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Perceptions of Teaching Ability During the Student Teaching Experience in Agricultural Education

Sheyenne Krysher, Senior Lecturer
Texas State University
J. Shane Robinson, Associate Professor
Oklahoma State University
Diane Montgomery, Regents Professor
Oklahoma State University
M. Craig Edwards, Professor
Oklahoma State University

The purpose of this study was to describe the views student teachers in agricultural education at Oklahoma State University had regarding their 12–week student teaching internship. Using Q–methodology as a research approach, 28 interns rank–ordered a Q–set of 36 statements describing various aspects of teacher responsibilities and performance. The completed Q–sorts were factor analyzed resulting in three distinct teaching views found in the sample: Emerging Teacher, Self–Assured Teacher, and Determined Teacher. The Emerging Teacher view recognized areas needed for growth and development but also recognized their progress toward becoming a professional. The Self–Assured Teacher view had a high level of comfort and confidence in their teaching ability, which extended to their views on developing lessons and teaching across the agricultural education curriculum. The Determined Teacher view recognized confidence but not comfort in their teaching ability. Teaching did not always come easy for them, but they recognized they were getting better. Study results suggested all three groups attained their views from different sources of self–efficacy. Recommendations were made to provide continued training and/or professional development tailored to each view, as well as, to seek the viewpoints of the cooperating teachers.

Keywords: student teaching; Q–method; views; teaching ability; self–efficacy

Introduction

Student teaching is one of the most commonly and widely used components in the teacher preparation process nationally (Carnegie Forum's Task Force, 1986). It is a culminating internship that provides experiential learning during the preparation process. The student teaching internship exposes interns to the same experiences they will encounter as a full–time teacher.

Time and experience are central to the growth and development of intern teachers (Spooner, Flowers, Lambert, & Algozzine, 2008). However, as graduation requirements have decreased, exposing pre–service students in agricultural education to real–life challenges has become problematic (Burris, Robinson, & Terry, 2005). In Oklahoma, the graduation hours have been reduced at the same time other teacher preparation requirements expanded (such as diversity and health issues). This limits the amount of time available to provide vital learning experiences to future teachers. The lack of potential learning experiences could lead to lower levels of student proficiency, which then could diminish teachers' levels of confidence or self–efficacy related to their teaching.

Self–efficacy beliefs influence specific domains or contexts, such as a person's ability in teaching. Tschannen–Moran, Hoy, and Hoy (1998) provided a definition of teaching efficacy as, a person's "belief in his or her capability to organize and execute courses of action required to successfully accomplish a specific teaching task in a particular context" (p. 233).

Though experiences during the student teaching internship vary from person to person, it is through these experiences that interns gain information about their teaching performance. Bandura (1986, 1997) described four main sources by which efficacy is built: mastery experiences, vicarious experience, social persuasion, and physiological and emotion state. Mastery experiences are particularly influential to interns through the practice of teaching, while vicarious experiences are also influential through the observations of model or expert teachers. Social persuasion involves the formation of efficacy beliefs through others' suggestions about a teacher's performance. A person's efficacy may be affected by his/her emotional or physical state, that is, stress, fear, and anxiety may influence a person's vulnerability thereby lowering the appraisal of efficacy.

Self–efficacy regarding an individual's perception about his/her teaching ability is an important phenomenon to understand because "once efficacy beliefs are established, they appear to be somewhat resistant to change" (Tschannen–Moran et al., 1998, p. 235). As such, it is important to assess student teacher self–efficacy while these individuals are still at the pre–service level (Korthagen & Kessels, 1999) so that efforts can be made to improve the preparation they encounter during their teaching practice experiences (Pajares, 1992).

Although teacher efficacy is a powerful construct, it has been difficult to measure (Tschannen–Moran & Hoy, 2001); several methods of measuring efficacy have been employed. These include the smaller two–item scale used in the Rand Corporation studies (Armor et al., 1976; Berman, McLaughlin, Bass, Pauly, & Zellman, 1977) to the larger 24–item scale used in the Teachers' Sense of Efficacy Scale (Tschannen–Moran et al., 1998). However, Bandura (1997) warned that instruments with few measurements are too global and instruments that are too specific become less generalizable. Other researchers have suggested that employing a variety of research methods, including qualitative inquiry, would serve to enrich the understanding of teacher efficacy (Henson, 2002; Labone, 2004; Tschannen–Moran et al., 1998).

