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# INFLUENCE OF THE RELATIONSHIP BETWEEN THE STUDENT TEACHER AND COOPERATING TEACHER ON STUDENT TEACHER'S DECISION TO ENTER TEACHING

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**Abstract**

*The purpose of the study was to determine if student teachers' perceptions of the student teacher/cooperating teacher relationship were predictive of their decisions to enter the teaching profession. The target population of this study consisted of preservice agricultural education students at Texas A&M University. The accessible sample consisted of student teachers in agricultural education at Texas A&M University in fall 2004, a group of 33 student teachers. Multiple regression was used to build a model that explained the greatest amount of variability in the student teachers' decision to enter teaching, based on the student teachers' perceptions of the cooperating teacher and other suspected predictor variables. The typical student teacher in agricultural education was a 22 year old white female completing an undergraduate degree. The majority of student teachers had no full-time agricultural employment experience. The majority of student teachers had at least four semesters (two years) of high school agricultural science courses. It was concluded that the student teaching/cooperating teacher relationship is not predictive of decision to teach. However, semesters of high school agricultural sciences courses completed was predictive of one's decision to teach. The best model explained 18.3% of the variance.*

## Introduction/Theoretical Framework

In 2001, there were 857 newly qualified agricultural education graduates (Camp, Broyles, & Skelton, 2002). In that same year, 798 new agricultural science teachers were needed to fill vacant teaching positions. Those numbers would suggest that there is not a shortage of agricultural science teachers. However, only 59% (509) of the graduates chose to enter the teaching profession. This divergence (798 vacancies, 509 teachers) created a net deficit in the number of qualified instructors to fill teaching vacancies.

Teacher educators are challenged with the responsibility of determining the reasons that such a large percentage of students completing teacher education programs chose not to enter the teaching profession. Possible solutions to the problem include addressing the concerns related to the quality of the student teaching experience and the effectiveness of the cooperating teacher. Given the plethora of available majors that capture the human dimension of agriculture (agricultural communications, agricultural leadership, extension education, etc.), it is reasonable to assume that students enrolled in an agricultural education (teacher preparation) program have some interest in teaching. However, as reported earlier, many do not enter teaching. Teacher educators need to identify why students enrolled in teacher education programs are completing student teaching but then choosing not to enter the profession. Researchers (Briers & Byler, 1979; Byler & Byler, 1984; Schumacher & Johnson, 1990; Schumann, 1969) posited that the student teaching experience and the quality of the relationship between the student teacher and cooperating teacher have an impact on one's decision to enter the profession.

Student teaching is often the capstone experience of a teacher preparation program

and occurs during the time in which the decision to enter teaching is made. Throughout the student teaching experience, the student teacher develops as an educator and gains practical teaching skills in the classroom. It is during student teaching that preservice teachers obtain hands on, real world experience. Numerous researchers (Briers & Byler, 1979; Byler & Byler, 1984; Schumacher & Johnson, 1990; Schumann, 1969) have concluded that the experience of student teaching plays a considerable role in preparation of future teachers. Schumann added that "a cooperating teacher plays a key role in providing the experiences necessary to become a successful teacher" (p. 156).

Generally, student teaching involves three groups of individuals – the student teacher, the university supervisor, and the cooperating teacher. Cooperating teachers are often the most influential in the development of novice teachers, as they have the most contact and communication with the student teachers. Norris, Larke, and Briers (1990) stated that "the student teaching center and the supervising teacher are the most important ingredients in the student teaching experience" (p. 58). Other investigators (Deeds, 1993; Deeds, Flowers, & Arrington, 1991; Garton & Cano, 1994; Martin & Yoder, 1985) also supported this assertion. Martin and Yoder added that a student teacher's success during his or her field experience was based "on the general supervisory climate in the department and on the educational leadership abilities of the cooperating teacher" (p. 21). In most instances, the relationship that a student teacher has with his or her cooperating teacher is unique. Montgomery (2000) stated that "if the perspective of the cooperating teacher conflicts with the perspective learned by the student teacher, this relationship does not permit a smooth transition for the student teacher" (p. 7).

