

BEGINNING AND MENTOR AGRICULTURE TEACHERS' PERCEPTIONS OF PSYCHOSOCIAL ASSISTANCE, SIMILARITIES, AND SATISFACTION

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Abstract

The purpose of the study was to describe the extent to which a formal mentoring relationship met psychosocial needs of beginning agriculture teachers and to describe the extent of satisfaction with the dyad relationship. The accepting sample consisted of Missouri agriculture teachers (n = 40) in their first year of teaching during the 2003-2004 school year, and their formal mentors (n = 40) provided by school districts. Data were collected using the Mentoring Relationship Questionnaire (MRQ) developed by Greiman (2002). This instrument consisted of both a beginning teacher version and mentor version. From the findings of the study it was concluded that formal mentors provide psychosocial assistance to beginning agriculture teachers. Psychosocial assistance was intended to enhance a sense of competence, identity, and effectiveness in beginning teachers and consisted of support encompassing the functions of acceptance, counseling, friendship, role modeling, and social. It was found that beginning agriculture teachers and formal mentors who perceive they are similar to their dyad partner are more likely to have a satisfying mentoring experience. Dyad partners who recognize that they have similar values, attitudes, working styles, and teaching philosophies are more likely to have a positive mentoring experience, successful relationship, and satisfactory interaction.

Introduction

Gerald and Hussar (1998) predicted over two million new teachers will be employed in America's schools by 2008. An increasingly complex society will challenge this group of teachers to be more prepared than ever before (National Center for Education Statistics, 1997a). Unfortunately, first-year teachers are frequently inducted through a sink or swim approach with little support from colleagues and few opportunities for professional development (Darling-Hammond & Sclan, 1996). According to the National Commission on Teaching and America's Future (1996), haphazard induction experiences contribute to high attrition rates and to lower levels of teacher effectiveness. Members of the Association of Teacher Educators (ATE)

rated mentoring beginning teachers as one of the two most critical issues for improving teacher education (Buttery, Haberman, & Houston, 1990)

Nationally, more than half of all teachers leave the profession before the end of their sixth year (Marso & Pigge, 1997). According to Darling-Hammond (1997), the attrition rate (15%) for first and second year teachers is more than double that of the national average (6.6%). These characteristics led Halford (1998) to describe education as a profession that "eats its young" (p. 33). However, Galvez-Hjornevik (1985) found stress incurred by beginning teachers can be reduced by the mentoring relationship. Additionally, this mentoring relationship can help reduce the number of teachers leaving the profession by helping to promote professional

development of new teachers (Odell & Ferraro, 1992). Several studies (Archer, 1999; Fideler & Haselkorn, 1999; Gold, 1996) have confirmed that induction programs and mentorship are effective at retaining qualified teachers.

Several states have developed mentor programs to address the issues associated with beginning teachers. One such state is Missouri. The structure and delivery in Missouri has evolved over the years. The induction program to assist beginning teachers is a result of policy decisions made by state legislators. The 1985 Excellence in Education Act passed by the state legislature required school districts to provide professional development for all teachers, and assign a formal mentor to beginning teachers by September 1988 (Missouri Department of Elementary and Secondary Education [DESE], 1988). Under the structure of this program, beginning teachers were paired with formal mentors from within their school district. Most beginning teachers were matched with mentors outside of their own discipline. In mid 2003, Missouri's DESE mandated that each division of Career and Technical Education provide structure and support for mentor programs (G. Laboube, personal communication, May 18, 2004). The Career and Technical Education program provided beginning agriculture teachers with formal mentors within their discipline.

Formal mentoring programs, like Missouri's model, have emerged as a popular response to the issues of induction teacher support and retention. The growth in popularity of these programs has been paralleled by an emerging degree of concern (Gold, 1996). Little (1990) indicated that these formal programs are often lacking in conceptual understanding characterized by unrealistic expectations and ineffective implementation strategies. Previous studies (Huling-Austin & Murphy, 1987; Ingersoll, 1999) have indicated that beginning teacher commitment did not improve just because a mentor program was in place. Peiter, Terry, and Cartmell (2003a) found, within agricultural education, many first year teachers experience problems and receive no help from a mentor. Beginning teachers often perceive induction programs as a form

of evaluation as opposed to a process of mentoring (Peiter, Terry, & Cartmell, 2003b). According to the National Center for Education Statistics (1997b), further research should be conducted on what distinguishes effective from ineffective induction and assistance programs.