Need for the Study

Due to the need to measure self–efficacy both quantitatively and qualitatively, Q–methodology was deemed to be a logical approach. Q–methodology is a qualitative research method with quantitative features (Watts & Stenner, 2003). This method could serve to study teacher efficacy through means of internal subjective opinions about self that have been overlooked previously. Q–methodology seeks to interrogate the phenomenon holistically by allowing participants to model their preferences in a Q–sort instead of reacting to one measure at a time (Brown, 1980).

Purpose and Research Question

The purpose of this study was to describe the views student teachers in agricultural education at Oklahoma State University had regarding their 12–week student teaching experience. To accomplish this purpose, this study explored the perceptions of agricultural education student teachers in the spring and fall semester of 2009 regarding aspects of self–efficacy. The research question was, what views did agricultural education student teachers have about their teaching ability?

Methodology

Conceptually, this study was based on Bandura's self–efficacy theory (1993). Bandura's work underpinning self–efficacy (1997) described extensively how an individual's perceptions of his or her ability is self–referent. "Q–studies, from conception to completion, adhere to the methodological axiom *that subjectivity is always self–referent*"

(McKeown & Thomas, 1988, p. 12). Specifically, subjectivity is the communication of a person's viewpoint, and self–reference is a person's internal frame of reference (McKeown & Thomas, 1988).

Q–methodology was developed originally by William Stephenson in the 1930s as a research method to study human subjectivity systematically. The quantitative portion of Q–methodology is an adaptation of a factor analysis (Watts & Stenner, 2005) and provides researchers a systematic method to study the mathematical structure of a group of people who hold a specific viewpoint, attitude, and/or belief on a chosen topic (Brown, 1993). Unlike other correlational measurements, in which data are often gathered from opinion questionnaires with standardized scales (Robbins, 2005), Q–method allows for the items to interact (Brown, 1980) according to the sorter's view. The holistic approach is accomplished by allowing participants to compare each statement to the others rather than rating each statement individually.

Participants

The participants for this study were 28 interns in agricultural education who were enrolled in a student teaching course at Oklahoma State University during the spring and fall semesters of 2009. The Q–sort was completed by each intern within the span of weeks nine through 12 of the student teaching internship. Data were collected by the university supervisors during the observational site–visits made to the internship location or by appointment on the university campus.

Instrument and Data Collection

The Q–set is a group of statements presented to the participants for rank–ordering (McKeown & Thomas, 1988) and is representative of several aspects or viewpoints of a topic (van Exel & de Graaf, 2005). This study used a combination, or hybrid approach, involving both naturalistic and theoretical types. A total of 36 statements were used to develop the Q–set. Of those, 30 originated from a validated instrument, The Teaching Ability Questionnaire (Spooner et al., 2008). To provide breadth to the Q–set, six additional naturalistic statements were added based on informal discussions and debriefings between the researcher and several semesters of student teachers. In total, all the statements represented multiple roles of teacher performance, which revealed the participants' perceptions of their teaching ability as they sorted, according to *How do you feel about the courses you instruct?* Interns sorted the Q–statements efficiently by first starting with three distinct piles (most like, most unlike, and neutral reactions). Then, statements were placed on a form board with the nine–column distribution value from -4 to +4 with the number of statements in each column as 2–4–4–5–6–5–4–4–2 (see Figure 1).