This study was grounded in situated learning theory and through legitimate peripheral participation. Lave and Wenger (1991) viewed learning as a "situated activity" (p. 29), i.e. a "learn by doing" approach. This approach models what teacher educators attempt with the placement of student teachers during the student teaching experience. An important notion within situated learning theory is legitimate peripheral participation. This is the "process by which newcomers become part of a community of practice" (Lave & Wenger, p. 29). As learners participate in the community, they acquire the knowledge and skills required to be practicing members within that community.

Applying the situated learning model to the student teaching experience is shown in Figure 1. Learners begin the process as preservice teachers. As preservice teachers enter the student teaching experience, they begin acquiring knowledge, skills, and attitudes about teaching. It is during this experience (student teaching) that preservice teachers make their decisions about entering the teaching profession. The researchers hypothesized that the relationship between student teacher and cooperating teacher had a direct effect on the legitimate peripheral participation, and ultimately has an effect on the decision to enter the community (teaching profession). The move from preservice teacher to inservice teacher involves the acquisition of knowledge and skills, much of which is obtained during the student teaching experience.

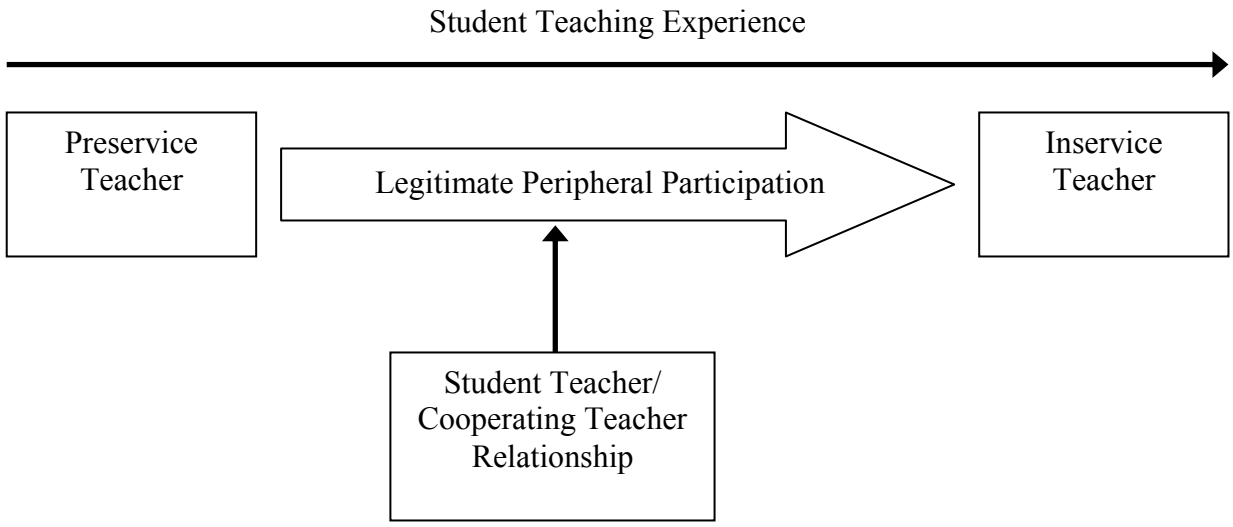


*Figure 1.* Conceptual model of student teacher/cooperating teacher relationship.

This study sought to address the shortage of agricultural education graduates entering the teaching profession by examining what is arguably the most important component of a preservice program, student teaching. More specifically, this study investigated the relationship between the student teacher and cooperating teacher and how that relationship relates to the student teacher's decision to enter teaching. With this knowledge, teacher educators can better place student teachers, thus maximizing their likelihood of entering the profession. If teacher educators can identify cooperating teachers who exhibit the most important characteristics, student teachers will likely have a better student teaching experience. Therefore, the shortage of qualified agricultural education teachers, as identified by Camp et al. (2002), would be addressed.