Previous studies have addressed issues of concern among induction year teachers in agricultural education. Most common concerns faced by beginning teachers were found to be issues of classroom management and time management (Joerger & Boettcher, 2000; Mundt, 1991; Mundt & Connors, 1999; Simon, 1989; Simon & Wardlow, 1989; Talbert, Camp, & Heath-Camp, 1994). Studies focusing on mentorship in agricultural education primarily pertained to instructional-related support and challenges associated with the first-year of teaching (Greiman, Birkenholz, & Stewart, 2003). Other studies (Barrera & Finley, 1992; Greiman, Walker, & Birkenholz, 2002; Simon, 1989; Simon & Wardlow 1989) concluded that mentor assistance helped beginning agriculture teachers overcome common first-year problems.

Findings from previous investigations into Missouri's induction and mentorship program have provided an indication of the effectiveness of the program. Early in the history of the program, Wilkinson (1997) reported that one-fourth of new teachers in Missouri were struggling alone without a mentor and a professional development plan during the 1994-1995 school year. Greiman et al. (2002) reported that most first-year teachers had access to formal and informal mentors. It was implied that first-year teachers were utilizing several mentors to assist them during the induction process. According to Greiman et al. (2002), although formal mentors were assigned to provide professional development assistance for first-year teachers, it appeared that informal mentors were more helpful. In the same study, it was found that the majority of the respondents indicated that a teacher within the school district and an agriculture teacher located outside the local school district were more helpful in providing professional development assistance than the formal mentor. In contrast, Greiman et al. (2003)

found that mentors and beginning teachers, overall, were satisfied with the formal mentoring. In that same study, it was concluded that mentors provided psychosocial assistance to beginning agriculture teachers. These studies preceded the 2003 program shift from district to state control.

Theoretical Framework

Beginning teachers experience a variety of issues and challenges during their induction years. Those challenges require an equal variety of support to meet their needs. This support can be categorized as either instructional-related or psychological (Gold, 1996; Stansbury & Zimmerman, 2000). Instructional-related support includes assistance with the knowledge and skill that is necessary to be successful in the classroom and school. Psychological support builds self-concept of the beginning teacher by promoting confidence, developing self-reliance and encouraging feelings of effectiveness and positive self-esteem. This is evident in findings from Simon (1989) indicating that mentors perceived their role to be one of personal assistance and psychological support.

Many research efforts have been directed at identifying characteristics of successful mentoring relationships. Gender, race, length of relationship, and perceived similarity of dyad participants may influence mentoring relationships (Dreher & Cox, 1996; Ragins & Cotton, 1999; Turban, Dougherty, & Lee, 2002). Beginning agriculture teachers and formal mentors who perceive similarities in their relationships are more likely to have a satisfying mentor experience (Greiman et al., 2003). Simon (1989) described mentoring as an informal and naturally occurring process and recommended that mentor-induction programs not become over-formalized. Research from business and management further indicated that informal mentor relationships were more effective than formal relationships (Ragins & Cotton).

Kram (1985) described mentoring as a type of developmental relationship in which mentors provide functions that enhance both

individuals' growth and advancement. According to Kram's mentor role theory; there are two types of functions of a developmental mentoring relationship, career functions and psychosocial functions. This classification provides a theoretical framework in which mentoring relationships may be evaluated. Kram described career functions as "those aspects of a mentoring relationship that enhance learning the ropes and preparing for advancement in an organization" (p. 22). These functions serve primarily to aid in the advancement in an organization, and included sponsorship, exposure and visibility, coaching, protection, and challenging assignments. Psychosocial functions "enhance an individual's sense of competence, identity, and effectiveness in a professional role" (p. 23). Psychosocial functions include acceptance, counseling, friendship, and role modeling. A fifth psychosocial function, social, was later incorporated into the theory (Ragins & McFarlin, 1990). Career functions operate primarily at the organizational level to assist in advancement of the junior colleague, while psychosocial functions affect each individual on the interpersonal level, both inside and outside the organization. Kram suggested that the greater the number of functions provided by the mentor, the more beneficial the relationship will be to the person being mentored.

