

DIFFERENCES IN TEACHER EFFICACY RELATED TO CAREER COMMITMENT OF NOVICE AGRICULTURE TEACHERS

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ABSTRACT

This exploratory descriptive study investigated the differences between teacher efficacy of novice teachers based on relatively low and high levels of career commitment. The population was 91 novice teachers in their first, second, and third years of teaching in agricultural education in Ohio. The teachers were split into two groups based on their median scores of career commitment. Although the two groups had the same teacher efficacy at the beginning of the school year, teachers with higher career commitment were more efficacious after the first 10 weeks of the school year than the teachers with lower career commitment. Moreover, teachers with lower career commitment experienced a decline in their teacher efficacy while teachers with higher career commitment did not change in their teacher efficacy from week 1 to week 10. There was a small relationship between career commitment and tenth week teacher efficacy.

Beginning a career is a pivotal stage for teachers. The initial years of teaching are recognized as being important to one's teaching effectiveness, job satisfaction, professional commitment, and career longevity (Darling-Hammond, 1997; Feiman-Nemser, 1983; Lortie, 1975; National Commission on Teaching and America's Future, 1996). Many novice teachers start their careers with uncertainty, find their jobs more demanding and challenging than expected, and reconsider their career choices (Gordon, 1991; Veenman, 1984). Nationally, 17% of new public school teachers leave the profession within the first three years (National Center for Educational Statistics, 1997). Among those who left, 27% retired, 37% left for family or personal reasons, and 26% were dissatisfied with teaching or entered another career. Teachers were most dissatisfied with student motivation and discipline, lack of recognition, and administrative support (Darling-Hammond, 1997). Likewise, Heath-Camp and Camp (1990) found that 15% of career and technical teachers quit within their first year and more than half left the profession within six years. Secondary career and technical education teachers left the teaching profession because of job-related stress (Ruhland, 2001); concerns about their own safety; a perceived lack of fairness

and support; inadequate facilities and materials, resources; and, time consuming tasks that were perceived as unnecessary (Kirby & LeBude, 1998).

Beginning teachers in agricultural education face similar challenges as their teaching colleagues in other disciplines, including those in career and technical education (Joerger & Bremer, 2001; Kirby & LeBude, 1997). Beginning career and technical teachers experienced an “unbelievably complex set of problems” (Heath-Camp & Camp, 1990, p. 22), and had unrealistic expectations and experienced severe frustration, especially during the first few months in the classroom (Lynch, 1994). The first year of teaching is exceptionally challenging for most beginning agriculture teachers (Talbert, Camp, & Heath-Camp, 1994). Beginning agricultural education teachers were stressed, dissatisfied (Joerger & Boettcher, 2000), hesitant to act, and had low self-confidence (Mundt, 1991). When faced with difficulties, beginning teachers tend to contemplate whether or not they will stay in teaching. One out of four agricultural education teachers in Ohio left the teaching profession after their first year (Wardlow, Barrick, & Warmbrod, 1985). Walker (2002) reported that 42% of agriculture teachers in Missouri left teaching by their sixth year.

Teachers are more satisfied with their jobs when they believe in their abilities and foresee that they can have a positive impact (Hoy & Miskel, 2001). Beginning agriculture teachers believed that self-confidence and personal satisfaction have a major impact on teaching (Joerger & Boettcher, 2000). Personal achievement and feelings of satisfaction were critical to whether or not beginning agriculture teachers remained in or left the teaching profession (Henderson & Nieto, 1991). Similarly, beginning career technical education teachers were more willing to stay in the teaching profession if they had positive teaching experiences, inner satisfaction, administrative support, adequate time to do their job, and job security (Ruhland, 2001). In general education, there is evidence that teachers who left teaching were less efficacious than teachers who remained in teaching (Burley, Hall, Villeme, & Brockmeier, 1991; Glickman & Tamashiro, 1982). Teacher efficacy has been linked to the level of professional commitment for preservice and inservice teachers (Coladarci, 1992; Evans & Tribble, 1986) and to level of stress experienced in teaching (Smylie, 1988). It is important that beginning teachers develop a belief in their own abilities to teach because “if teachers go into their first year of teaching without the belief that they can make a difference, chances are pretty good that they may never develop such an attitude” (Burley et al., p. 15).

THEORETICAL FRAMEWORK

Researchers, teacher educators, and administrators are interested in knowing what teacher attributes and sources contribute to a greater sense of teacher efficacy (Hoy & Miskel, 2001; Tschannen-Moran & Woolfolk Hoy, 2002) and teacher competence (Findlay & Drake, 1989). *Teacher efficacy* can contribute to teaching effectiveness (Tschannen-Moran, Woolfolk Hoy, & Hoy, 1998), student achievement (Armor, Conroy-Osegurea, Cox, King, McDonnell, Pascal, Pauly, & Zellman, 1976), professional commitment (Coladarci, 1992; Evans & Tribble, 1986; Trentham, Silvern, & Brogdon, 1985), and career longevity (Burley et al., 1991). A teachers' commitment to teaching plays an important role in determining how long one remains in the profession (Chapman, 1982; Chapman & Lowther, 1983; McCracken & Etuk, 1986).