Byler and Byler (1984) attempted to identify if the morale of student teachers changes during the student teaching experience. They found that student teachers' morale significantly increased (positively) between the pretest and posttest when asked about communication with supervising teacher (cooperating teacher). They also concluded that a relationship existed between the morale of the student teacher and the morale of the cooperating teacher, suggesting the importance of the relationship between the two.

Deeds and Barrick (1986) examined preservice teachers' attitudes about themselves as future teachers of agriculture. They found that preservice teachers' perceptions about their future of teaching agriculture were positively related to their field experience. This study supported the conclusions made by Byler and Byler (1984).

Martin and Yoder (1985) noted that in order for a student teaching experience to be successful, it must be a "team approach" (p. 19). They argued that the success of the experience and the student teacher "depends, to a very great extent, upon the general supervisory climate in the department and on the educational leadership abilities of the cooperating teacher" (p. 21). Because student teachers often view cooperating teachers as role models, cooperating teachers should encourage their student teachers to discover new situations. Korthagen and Kessels (1999) further stated that the cooperating center "must be able to offer a sound balance between safety and challenge and a balance between the goal of serving the student teachers' learning and the interests of the school" (p. 14). Garton and Cano (1994) concluded that "priority should be given to selecting teachers who model the desired teaching behaviors expected of student teachers" (p. 53). The cooperating teacher has the opportunity and

ability to positively guide the student teacher into becoming a successful educator (Schumann, 1969).

Rome and Moss (1990) surveyed first year teachers, university supervisors, and cooperating teachers in the Southern region and found that agricultural science teacher preparation programs lack consistency in placement methods, supervisory visits, and actual length of time spent student teaching. However, all three groups agreed on the importance of the student teaching experience, stating that "student teaching was the most valuable component of the teacher education program" (p. 31). The researchers also found that first-year teachers agreed that their student teaching experiences were positive and disagreed that student teachers learn very little from the experience. Rome and Moss concluded "overall effectiveness of the cooperating classroom teachers used during the student teaching experience is adequate" (pp. 32-33).

Harlin, Edwards, and Briers (2002), conducted a comparison of student teacher perceptions before and after the student teaching experience. The important elements were grouped into core areas; one of which was cooperating teacher/student teacher relationship. Items in this area received the highest overall rating in terms of their importance. Student teachers identified the importance of the student teacher and cooperating teacher relationship both before and after the student teacher experience (Harlin et al.).

A similar study conducted in 1998 with entry-phase teachers identified the importance of the student teacher/cooperating teacher relationship (Edwards & Briers, 1999). Edwards and Briers (2001a) used a focus group and a quantitative follow up with a group of cooperating teachers who attended a workshop. Participants were broken into core groups, one of which was cooperating teacher/student teacher relationship. This core area yielded five of the 10 highest rated items when the quantitative analysis was completed (Edwards & Briers, 2001a).

A recent study in Oklahoma developed a profile of cooperating teachers and centers used in the student teaching experience. Using an approach similar to that of Edwards and Briers (2001a), Young and Edwards (2005) found that items in the core area of cooperating teacher/student teacher relationship received seven of the ten highest ratings. This supports the work done earlier in Texas by Edwards and Briers (2001a), who also found that cooperating teachers recognized the importance of the relationship between student teacher and cooperating teacher. One recommendation from the Young and Edwards study was to investigate student teachers' perceptions about the student teaching experience.