Perspectives of beginning teachers regarding their induction into the profession are well documented. However, relatively few efforts have investigated the role of the mentor. It has been suggested that similarity of beginning teachers and mentors in the dyad relationship can lead to a more satisfactory experience, but little evidence exists to support that claim. Additionally, little research has been conducted to investigate the psychosocial needs of beginning teachers. Are beginning teachers and formal mentors satisfied with the mentorship component of the induction teacher program?

Purpose and Objectives

The purpose of the study was to describe the extent to which a formal mentoring

relationship met the psychosocial needs of beginning agriculture teachers. An additional focus of the study was to describe the extent to which beginning agriculture teachers and their formal mentors were satisfied with the dyad relationship. The following research questions were addressed in the study:

1. What are the demographic characteristics of beginning agriculture teachers, their formal mentors, and the schools where they taught?
2. To what extent do formal mentors provide assistance to beginning agriculture teachers in meeting their psychosocial needs?
3. What is the relationship between the perceived satisfaction of formal mentoring and the perceived similarity of the dyad relationship?

Procedures

This study was descriptive-correlational in design. The target population for the study was Missouri's agriculture teachers in their first year of teaching during the 2003-2004 school year ($N = 40$), and their formal mentors ($N = 40$). The names of the beginning agriculture teachers and their formal mentors were obtained from the Missouri Department of Elementary and Secondary Education and served as a frame for the study.

Instrumentation

Data were collected using a beginning teacher version and mentor version of the Mentoring Relationship Questionnaire (MRQ) developed by Greiman (2002). The MRQ was developed after reviewing the literature and identifying highly reliable data collection instruments utilized in previous research studies involving mentoring (Kram, 1985; Mundt & Connors, 1999; Ragins & McFarlin, 1990; Turban et al., 2002; Veenman, 1984). Section one of the beginning teacher version of the MRQ asked subjects to identify the extent their formal mentor had provided psychosocial support. This section consisted of 15 statements representing each of the five psychosocial

functions (acceptance, counseling, friendship, role modeling, and social). The function of acceptance described the rate at which the beginning teacher becomes accepted into the profession by the mentor. The function of counseling referred to the extent the mentor served as a sounding board or offered an alternative perspective. Friendship represented the level the beginning teacher can trust and confide in the mentor teacher. The extent to which mentors provided a desirable example that beginning teachers could identify with was represented by the role modeling function. Finally, the social function related to the extent mentors and beginning teachers shared personal experiences as a way to escape the pressures of work.

Participants were asked to identify the extent their mentor performed each of the 15 functions using a 7-point Likert-type scale ranging from 1 = *not at all* to 7 = *very large extent*. A second section of the MRQ required subjects to respond to 10 statements regarding the relationship with their formal mentor. Five items were designed to measure the perceived similarity of the dyad relationship, while five additional items were intended to gain a measure of the perceived satisfaction with formal mentoring. Subjects provided their perceptions using a 7-point Likert-type scale with 1 representing *strongly disagree* and 7 representing *strongly agree*. A third section of the questionnaire asked subjects to supply demographic information regarding their school (number of students, number of teachers) and themselves (age, gender, type of certification). An alternate form of the data collection instrument was developed to collect information from formal mentors of the dyad relationship, and mirrored the beginning teacher form.

Validity of the two forms of the instrument was established through prior research with a panel of experts ($n = 8$), who had an identifiable research focus on mentorship (Greiman, 2002). Reliability estimates for the beginning teacher version of the instrument were reported by Greiman as follows: .97 for psychosocial mentoring functions, .98 for perceived similarity of the dyad, and .99 for perceived satisfaction with the mentoring experience. With regard to

the mentor version of the MRQ, the reliability estimates were as follows: .93 for psychosocial mentoring functions, .96 for perceived similarity of the dyad, and .98 for perceived satisfaction with the mentoring experience.