Teacher commitment is the degree of psychological attachment teachers have to their profession (Chapman, 1982). Raju and Srivastava (1994) found that committed teachers were intrinsically

motivated, satisfied with their career choice, and intended to stay in the profession. Some researchers claim that commitment is formed before teachers take their first teaching job, which can influence their level of job satisfaction (Chapman & Lowther, 1983; Culver, Wolfe, & Cross, 1990). Furthermore, Fresko, Kfir and Nasser (1997) stated that personality factors, family factors, and alternative opportunity factors may be more important in determining teacher commitment than factors which are related to the everyday tasks of teaching. On the contrary, Ruhland (2001) found that teachers who stayed in teaching were those who had successful teaching experiences. The conceptual framework of the study was based on the proposition that novice teachers who had a greater sense of career commitment in agricultural education will be more efficacious after the first 10 weeks of the school year.

CONCEPTUAL FRAMEWORK

The conceptual framework of the study was grounded on Bandura's (1986, 1997) social cognitive and self-efficacy theories. Novice teachers' performances reciprocally influence and are influenced by their personal factors and factors in the environments in which they teach. People self-reflect on their own beliefs of performing tasks in specific situations, known as self-efficacy.

TEACHER EFFICACY

Teacher efficacy is a type of self-efficacy and it lies in the heart of the conceptual framework. Teacher efficacy is a belief that teachers have in their abilities to organize and execute courses of action that are required to successfully accomplish a specific teaching task in a particular context (Tschannen-Moran et al., 1998). Furthermore, teachers with high teacher efficacy are motivated to persist when faced with setbacks and willing to exert effort to overcome difficulties (Tschannen-Moran et al., 1998). The three components—personal factors, environmental factors, and behaviors—of the triadic reciprocal system interact dynamically (Bandura, 1986) during the initial and beginning phases of the teaching career.

CAREER COMMITMENT

Because personal characteristics influence teaching competence (Findlay & Drake, 1989) and performance (Somech & Drach-Zahavy, 2000), the focus of the study investigated the antecedent of a personal factor—career commitment—that could be related to teacher efficacy. It was conceptualized that teachers are committed to and are more likely to stay in the teaching profession based on their personal needs and goals related to their teaching jobs. Therefore, literature regarding professional longevity, personal expectations of career, including balance between career and personal-family needs, long-term career motivation, and professional commitment were reviewed. Because of the limited number of studies in agricultural education, the researcher reviewed general teacher education literature.

Personal expectations and needs Herbert and Worthy (2001) found that a perceived match between personal expectations, workplace realities, and personality explained a beginning teacher's success. Herbert and Worthy's (2001) study of a successful first-year teacher found that she had realistic expectations of the fast pace and long hours of teaching, which helped her accept her teaching responsibilities and became committed to her students and career. However, many young professionals in the helping professions, including teachers, worry about maintaining a balance between their career and interpersonal commitments (Fischman, Schutte, Solomon, & Wu Lam 2001). The balance between career and personal-family needs is influenced

by situations in life, which can affect novice teachers' performances. Herbert and Worthy (2001) found that a successful novice teacher was able to devote herself completely to the demands and expectations of her first-year of teaching because of her limited out-of-school family and personal responsibilities. However, Thompson, Beauvais, and Lyness (1999) found that intention to leave was not related to marital status and number of children. Rather, Thompson et al. (1999) found that the employees with more affective commitment about their organization were less likely to leave their jobs. Many teachers probably concur that the balance between career and personal-family responsibilities continues to be a determinant of job satisfaction and teaching efficacy.

Career choice. Teachers who selected their career based on an intrinsic motivation to serve others or a long-term career goal are more likely to exhibit higher efficacy in their teaching. Personal experiences and family background can influence the career decision-making processes and the projection of long-term career goals. Fischman et al. (2001) stated that many helping professionals, including teachers, "chose a career that is at its core is about helping others because they see their professional work as one avenue toward fulfilling their life's goal" (p. 34). Teachers' personal and social experiences are important in choosing careers because helping professionals often pursue their careers based on childhood experiences, personal and professional goals, beliefs and values, and being inspired by family and peers to serve others (Fischman et al., 2001).