Edwards and Briers (2001b) examined characteristics of entry-phase teachers, looking specifically at those characteristics that would help explain a teacher's decision to stay in the teaching field. The investigators found that nearly one-third of the teachers were female and that nearly 80% had "considerable agricultural work experience" (p. 10). The females in that study had less work experience in agriculture and had lower expectations of the number of years they expected to teach. Edwards and Briers (2001b) found a "moderate relationship ($r$ = .38) between the agricultural work experience of the teacher and how many years they expected to teach" (p. 12). By using multiple regression, the researchers were able to explain approximately 17% of the variation in years to teach by knowing gender and previous agricultural work experience (Edwards & Briers, 2001b). Teachers who had more agricultural work experience expected to teach longer than those who had less work experience in agriculture.

Previous studies identified the student teaching experience as an important step in the development of future teachers. Further research indicated that the cooperating teacher plays a vital role in the overall success of the student teacher. However, no research was found that addressed whether specific characteristics of the student teacher/cooperating teacher relationship are related to a student teacher's decision to enter the agricultural science teaching profession. This study sought to fill that void.

## Purpose and Objectives

What factors contribute to a student teacher's decision to enter teaching? The purpose of the study was to determine if student teachers' perceptions of the student teacher/cooperating teacher relationship were predictive of the decision to enter the teaching profession. The following research objectives guided the study:

1. Describe student teachers from the fall 2004 semester.
2. Determine if student teachers' perceptions of the student teacher/cooperating teacher relationship were predictive of the students' decision to enter the teaching profession in the presence of other relevant variables.

## Procedures

This study is part of an on-going larger research project at Texas A&M University. Accordingly, readers may notice similarities in research design, population, and sampling with other published research. A causal-comparative design was used for this study that was ex post facto in nature. This study examined the relationship between student teacher perceptions of important characteristics of cooperating teachers and their decisions to enter the teaching profession as they existed during the semester in which student teaching occured. Causal-comparative designs set out to study cause and effect relationships (Gall, Gall, & Borg, 2003); however, given that variables are not manipulated, a true cause and effect relationship cannot be established. Therefore, this study investigated the cause and effect relationship between the quality of the student teacher's relationship with the cooperating teacher (independent variable) and one's decision to enter the teaching profession (dependent variable). Due to the small sample size and the sampling method employed in this study, definite inferences to the general population of student teachers should not be made.

The target population of this study consisted of preservice agricultural education students at Texas A&M University. A purposive sample of students was selected during fall 2004. The accessible sample consisted of student teachers in agricultural education at Texas A&M University in fall 2004, a group of 33 student teachers. This group was chosen because participants in the student teaching block held perceptions about relationships between student teachers and cooperating teachers. Anecdotal evidence suggests that this group is representative of student teachers in agricultural education at Texas A&M University. The accessibility of the study's participants made the sampling method convenient as well. The preservice teachers were engaged in a four-week pre-experience teaching block on campus and then reconvened at the midpoint of the semester and again at conclusion of the eleven-week field experience. The responding sample consisted of 33 preservice teachers.

The instrument utilized for this study was based on preliminary research conducted by Roberts (2006) and a thorough review of the literature. Roberts sought to develop a model of cooperating teacher effectiveness by identifying characteristics of effective cooperating teachers. Four categories were identified: teaching/instruction, professionalism, student teacher/cooperating teacher relationship, and personal characteristics. Thirty characteristics were grouped into those categories (Roberts). Content validity and construct validity of the instrument were verified by an expert panel of university teacher educators not involved in the study. The instrument used in the current study consisted of three sections: background/demographics, cooperating teacher/student teacher relationship characteristics, and intent to enter teaching.

Background/demographics section consisted of six items: gender, age (years), semesters of high school agricultural science courses completed, academic classification, race/ethnicity, and agricultural work experience. The section of the instrument used to determine student teacher/cooperating teacher relationship consisted of 14 items. For each item, respondents were asked to provide two measures: 1) the *importance* of each

characteristic and 2) the current *level* of that characteristic exhibited by their cooperating teacher. Respondents used a five-point summated rating scale that ranged from 1 to 5 (1 = low, 2 = moderately low, 3 = average, 4 = moderately high, and 5 = high). The intent to teach section of the instrument consisted of a single item, "Do you plan to teach agricultural science when you graduate?" accompanied by a seven point response scale ranging from definitely yes to definitely no.