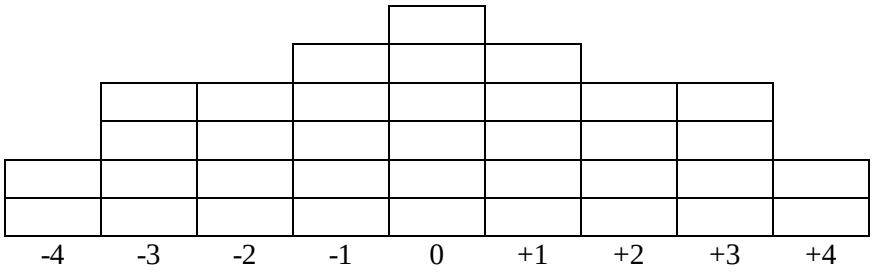

Figure 1. Q–sort Form Board

The two statements in which the interns believed represented their views the most were placed on the extreme right side of the distribution (+4), and the two statements the interns believed represented their views the least were placed on the extreme left side (-4) of the distribution. The process was repeated working toward the middle row (0) until all cards were

placed on the board by each intern. Finally, the placement of the statements was recorded onto the response sheet for data analysis. Space was available for the interns to add written comments about their perceptions of their teaching ability, as well as personal characteristics. When completed, the researcher checked the accuracy between the placement of the Q–sort statements and the response sheet.

Data Analysis

The data from the Q–sorts for each of the 28 interns were entered into PQMethod (Schmolck, 2002) to develop a correlation matrix, which was factor analyzed using principal component analysis (PCA) and a varimax rotation of three factors to determine the best solution for data that accommodated the most sorts. Twenty–one of 28 sorts loaded significantly on one of three factors. Factor 1 had 12 defining Q–sorts, Factor 2 had five defining Q–sorts, and Factor 3 had four defining Q–sorts. The remaining Q–sorts were identified as non–significant or confounding and did not aid in the interpretation of factors.

Findings

Interpretation of the factors involved an examination of the array of statements created for each factor. The interpretation was constructed by a careful consideration of *most like* and *most unlike* statements, both individually and holistically. As the viewpoints began to evolve, consideration was given to distinguishing statements and consensus statements. The final refinement of the viewpoints came with an examination of the interns' written comments gathered from the response sheet. The three factors were interpreted and named the *Emerging Teacher*, the *Self-Assured Teacher*, and the *Determined Teacher*.

Factor 1: Emerging Teacher

This factor was defined by 12 of the Q–sorts and accounted for 22% of the variance in the analysis. Interns who held this view did not perceive teaching was particularly easy (statement 2, z–score -1.23) (see Table 1). Yet, these individuals recognized they were getting better at teaching (4, 1.56) and perceived they needed less help teaching than before (7, 1.02). In addition, they liked how teaching made them feel overall (1, 1.36). Written comments, which supported this point of view were, "They [my classes] are all good and going great" (participant 6), and "[I] hope that the rest of my experience is as enjoyable" (participant 3). These student teachers recognized they were still growing as a professional (28, 1.72).

This continued growth aspect was emphasized further with the *most unlike me* placement of two distinguishing statements: "I have enough training to deal with student learning problems" (15, -1.24), and "I know how to individualize instruction" (18, -0.86). Participant 22 said, "I feel that I would have liked to know a little more about which IEP [Individualized Education Plan] students have." IEPs are implemented in the school system and are designed to meet the particular educational needs or learning problems of a specific student. This participant's comment can be related back to the growth needed as a teacher in relation to the aforementioned statements concerning individualized instruction and management of student learning problems. In addition, those with this view failed to understand how children learn and develop (14, -0.79). Nor did these student teachers know how and where to refer students with learning problems (16, -0.82). These statements (see Table 1) defined the student teachers' awareness that they needed more growth in this area.

Table 1
Factor 1: The Emerging Teacher View: High and Low Ranking Statements

No.	*Most Like* Statements	Array Position	Z score
29.*	I feel comfortable with my ability to communicate with colleagues and parents.	4	1.74
28.	I have learned ways to grow as a professional.	4	1.72
20.*	I know how to encourage positive social interactions.	3	1.61
4.	I am getting better at teaching.	3	1.56
1.	I like how teaching makes me feel.	3	1.36
21.*	I am able to handle discipline problems in my classroom	3	1.12
19.	I feel comfortable with my classroom management skills.	2	1.03
7.	I need less help with teaching than I did before.	2	1.02
5.*	I am confident in my ability to teach.	2	0.78
24.*	I feel comfortable with my ability to motivate students.	2	0.75
	Most Unlike Statements		
14.	I understand how children learn and develop.	-2	-0.79
26.	I am able to use prescribed curriculum for instruction.	-2	-0.82
16.	I know how and where to refer students with learning problems.	-2	-0.82
18.*	I know how to individualize instruction.	-2	-0.86
32.	I can construct lesson plans for only the subjects I am comfortable with.	-3	-1.18
2.*	Teaching is easy for me.	-3	-1.23
15.*	I have enough training to deal with student learning problems.	-3	-1.24
35.*	I can teach any agricultural education course.	-3	-1.36
34.	It is easy to find curriculum materials to instruct with.	-4	-1.43
33.	I feel comfortable teaching only one or two subjects.	-4	-2.06