Data Collection

The data collection process began by sending subjects a pre-notice e-mail message announcing the intent of the study and the forth coming survey packet. Five days later, the survey packet, consisting of a personalized and signed cover letter, questionnaire, and self-addressed, stamped envelope, was mailed to subjects. Ten days after the first mailing, an e-mail reminder notice was sent to nonrespondents further encouraging their participation. A week later, nonrespondents were sent a second packet containing a revised cover letter, a second questionnaire, and a self-addressed, stamped envelope as a reminder to participate in the study. The final contact with nonrespondents was approximately 25 days after the first mailing, and consisted of telephone calls that encouraged the return of the questionnaire. A total of 30 beginning agriculture teachers completed the

questionnaire, resulting in a beginning teacher response rate of 75%. The response rate for the formal mentors was 75%, with 30 instruments completed and returned. An overall response rate of 75% was achieved, resulting in an accepting sample of 60 ($n = 60$). No further effort was made to address non-response bias. All instruments were usable for data analysis. Data were coded and entered into SPSS for the analyses. Measures of central tendency and variability were used to summarize the data.

Findings

The first research question sought to describe the demographic characteristics of formal mentors and the characteristics of beginning agriculture teachers and the schools where they taught. Table 1 displays the demographic characteristics of formal mentors. Twenty-five mentor teachers were male (83%) while only five were female (17%). The average age of formal mentors was 39 years old ($SD = 8.96$) with a range from 25 to 56. Additionally, mentors reported an average of 15 years of teaching experience ($SD = 8.14$). Years of experience ranged from 3 to 29 years.

Table 1
Demographic Characteristics of Formal mentors (n = 30)

| Characteristic | <i>f</i> | % | <i>M</i> | <i>SD</i> | Range |
|---------------------|----------|----|----------|-----------|-------|
| Gender | | | | | |
| Male | 25 | 83 | | | |
| Female | 5 | 17 | | | |
| Age | | | 39 | 8.96 | 25-56 |
| Years of Experience | | | 15 | 8.14 | 3-29 |

Demographic characteristics of beginning teachers and the schools where they taught are displayed in Table 2. The average age of beginning agriculture teachers was 25 years (*SD* = 4.08), with a range of 22 to 45. This resulted in an average age difference of 14 years between beginning agriculture teachers and their

formal mentors. There were almost an equal number of male (*n* = 16, 53%) beginning agriculture teachers as there were female (*n* = 14, 47%). The majority of beginning agriculture teachers (*n* = 27, 90%) were certified to teach at a secondary school, while three (10%) had a temporary teaching certificate.

Table 2
Demographic Characteristics of Beginning Teachers and Their Schools (n = 30)

| Characteristic | <i>f</i> | % | <i>M</i> | <i>SD</i> | Range |
|------------------|----------|----|----------|-----------|--------|
| Gender | | | | | |
| Male | 16 | 53 | | | |
| Female | 14 | 47 | | | |
| Certificate Type | | | | | |
| Permanent | 27 | 90 | | | |
| Temporary | 3 | 10 | | | |
| School Type | | | | | |
| Comprehensive | 21 | 72 | | | |
| Vocational | 9 | 28 | | | |
| Program Type | | | | | |
| Single Teacher | 17 | 59 | | | |
| Multiple Teacher | 13 | 41 | | | |
| Age | | | 25 | 4.08 | 22-45 |
| Enrollment | | | 93 | 64.96 | 14-260 |

Regarding school information (Table 2), most ($n = 21$, 72%) of the beginning agriculture teachers taught in a comprehensive high school rather than an area vocational technical school (AVTS) or career center. The majority ($n = 17$, 59%) of beginning agriculture teachers taught in single-teacher programs, while 41% were located in multiple-teacher departments. There was an average of 93 students enrolled in the agriculture programs of beginning teachers, with a range of 14 to 260 (four-teacher program).