The instrument was pilot tested by a similar sample of preservice teachers at the University of Georgia for reliability and face validity. Data in the pilot test were collected from 33 participants. Reliability of the student teacher/cooperating teacher section, as measured by internal consistency, was alpha = 0.85. Respondents were also given the opportunity to suggest changes to the format of the instrument. However, no suggestions were made.

The study was conducted during the fall semester 2004. Data were collected face to face using paper instruments at two points during the semester. Background/demographic data were collected at the beginning of the semester. Perceptions of the student teacher/cooperating teacher relationship and decision to teach were collected at conclusion of the student teaching semester. A 100% response rate was achieved.

To provide a single independent variable in the model, a discrepancy variable was calculated using the mean score from *importance* and cooperating teacher *level*. The variable was calculated by dividing the cooperating teacher *level* mean by the *importance* mean and multiplying the difference by 100. The discrepancy variable was calculated to provide a variable that represents the incongruity between the student teacher's perceptions of importance and the level they perceive their cooperating teacher to exhibit.

Significance levels were set *a priori* at .05. To achieve the research objectives, frequencies, percentages, and central tendencies were calculated. In addition, multiple regression was used to build a model that explained the greatest amount of variability in the student teacher's decision to enter teaching, based on the student teacher's perceptions of the cooperating teacher. To explain the greatest amount of variance, other predictor variables correlated with the dependent variable were included in the model.

## Findings

Of the 33 participants in the study, 57.6% were female ($n$ = 19). Males comprised 42.4%, ($n$ = 14) of the respondents. The ages of participants ranged from 21 to 47. The average age of participants was 23.61 years old ($SD$ = 4.95, $n$ = 33). The median age was 22. Of the 33 respondents, 90.9% indicated their race/ethnicity as white. Two respondents (6.1%) indicated Hispanic/Latino, and one respondent (3%) indicated Native Hawaiian or Other Pacific Islander.

Of the 33 respondents, the largest percentage were classified as undergraduates ($n$ = 24, 72.7%). An additional 9.1% were postgraduates seeking only certification ($n$ = 3). Those classified as postgraduates seeking certification and a second degree represented 9.1% ($n$ = 3), and 9.1% were classified as graduate students seeking certification and a graduate degree ($n$ = 3).

Participants were asked to indicate if they had previous agricultural work experience, and if so, to further describe the nature of their experience. The range of responses varied from no previous agricultural work experience to full-time employment for more than six months in an agricultural industry (Table 1). Roughly 30% of the participants in this study ($n$ = 10) indicated that their previous experience was mostly a vocational (e.g., assisting a friend "feeding cows" on an occasional weekend, planting and caring for a garden). An additional 27.3% ($n$ = 9) had full-time temporary employment for one or more summers in a production or agribusiness setting. Two respondents (6.1%) indicated that they had no agricultural work experience.

Table 1
*Previous Agricultural Work Experience of Participants*

| Agricultural Work Experience | *n* | % |
|---|---|---|
| None | 2 | 6.1 |
| Mostly avocational | 10 | 30.3 |
| Part-time employment | 7 | 21.1 |
| Full-time temporary employment | 9 | 27.3 |
| Full-time employment | 5 | 15.2 |
| Total | 33 | 100.0 |

The number of semesters of high school agricultural science courses that participants had taken previously were grouped into five categories (none, 1-2, 3-4, 5-6, and 7-8 semesters completed). Note that most high school agricultural science courses in Texas are one semester in length, rather than two semesters. Respondents' experiences ranged from having taken no semesters of high school agricultural science courses, to having taken 7-8 semesters of agricultural science courses (Table 2). Thirty-three percent ($n$ = 11) of the participants had taken 7 or 8 semesters of high school agricultural science courses. However, eight participants (24.2%) had not taken any agricultural science courses in high school.

