of Teacher Educators in Agriculture. 22 (1), 29-34.

Talbert, B.A., Camp, B.G., Heath-Camp, G. (1994). A year in the lives of three beginning agriculture teachers. *Journal of Agricultural Education. 35* (2), 31-36.

Walker, W.D., Garton, B.G. & Kitchel, T.J. (2004). Job satisfaction and retention of secondary agriculture teachers. *Journal of Agricultural Education. 45* (2), 28-38.

Weiss, E.M.; Weiss, S.G. (1999). *Beginning teacher induction*. (Eric Document Reproduction Service No. ED 436487).