The second research question sought to determine the extent to which formal mentors provided assistance to beginning agriculture teachers in meeting their psychosocial needs. As revealed in Table 3, both beginning teachers and mentors perceived the psychosocial function of

acceptance (beginning teacher $M = 5.54$, mentor $M = 5.90$) to be the function met to the highest extent. The psychosocial functions of counseling (beginning teacher $M = 5.45$, mentor $M = 5.64$), friendship (beginning teacher $M = 5.37$, mentor $M = 5.54$), and role modeling (beginning teacher $M = 4.94$, mentor $M = 5.13$) were identified by each group as being met to a *large extent*. Both groups perceived that the psychosocial needs of beginning agriculture teachers involving the social function (beginning teacher $M = 3.83$, mentor $M = 3.38$) were being met to *some extent*. Formal mentors had a smaller standard deviation for each of the five psychosocial functions indicating a higher level agreement on the extent to which the functions were met when compared to beginning teachers.

Table 3
Extent to Which Mentors Met the Psychosocial Needs of Beginning Teachers as Perceived by Beginning Agriculture Teachers and Formal Mentors

| Psychosocial Function | Beginning Teachers ($n = 30$) | | Formal Mentors ($n = 29$) | |
|-----------------------|---------------------------------|-----------|-----------------------------|-----------|
| | <i>M</i> | <i>SD</i> | <i>M</i> | <i>SD</i> |
| Acceptance | 5.54 | 1.32 | 5.90 | 0.72 |
| Counseling | 5.45 | 1.69 | 5.64 | 0.92 |
| Friendship | 5.37 | 1.76 | 5.54 | 1.03 |
| Role Modeling | 4.94 | 1.85 | 5.13 | 1.02 |
| Social | 3.83 | 2.23 | 3.38 | 2.18 |

Note. 7-point scale (1 = not at all, 3 = some extent, 5 = large extent, 7 = very large extent)

The third research question sought to determine the relationship between the perceived satisfaction of formal mentoring and the perceived similarity of the dyad relationship. As revealed in Table 4, beginning agriculture teachers ($M = 5.41$, $SD = 1.69$) and formal mentors ($M = 5.94$, $SD = 1.09$) *agreed* that overall they were satisfied with formal mentoring (i.e., the relationship had been a positive experience,

they were glad to have had the opportunity to interact, the relationship had been successful, they would want the same dyad partner if having to do it over again, and they were satisfied with the interaction). Respondents (beginning teacher $M = 4.86$, mentor $M = 5.03$) *agreed* that the dyad relationship had similarities (i.e., partner had similar values and attitudes, were alike in a number of areas, had similar working styles,

see things much the same way, and have similar teaching philosophies). Further, it was found that formal mentors ($M = 5.94$, $SD = 1.09$) were more satisfied with mentoring interactions than were beginning agriculture teachers ($M = 5.40$, $SD = 1.69$). In addition, formal mentors ($M = 5.03$, $SD = 1.08$) perceived the dyad relationship to be

more similar than did beginning agriculture teachers ($M = 4.86$, $SD = 1.42$). The perceived satisfaction of formal mentoring was found to have a *very high* positive correlation (Davis, 1971) with the perceived similarity of the dyad relationship for both the beginning agriculture teachers ($r = .82$) and the formal mentors ($r = .85$).

Table 4
Satisfaction with Formal Mentoring and Similarity of Dyad Relationship

| Construct | Beginning Teachers ($n = 30$) | | | Formal Mentors ($n = 30$) | | |
|--|------------------------------------|------|---------------|--------------------------------|------|---------------|
| | M | SD | $r_{x_{1,2}}$ | M | SD | $r_{x_{1,2}}$ |
| Satisfaction with Formal Mentoring (x_1) | 5.40 | 1.69 | .82 | 5.94 | 1.09 | .85 |
| Similarity of Dyad Relationship (x_2) | 4.86 | 1.42 | | 5.03 | 1.08 | |

Note. 7-point scale (1 = strongly disagree, 3 = disagree, 5 = agree, 7 = strongly agree)

Conclusions, Implications, and Recommendations

From the findings of this study, it was concluded that formal mentors provided psychosocial assistance to beginning agriculture teachers, thus supporting research conducted by Kram (1985). In particular, the psychosocial needs of beginning agriculture teachers were being met in the functions of acceptance, counseling, friendship, and role modeling. To a lesser extent, the social function was not being met to the extent the other four psychosocial functions were. This concurs with Greiman, et al., (2003), except the mentors in that study were in the same school as the beginning teacher and were not necessarily agriculture teachers. This implies that the psychosocial needs of beginning agriculture teachers were being provided for in the mentoring relationship.