Table 2
*Semesters of High School Ag Courses Completed by Participants*

| Semesters | *n* | % |
|---|---|---|
| None | 8 | 24.2 |
| 1-2 | 4 | 12.1 |
| 3-4 | 7 | 21.1 |
| 5-6 | 3 | 9.1 |
| 7-8 | 11 | 33.3 |
| Total | 33 | 100.0 |

*Note.* Most high school agricultural science courses in Texas are a semester in length.

As part of describing student teacher perceptions of the relationship between student teacher and cooperating teacher, correlations were calculated using the procedure CORRELATE. The strength of the correlations is described using terminology derived from Davis (1971). A correlation between .01 and .09 is negligible, correlations between .10 and .29 are low, correlations between .30 and .49 are moderate, correlations .50 and .69 are substantial, and correlations of .70 or larger are very high. Table 3 presents the correlation coefficients between variables. As depicted in the table, moderate correlations were found between high school agricultural science courses completed and one's decision to teach ($r$ = .44), and agricultural work experience and decision to teach ($r$ = .36). Given that "Discrepancy" was a variable calculated from using "*importance*" and "*level*", the correlations observed ($r$ = .39 and $r$ = -.93, respectively) would be expected.

Table 3
*Associations Between Variables Related to Student Teachers' Decision to Teach*

| Variable | 1 | 2 | 3 | 4 | 5 | 6 |
|---|---|---|---|---|---|---|
| 1. HS Ag Courses | -- | .312 | -.011 | .396* | -.354* | .442* |
| 2. Ag Experience | | -- | -.132 | .230 | -.117 | .359* |
| 3. Importance | | | -- | -.220 | .391* | .046 |
| 4. Level | | | | -- | -.933* | .136 |
| 5. Discrepancy | | | | | -- | -.064 |
| 6. Decision to Teach | | | | | | -- |

* $p < .05$

The REGRESSION function within SPSS was used to select the best model for predicting a student's decision to enter the teaching profession. Multiple regression was used to determine if the student teacher/cooperating teacher relationship (Discrepancy) was related to one's decision to teach. Previous agricultural work experience and semesters of high school agricultural courses completed were included in the model based on their relationship to decision to teach.

Regression analysis showed that a combination of "discrepancy", "previous agricultural work experience", and "semesters of high school agricultural courses completed" significantly predicted decision to teach, $F_{(3.394)}$ and $p$ = .032 (Table 4). The $R^2$ for this model was .26 and adjusted $R^2$ was .18. The student teacher/cooperating teacher relationship (discrepancy) value ($t$ = .63, $p$ = .53) and previous agricultural work experience ($t$ = 1.46, $p$ = .15) did not contribute significantly beyond the variable semesters of agricultural science completed to predicting the decision to teach. However, semesters of high school agricultural courses taken ($t$ = 2.26, $p$ = .03) did significantly contribute to the decision to teach. These three variables accounted for 18.3% of the variance in student teachers' decisions to teach.

Table 4
*Regression Analysis to Predict Decision to Teach*

| Variable | $\beta$ | Standard Error | $t$ | $p$ |
|---|---|---|---|---|
| Discrepancy | .003 | .005 | .633 | .532 |
| Ag Experience | .394 | .269 | 1.464 | .154 |
| HS Ag Courses | .484 | .214 | 2.259 | .032 |

*Note*. $R^2 = .260$; Adjusted $R^2 = .183$

## Conclusions, Recommendations, and Implications

The first objective of this study was to describe the student teachers from the fall 2004 semester. Based on the findings, it was concluded that the typical student teacher in agricultural education was a 22 year old white female completing an undergraduate degree. This conclusion is consistent with Harlin et al. (2002), although in that study females were slightly less than half of the sample. It is interesting to consider that in the sample of student teachers from this preservice program that females are the majority. Anecdotal evidence suggested this trend goes beyond just the fall 2004 semester. However, in contrast, Camp et al. (2002) reported that in 2001 the majority of agricultural education graduates were male. This discrepancy raises the question, why does the preservice program at Texas A&M University attract more female students?