Note. The table displays the top ten *most like me* and *most unlike me* statements. *Denotes a distinguishing statement at an alpha level of $p < .05$.

Student teachers holding the *Emerging Teacher* view clearly were not comfortable teaching all aspects of agriculture, as defined by the rejection of the distinguishing statement, "I can teach any agricultural education course" (35, -1.36) (see Table 1). Participant 13 wrote, "I am learning in ag[ricultural] mechanics and will continue to do so, but basic welding [is] what I am comfortable with now." Although these student teachers were not comfortable teaching *all* agricultural education courses, they did indicate strongly their ability to teach several different agricultural subjects rejecting the statement, "I feel comfortable teaching only one or two subjects" (33. -2.06). However, despite any discomfort in *teaching* across the curriculum, these student teachers had no problem creating lesson plans across the curriculum. This finding is supported by their rejection of the statement, "I can construct lesson plans for only the subjects I am comfortable with" (32, -1.18). Participant 12 explained, "I just have to do my part in researching/studying the topics before I actually teach it to my students."

Interns who held the *Emerging Teacher* view perceived they could construct lessons across the curriculum, but finding the materials to do that was not easy (34, -1.43). These student teachers also perceived it was difficult to use prescribed curriculum for instruction (26, -0.82); and when pursuing the creation of their own materials, it was not easy to find curriculum materials with which to instruct (34, -1.43). Unique to this view was a social dimension. Particularly noteworthy were three *most like me* distinguishing statements. These were, "I feel comfortable with my ability to communicate with colleagues and parents" (29, 1.74); "I know how to encourage positive social interactions"

(20, 1.61); and "I feel comfortable with my ability to motivate students" (24, 0.75). This social dimension of those holding the *Emerging Teacher* view also trickled down to their comfort with classroom management skills (19, 1.03). Their knowledge in encouraging positive social interactions was emphasized by another distinguishing statement; "I am able to handle discipline problems in my classroom" (21, 1.12) (see Table 1).

Factor 2: Self–Assured Teacher

This factor array was defined by five of the Q–sorts and accounted for 17% of the variance in the analysis. Interns who held the *Self–Assured Teacher* view were confident in their teaching ability (statement 5, z–score 2.19) and classroom management skills (19, 0.84) (see Table 2).

Table 2
Factor 2: The Self–Assured Teacher View: High and Low Ranking Statements

No.	*Most Like* Statements	Array Position	Z score
5.	I am confident in my ability to teach.	4	2.19
3.*	When I teach, I feel satisfied.	4	1.58
23.	I feel comfortable with my ability to plan instruction.	3	1.37
2.*	Teaching is easy for me.	3	1.26
1.	I like how teaching makes me feel.	3	1.15
6.*	I am relaxed when I teach.	3	1.06
8.	My students think I teach well.	2	0.91
12.	My lessons contain meaningful learning experiences.	2	0.88
35.	I can teach any agricultural education course.	2	0.85
19.	I feel comfortable with my classroom management skills	2	0.84
	Most Unlike Statements		
34.*	It is easy to find curriculum materials to instruct with.	-2	-0.54
15.	I have enough training to deal with student learning problems.	-2	-0.69
14.	I understand how children learn and develop.	-2	-0.70
30.*	I have observed teaching that I will model in the future.	-2	-0.95
25.	I have observed other teachers techniques to motivate students.	-3	-0.98
17.	I have observed other teachers deal with student learning problems.	-3	-1.01
26.	I am able to use prescribed curriculum for instruction.	-3	-1.20
36.	I have observed other teachers use a variety of materials to build lessons with.	-3	-1.22
32.*	I can construct lesson plans for only the subjects I am comfortable with.	-4	-2.17
33.	I feel comfortable teaching only one or two subjects.	-4	-2.25

Note. The table displays the top ten *most like me* and *most unlike me* statements. *Denotes a distinguishing statement at an alpha level of $p < .05$.