Beginning agriculture teachers can anticipate formal mentors providing psychosocial support during the induction year of teaching. This support is not dependent upon whether the mentor is in the same school district or a different school district. Additionally, this support is not

dependent upon whether the mentor is a teacher in the agriculture field or from a different field. Knowing this support is available may help to build the self-confidence of beginning teachers as they begin their induction into the profession, and help to reduce the feelings of insignificance and isolation that beginning teachers often experience (Odell & Ferraro, 1992). When a beginning teacher seeks a teaching position, the level of support may be a factor in whether or not beginning teachers want a single- or multi-teacher program. A beginning teacher may seek a multi-teacher program over a single-teacher program if he or she is concerned about not feeling supported or competent during the first year. However, findings of this study are consistent with Greiman, et al., (2003) in that assistance will be available in the form of a mentor, despite the number of teachers in the program.

Beginning teachers and mentor teachers are satisfied with formal mentoring. In addition, it is concluded from this study that beginning agriculture teachers and formal mentors who perceived they are similar to their dyad partner are more likely to have a satisfying mentoring experience. This

conclusion is consistent with previous research suggesting that perceived similarity influenced dyad relationships (Dreher & Cox, 1996; Turban et al., 2002; Greiman et al., 2003). However, this study fails to support Simon's (1989) claim that mentor-induction programs not become over-formalized and that that beginning teachers should be allowed to select their own mentor(s). For this study, the mentor-induction program was formalized and mentors were assigned. Mentors and induction teachers with similar values, attitudes, working styles, and teaching philosophies were more likely to have a positive mentoring experience, successful relationship, and satisfactory interaction. This finding implies the importance of similarity when selecting dyad partners, and presents administrators and mentoring program coordinators with the challenge of making a dyad assignment before the two participants have met and established a rating of similarity.

The first recommendation is to share the findings of this research and that of the Greiman et al. (2003) study with the state agency responsible for the teacher mentoring process. Because both studies produced similar findings, the state agency may now feel it has flexibility in whether or not the mentor is an agriculture teacher or not, or if the mentor is a part of the school district or not. In addition, the state agency should be encouraged to spend time and resources in pairing the mentor with the beginning teacher.

Another recommendation is to investigate the discrepancies in the study indicating that the mentors were more satisfied and perceived the dyad relationship to be more similar than beginning teachers. Identifying the factors that make the mentoring relationship more satisfying to the mentor teacher may help to entice other qualified teachers to seek out professional development opportunities associated with serving as a mentor. Additionally, factors influencing the satisfaction of beginning teachers should be identified. The focus of the mentoring process is on the growth of the beginning teacher. This focus makes it logical to conclude that the beginning teacher should be as satisfied or more

satisfied with the relationship than the mentor.

References

- Archer, J. (1999). New teachers abandon field at high rate. *Education Week*, 18(27), 1-21.
- Barrera, M. A., & Finley, E. (1992). Entry year agricultural education teachers' and entry year assistance committee members' perceptions of the Oklahoma entry year assistance program. *Proceedings of the 19th Annual National Agricultural Education Research Meeting*, 178-184.
- Buttery, T. J., Haberman, M., & Houston, W. R. (1990). First annual survey of critical issues in teacher education. *Action in Teacher education* 12(2), 1-7.
- 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.
- Davis, J. A. (1971). *Elementary survey analysis*. Englewood, NJ: Prentice-Hall.
- Dreher, G., & Cox, T., Jr. (1996). Race, gender, and opportunity: A study of compensation attainment and the establishment of mentoring relationships. *Journal of Applied Psychology*, 81, 297-308.
- Fideler, E., & Haselkorn, D. (1999). *Learning the Ropes: Urban Teacher Induction Programs and Practices in the United States*. Belmont, MA: Recruiting New Teachers.
- Galvez-Hjornevik, C. (1985, April). *Mentoring: A review of the literature with focus on teaching*. Paper presented at the

National Institute of Education (ED), Washington, DC. (ERIC Document Reproduction Service No. ED262032)

Gerald, D. E., & Hussar, W. J. (1998). *Projections of education statistics to 2008*. Washington, DC: U.S. Department of Education, National Center for Educational Statistics, Office of Educational Research and Improvement.