It was also concluded that the majority of student teachers had no full-time agricultural employment. Approximately one-third of the participants indicated that they had mostly avocational work experience (assisting a friend 'feeding cows" on an occasional weekend or planting/caring for a garden). Only nine participants indicated that they had full-time temporary employment in the agricultural industry. This was considerably less than the entry-phase teachers examined by Edwards and Briers (2001b). This finding implies that student teachers in this study have less agricultural experience than the teachers examined by Edwards and Briers. Does this dissimilarity translate into less agricultural technical knowledge? Is this a national trend? If agricultural experience is predictive of teaching longevity, are student teachers in the current study destined for shorter careers as teachers?

The final conclusion related to objective one was that the majority of student teachers had at least four semesters (2 years) of high school agricultural science courses. Furthermore, one-third of the participants indicated that they had completed 7-8 semesters (4 years) of agricultural science courses. Yet, nearly one-fourth of participants had not taken any high school agricultural science courses. The latter finding may have significant implications for teacher preparation at Texas A&M University. It cannot be assumed that all students in agricultural education courses possess basic knowledge of agricultural education, SAE, or FFA. Therefore, steps should be implemented to ensure that these students gain the knowledge and experience that many of their colleagues obtained while enrolled in high school agricultural science courses. This phenomenon also raises a few questions. Are other preservice programs observing similar trends in their students? How are other preservice programs supplementing their curricula to address this issue?

Research objective two was to determine if the student teachers' perceptions of the student teacher/cooperating teacher relationship was predictive of the students' decision to enter the teaching profession. It was concluded that the student teaching/cooperating teacher relationship is not predictive of decision to teach. However, results indicated that the student teacher/cooperating teacher relationship is important to student teachers, which was

consistent with Briers and Byler (1979), Byler and Byler (1984), Schumacher and Johnson (1990), and Schumann (1969). This implies that even though student teachers perceived the relationship they had with their cooperating teacher was important, a bad relationship may not necessarily affect their decision to enter teaching. This further implies that matching student teachers and cooperating teachers on personality may not be necessary, which seems to contradict considerable anecdotal evidence. However, it is important to note that conclusions from this study are not generalizable to the national population of preservice agricultural science teachers. Therefore, this study needs to be replicated at several institutions with similar conclusions drawn before the researchers are comfortable making such a recommendation. Additionally, an in-depth study of the student teacher/cooperating teacher relationship using naturalistic inquiry methods may contribute to a better understanding of this important issue.

Interestingly, semesters of high school agricultural sciences courses completed was predictive of decision to teach. Although not synonymous, FFA involvement was not predictive of teaching longevity according to Edwards and Briers (2001b). If it is a goal of an agricultural science preservice program to increase the number of students who chose to enter teaching following their student teaching semester, the current study implies that students with more semesters of high school agricultural science courses should be recruited into the program. This has considerable implications for the portion of the student teachers with no high school agricultural science courses (nearly a fourth of this sample). If it is likely that they will not enter teaching, should this group of students be counseled to consider other majors?

Although the conclusions drawn based on the findings of this provide some interesting discussion points, a considerable amount of the variance in decision to enter teaching remains unknown. What other variables contribute to this decision? Further, does a student teacher's intent to enter teaching correlate with one's actual actions? This study may provide a starting point for addressing the defacto teacher "shortage" reported by Camp et al. (2002). However, much work still needs to be done to better understand and address this issue.

## References

Briers, G. E., & Byler, B. L. (1979). Morale of student teachers in agricultural education at Iowa State University. *The Journal of the American Association of Teacher Educators in Agriculture, 20*(3), 41-51.

Byler, B. L., & Byler, L. F. (1984). Analysis of student teacher morale before and after student teaching. *The Journal of the American Association of Teacher Educators in Agriculture, 25*(3), 22-28.