In addition, these student teachers perceived they could teach any agricultural education course (35, 0.85)(see Table 2). This was emphasized further with the "most unlike me" placement of the distinguishing statement, "I feel comfortable teaching only one or two subjects" (33, -2.25). Participant 17 supported the view of being able to teach any agricultural education course by writing, "I really feel that I was prepared for [the] content."

The high confidence of the *Self–Assured Teacher* was emphasized by other statements as well. The *most like me* placement of two distinguishing statements, "Teaching is easy for me" (2, 1.26), and "I am relaxed when I teach" (6, 1.06), added to the interpretation of comfort and confidence (see Table 2). Although those

holding this view were comfortable and confident in their own teaching ability, they had not observed teaching that they will model in the future (30, -0.95).

In terms of finding quality curriculum, the *Self–Assured Teacher* struggled. The distinguishing statement "It is easy to find curriculum materials to instruct with" (34, -0.54) was rejected (see Table 2). And while curriculum was difficult to find, these student teachers did not want to use prescribed curriculum for instruction (26, -1.20) either. Participant 15 wrote, "Good curriculum is the key, not having to go home at night and fill in gaps would be beneficial." This supported a view that these student teachers wanted quality instructional curriculum. It was noteworthy that they had not observed other teachers use a variety of materials with which to build lessons (36, -1.22), or so they perceived.

The *Self–Assured Teachers'* expressions of confidence regarding their ability to teach any agricultural education course was also tied to their confidence in planning instruction. The struggle in locating curriculum materials did not affect their perceived ability for lesson planning. These student teachers perceived their lessons contained meaningful learning experiences (12, 0.88), and they were comfortable with their ability to plan instruction overall (23, 1.37) (see Table 2). They also were confident in their ability to construct lessons across the agricultural education curriculum, as expressed by their rejection of the statement, "I can construct lesson plans for only the subjects I am comfortable with" (32, -2.17). However, based on their individual comments, the student teachers did not seem to plan for many classes. Participant 7 claimed to "use the same lesson plan for both horticultural classes," and Participant 4 stated his classes were "somewhat cover–all in subject matter . . . all ag[ricultural] subjects [were taught] inside one class so the students get a broad view of ag[riculture]."

Although confident, the *Self–Assured Teachers* view themselves as unprepared in some areas of teaching. They do not perceive they had enough preparation to deal with student learning problems (15, -0.69) nor did they understand how children learn and develop (14, -0.70) (see Table 2). These student teachers had not observed other teachers model these teaching behaviors. They rejected the statements, "I have observed other teachers deal with student learning problems" (17, -1.01), and "I have observed other teachers techniques to motivate students" (25, -0.98). Further, teaching not only evoked confidence for the *Self–Assured Teacher* but pleasure and satisfaction as well. A *most like me* statement included, "I like how teaching makes me feel "(1, 1.15), and a distinguishing statement was, "When I teach, I feel satisfied" (3, 1.58) (see Table 2).

Factor 3: Determined Teacher

This factor array was defined by four of the Q–sorts and accounted for 12% of the variance in the analysis. This group was named the *Determined Teacher* because of its balance of teaching confidence and hard work. Participants with this view had confidence in their teaching ability but perceived they were still growing as teachers and professionals (4, 1.68; 7, 0.73) (see Table 3). This type of student teacher viewed strongly that teaching was not particularly easy (statement 2, z–score -1.92). In addition to teaching not being easy, these student teachers had experienced stress and tension in relation to teaching. Two *most unlike me* distinguishing statements verified this view firmly: "I am relaxed when I teach" (6, -2.37), and "When I teach, lessons flow" (11, -1.08). Yet, countering the perceived feelings of teaching stress, the *Determined Teachers* recognized a level of confidence in their ability to teach (5, 2.02). These individuals perceived that they needed less help teaching than before and were growing as a professional (28, 1.34). In addition, teaching was a source of pleasure for this group (1, 1.37). The *Determined Teachers'* confidence was supported by others' thoughts on their teaching ability. This was expressed in the *most like me* statement, "My students think I teach well" (8, 0.80) (see Table 3).