Gold, Y. (1996). Beginning teacher support: Attrition, mentoring, and induction. In J. Sikula, T. J. Buttery, & E. Guyton (Eds.) *Handbook of research on teacher education* (2nd ed.) (pp. 548-594). New York: Macmillan.

Greiman, B. C. (2002). Providing professional and psychosocial assistance for beginning agriculture teachers: The perceptions of formal mentors and novice teachers. *Dissertation Abstracts International*, 63(07), 2434A. (UMI No. 3060100).

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*.

Greiman, B. C., Walker, W. D., & Birkenholz, R. J. (2002). The induction of novice teachers: A study of first-year agriculture teachers in Missouri. *Proceedings of the 29th National Agricultural Education Research Conference*.

Halford, J. M. (1998). Easing the way for new teachers. *Educational Leadership*, 55(5), 33-36.

Huling-Austin, L., & Murphy, S. C. (1987). *Assessing the impact of teacher induction programs: Implications for program development*. Paper presented at the annual meeting of the American Educational Research Association,

Washington, D.C. (ERIC Document Reproduction Service No. ED283779)

Ingersoll, R. M. (1999). *Teacher turnover, teacher shortages, and the organization of schools* (Document W-99-1). University of Washington: Seattle: Center for the Study of Teaching and Policy.

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

Kram, K. E. (1985). *Mentoring at work*. Boston: Scott, Foresman and Company.

Little, J. W. (1990). The mentor phenomenon and the social organization of teaching. In C. B. Cazden (Ed.), *Review of research in education* (pp. 297-351). Washington, DC: American Educational Research Association.

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.

Missouri Department of Elementary and Secondary Education. (1988). *Suggested guidelines for professional development programs in Missouri schools*. Jefferson City, MO: Professional Development Advisory Committee of the Missouri Department of Elementary and Secondary Education.

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.

National Center for Education Statistics. (1997a). *Projections of education statistics to 2007* (NCES 97-382). Washington, DC: U.S. Government Printing Office.

National Center for Education Statistics. (1997b). *Teacher professionalization and teacher commitment: A multilevel analysis* (NCES 97-069). Washington, DC: U.S. Government Printing Office.

National Commission on Teaching and America's Future (1996). *What matters most: Teaching for America's future*. New York: National Commission on Teaching and America's Future.

Odell, S. J., & Ferraro, D. P. (1992). Teacher mentoring and teacher retention. *Journal of Teacher Education*, 43(3), 200-204.

Peiter, R. L., Terry, R. Jr., & Cartmell, D. D. (2003a). Identification of mentors for first year agricultural education teachers. *Proceedings of the 30th National Agricultural Education Research Conference*.

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*.

Ragins, B. R., & Cotton, J. L. (1999). Mentor functions and outcomes: A comparison of men and women in formal and informal mentoring relationships. *Journal of Applied Psychology*, 84, 529-550.

Ragins, B. R., & McFarlin, D. B. (1990). Perceptions of mentor roles in cross-gender mentoring relationships. *Journal of Vocational Behavior*, 37, 321-339.

Simon, J. (1989). Mentor teachers' perceptions of the mentoring experience. *Proceeding of the 16th Annual National Agricultural Education Research Meeting*, 217-224.

Simon, S., & Wardlow, G. (1989). The perceptions of beginning teachers about the value of mentors. *Proceedings of the 43rd Annual Central Region Research Conference in Agricultural Education*.

Stansbury, K., & Zimmerman, J. (2000). *Lifelines to the classroom: Designing support for beginning teachers* (WestEd Knowledge Brief). San Francisco: WestEd.

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.

Turban, D. B., Dougherty, T. W., & Lee, F. K. (2002). Gender, race, and perceived similarity effects in developmental relationships: The moderating role of relationship duration. *Journal of Vocational Behavior*, 61(2), 240-262.

Veenman, S. (1984). Perceived problems of beginning teachers. *Review of Educational Research*, 54(2), 143-178.

Wilkinson, G. A. (1997). Beginning teachers identify gaps in their induction programs. *Journal of Staff Development*, 18(2), 48-51.

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