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.

Davis, J. A. (1971). *Elementary survey analysis*. Englewood Cliffs, NJ: Prentice-Hall.

Deeds, J. P. (1993). A national study of student teaching requirements in agricultural education. *Proceedings of the 20th National Agricultural Education Research Meeting, 20,* 219-225.

Deeds, J. P., & Barrick, R. K. (1986). Relationships between attitudes of pre-service agricultural education majors and variables related to early field-based experience. *The Journal of the American Association of Teacher Educators in Agriculture, 27*(3), 2-7.

Deeds, J. P., Flowers, J., & Arrington, L. A. (1991). Cooperating teacher attitudes and opinions regarding agricultural education student teaching expectations and policies. *Journal of Agricultural Education, 32*(2), 2-9.

Edwards, M. C., & Briers, G. E. (1999). Assessing inservice needs of entry-phase

agriculture teachers in Texas: A discrepancy model versus direct assessment. *Journal of Agricultural Education, 40*(3), 40-49.

Edwards, M. C., & Briers, G. E. (2001a). Cooperating teachers' perceptions of important elements of the student teaching experience: A focus group approach with quantitative follow-up. *Journal of Agricultural Education, 42*(3), 30-41.

Edwards, M. C., & Briers, G. E. (2001b). Selected variables related to expected longevity in teaching of entry-phase agriculture teachers. *Journal of Career and Technical Education, 16*(1), 7-18.

Gall, M. D., Gall, J. P., & Borg, W. R. (2003). *Educational research: An introduction* (7th ed.). Boston: Allyn and Bacon.

Garton, B. L., & Cano, J. (1994). The influence of the cooperating teacher on the student teacher's use of the problem-solving approach to teaching. *Proceedings of the 21st Annual National Agricultural Education Research Meeting, 21,* 209-214.

Harlin, J. F., Edwards, M. C., & Briers, G. E. (2002). A comparison of student teachers' perceptions of the important elements of the student teaching experience before and after an 11-week field experience. *Journal of Agricultural Education, 43*(3), 72-83.

Korthagen, F. A., & Kessels, J. P. (1999). Linking theory and practice: Changing the pedagogy of teacher education. *Educational Researcher, 28*(4), 4-17.

Lave, J., & Wenger, E. (1991). *Situated learning: Lgitimate peripheral participation.* New York: Cambridge University Press.

Martin, R. A., & Yoder, E. P. (1985). Clinical teaching analysis: A procedure for supervising teachers. *The Journal of the American Association of Teacher Educators in Agriculture, 26*(4), 16-21, 33.

Montgomery, B. (2000). The student and cooperating teacher relationship. *Journal of Family and Consumer Sciences Education, 18*(2), 7-15.

Norris, R. J., Larke, A., Jr., & Briers, G. E. (1990). Selection of student teaching centers and cooperating teachers in agriculture and expectations of teacher educators regarding these components of a teacher education program: A national study. *Journal of Agricultural Education, 31*(1), 58-63.

Roberts, T. G. (2006). Developing a model of cooperating teacher effectiveness. *Journal of Agricultural Education, 47*(3), 1-13.

Rome, C., & Moss, J. W. (1990). Satisfaction with agricultural education student teaching. *Journal of Agricultural Education, 31*(2), 29-34.

Schumacher, L. G., & Johnson, D. M. (1990). Time series analysis of agricultural education student teachers' perceptions of agricultural mechanics lab management competencies. *Journal of Agricultural Education, 31*(4), 2-8.

Schumann, H. B. (1969). The cooperating teacher's role in student teaching. *The Agricultural Education Magazine, 41*(7), 156.

Young, R. B., & Edwards, M. C. (2005). A profile of cooperating teachers and centers in Oklahoma: Implications for the student teaching experience in agricultural education. *Proceedings of the 2005 AAAE Southern Region Conference,* 170-181.

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