Table 3
Factor 3: The Determined Teacher View: High and Low Ranking Statements

No.	*Most Like* Statements	Array Position	Z score
5.	I am confident in my ability to teach.	4	2.02
4.	I am getting better at teaching.	4	1.68
1.	I like how teaching makes me feel.	3	1.37
28.	I have learned ways to grow as a professional.	3	1.34
12.	My lessons contain meaningful learning experiences.	3	1.09
30.*	I have observed teaching that I will model in the future.	3	1. 02
35.	I can teach any agricultural education course.	2	0.84
23.	I feel comfortable with my ability to plan instruction.	2	0.81
8.	My students think I teach well.	2	0.80
7.	I need less help with teaching than I did before.	2	0.73
	Most Unlike Statements		
22.	I have observed other teachers' classroom management procedures.	-2	-0.67
24.*	I feel comfortable with my ability to motivate students.	-2	-0.71
20.	I know how to encourage positive social interactions.	-2	-0.75
17.	I have observed other teachers deal with student learning problems.	-2	-0.87
32.	I can construct lesson plans for only the subjects I am comfortable with.	-3	-0.89
11.*	When I teach, lessons flow.	-3	-1.08
34.	It is easy to find curriculum materials to instruct with.	-3	-1.26
36.	I have observed other teachers use a variety of material to build lessons with.	-3	-1.72
2.*	Teaching is easy for me.	-4	-1.92
6.*	I am relaxed when I teach.	-4	-2.37

Note. The table displays the top ten *most like me* and *most unlike me* statements. *Denotes a distinguishing statement at an alpha level of $p < .05$.

Unique to the *Determined Teacher* view, however, was the distinguishing statement, "I have observed teaching that I will model in the future" (30, 1.02) (see Table 3). This was interesting because of their ranking of other statements, i.e., they had not seen teachers perform several important tasks associated with teaching. They rejected three statements associated with the observation of other teachers: "I have observed other teachers' classroom management procedures" (22, -0.67); "I have observed other teachers deal with student learning problems" (17, -0.87); and "I have observed other teachers use a variety of materials to build lessons with" (6, -1.72). However, not seeing others teachers complete these tasks did not interfere with the *Determined Teachers'* views on completing these tasks for themselves. In terms of curriculum planning and instruction, these student teachers expressed comfort with their ability to plan instruction (23, 0.81) and create lessons with meaningful learning experiences (12, 1.09).

In addition, these student teachers perceived they could teach any agricultural education course (35, 0.84). They also expressed they could construct lesson plans for more than just the subjects with which they were comfortable (32, -0.89). Participant 20 emphasized this by stating, "I feel comfortable with [all] the agriculture subjects." This participant did mention a lack of comfort with the agricultural communications curriculum, however. And, although these student teachers perceived they could construct lesson plans, finding the actual materials needed for the development of the curriculum was not easy for them. To that end, these student teachers rejected the statement, "It is easy to find curriculum materials to instruct with" (34, -1.26).

Limitations

This study did not attempt to *measure* the intern's views on teaching ability but rather *explore* their views through the employment of Q–methodology. Other methods and measures are recommended to study interns' views further on their teaching ability (i.e., teacher efficacy) or to identify factors that may contribute to those views. Second, this study was limited to the participants who performed the Q–sort and operated under the assumption that the self–reported data reflected the interns' actual views.

Discussion and Implications

The student teaching internship is a different experience for individual interns; however, some interns shared similar views allowing natural groupings to form. The three factors produced from this Q–method study represented the three distinct views found in the sample of agricultural education interns studied regarding their perceptions of teaching ability during their student teaching experience. Although this study did not attempt to measure the level of teacher efficacy in terms of high or low, all groups expressed a moderate level of teacher efficacy, as their views on teaching reflected an overall positive and satisfactory experience. However, considering Bandura's (1986, 1997) four sources of efficacy (i.e., mastery experiences, vicarious experiences, social persuasion and physiological/emotional state), each of the three collective viewpoints may have been derived from different sources of efficacy creating experiences.

In this study, the *Emerging Teacher* was the only view in which a distinct social dimension emerged. Their high ranking of statements such as comfort in communicating with colleagues and parents, motivating students, encouraging positive interactions, and dealing with classroom discipline and management could be reflective of a form of social persuasion, which contributed to their efficacy. When considering social persuasion, it is easier to gain and maintain a sense of efficacy when significant others profess confidence in a person's abilities (Bandura, 1997). For an intern, this "significant other" may have been a cooperating teacher, university supervisor, the pupils being instructed, or the pupils' parents, as indicated by the positive placement of such statements.

The *Self–Assured Teacher* view had the highest ranking of statements concerned with comfort and confidence in their teaching ability. According to Bandura (1986, 1997), mastery experiences are by far the most influential sources of positive self–efficacy beliefs. Though it is not known what the particular experiences were, the high ranking of those statements indicated these interns had the opportunity to master those tasks, therefore, influencing their view.

Another source of efficacy comes from vicarious experiences (Bandura, 1997). Vicarious experiences attained through the observation of others serve as a modeling effect. Evidence was found that modeling served as a source for one of the views, i.e., only interns holding the *Determined Teacher* viewpoint observed quality teaching being modeled. This is unfortunate because observation of effective models improves a person's efficacy at performing similar tasks (Bandura, 1997), especially in regard to teaching (Tschannen–Moran et al., 1998).

Recommendations

A longitudinal study during the entire student teaching internship could offer information on how student teachers differ at various stages of their internship experience. It would be helpful to collect data on the same group of student teachers prior to, during, and after they had finished their student teaching experience at the respective cooperating centers. Collecting data at these intervals would allow a researcher to determine the impact of the student teaching experience on student teachers' views of efficacy, as well as offer multiple, formative opportunities to assist them in improving on their deficiencies during their internship. Further, following a specific population of student teachers over time might be insightful as well. To date, somewhat conflicting evidence exists regarding whether self–efficacy increases (Hoy & Woolfolk, 1990) or decreases

(Knobloch & Whittington, 2003) after the student teaching internship. Other differences could also be found as the interns transition into the first year of teaching and thereafter.

Roberts and Dyer (2004) noted that being a secondary agricultural education teacher includes more than classroom teaching. As such, Q–statements should be refined and expanded to capture other teaching activities unique to agricultural education. In particular, Q–statements should be developed to include other aspects of a comprehensive agricultural education program, such as SAE and FFA. Information from such a study could provide insight into student teachers' views on those activities with regard to mastery experiences (Bandura, 1986, 1997).

This study was also informative by providing feedback to university supervisors about the activities occurring at the cooperating centers. When considering "not like me" statements across all three viewpoints, interns struggled with student learning problems, discipline, and finding curriculum materials. Therefore, attempts should be made to address the student interns' perceived deficiencies in these areas during the on–site visit with the university supervisor.

Student interns also had a perceived deficiency in observing some important teaching behaviors of their cooperators. From a practitioner's standpoint, dialogue should begin between the university supervisors and the cooperating teacher in order to provide a more robust set of student teaching experiences for all interns. Cooperators should be informed, systematically, of the expectation of the student teaching experience and reminded of the important role they play as models. They should also be encouraged to capitalize on as many teachable moments with the student intern as they do with their own students.

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SHEYENNE KRYSHER is a Senior Lecturer in the Department of Agriculture at Texas State University, 601 University Drive, San Marcos, TX 78666, krysher@txstate.edu

J. SHANE ROBINSON is an Associate Professor in the Department of Agricultural Education, Communication and Leadership at Oklahoma State University, 457 Ag Hall, Stillwater, OK 74078, shane.robinson@okstate.edu

DIANE MONTGOMERY is a Regents Professor in the Department of Educational Psychology at Oklahoma State University, 424 Willard Hall, Stillwater, OK 74078, diane.montgomery@okstate.edu

M. CRIAG EDWARDS is a Professor of Agricultural Education in the Department of Agricultural Education, Communications and Leadership at Oklahoma State University, 456 Agricultural Hall, Stillwater, OK 74078, craig.edwards@okstate.edu