NEED AND SIGNIFICANCE OF STUDY

Many teachers discover that the tasks that they are expected to perform are more difficult and challenging than they anticipated from their experience as a student (Lortie, 1975). Because employees question their career choice after they start their jobs (Holton, 2001), novice teachers' motivation and efficacy may be sustained by a long-term commitment to their career. Commitment to the teaching profession is related to teacher efficacy (Coladarci, 1992; Evans & Tribble, 1986; Lortie, 1975). Further, teacher characteristics in agricultural education that may be related to teacher efficacy are teaching as a long-term career goal (Grady, 1990; Moore & Camp, 1979) and the teaching career matched personal needs (Grady, 1990; McCracken & Etuk, 1986; Moore & Camp, 1979). This study was conducted because of two imperative needs. First, there is little current research on the development of teachers in agricultural education. Few studies have investigated teacher efficacy in agricultural education, and many studies related to teacher development are more than ten years old. Second, there is conflicting evidence on perceived competence (teacher efficacy) and career (commitment) longevity. Grady (1990) found that perceived competence was related to teachers who stayed in the profession, and Edwards and Briers (2000) found that perceived competence was not related to expected teaching longevity of novice agriculture teachers. Knowing if teacher efficacy and career commitment are related could help the profession develop and support novice teachers who may remain in agricultural education.

PURPOSE AND OBJECTIVES

The purpose of the study was to describe the differences between teacher efficacy of novice teachers based on levels of career commitment. The objectives of the study were to: (a) describe the difference in teacher efficacy between novice teachers with lower career commitment and novice teachers with higher career commitment at the first week and the tenth week of the

school year; (b) describe the degree of teacher efficacy change related to career commitment; and, (c) explain the relationship between tenth week teacher efficacy and career commitment.

METHODS AND PROCEDURES

This exploratory descriptive study used a one-group pretest-posttest design to assess teacher efficacy of novice teachers in agricultural education in an Ohio public high school at the first week and tenth week of the 2001-02 school year. The naturally occurring, non-manipulated treatment was 10 weeks of teaching experience in a public school in Ohio, determined by the length of a student teaching internship (which was part of another study, but was not included in this study). Although the brevity of the treatment could have been a limitation, Lynch (1994) stated that career and technical education teachers experience frustrations during the first few months in the classroom.

The population for the study was a census of agricultural education novice teachers in their first three years of teaching in public high schools in Ohio. There were 91 teachers in the accessible population at the beginning of the school year. There were 93 teachers in the accessible population at the tenth week of the school year. Four new teachers were reported to the Ohio Department of Education since the beginning of the school year, one teacher left teaching, and one teacher elected not to participate by returning a blank pretest questionnaire.

The dependent variable was teacher efficacy and the independent variable was career commitment. The data were collected through pretest and posttest questionnaires. The pretest questionnaire consisted of 24 items that measured teacher efficacy using the OSU Teacher Efficacy Scale (TES) (Tschannen-Moran & Woolfolk Hoy, 2001). Some example items were: "How much can you do to get through to the most difficult students? How much can you do to help your students think critically?" The OSU- TES is available at Woolfolk Hoy's web site: <http://www.coe.ohio-state.edu/ahoy/researchinstruments.htm>.

The OSU Teacher Efficacy Scale used Bandura's 9-point efficacy scale with anchors at (1) Nothing; (3) Very Little; (5) Some Influence; (7) Quite A Bit; and (9) A Great Deal. Tschannen-Moran and Woolfolk Hoy (2001) reported that the OSU Teacher Efficacy Scale had construct validity established by factor analysis and reliability ranged from 0.92 to 0.95. The posttest questionnaire consisted of the same 24 teacher efficacy items and four items that measured teacher perceptions related to career commitment. The four items were: being a high school agriculture teacher has been my long-term career goal; I plan to teach for at least 5 years; I do not plan to be teaching next year (reversed); teaching as a career matches my personal and family needs. The four perception items had a 6-point summated rating scale: (1) strongly disagree, (2) moderately disagree, (3) slightly disagree, (4) slightly agree, (5) moderately agree, and (6) strongly agree. The researchers created four perception items based on Bandura's (1997) self-efficacy theory and Darling-Hammond's (1999) review of effective teacher characteristics. Teacher efficacy change was calculated as posttest teacher efficacy minus pretest teacher efficacy.

A panel of teacher education experts in agricultural education established content validity of the questionnaires. Graduate students in agricultural education with student teaching and previous teaching experience established face validity through a field test. The questionnaires were pilot tested with preservice teachers enrolled in undergraduate courses yielding a Cronbach's alpha of 0.87 for 12 teacher efficacy items. The posthoc reliability coefficients verified that the

pretest and posttest questionnaires were reliable (first week teacher efficacy = .92; tenth week teacher efficacy = .94; career commitment = .72).

The data were collected using Dillman's (2000) tailored design method with up to five contacts. Data collection was ceased six weeks after the initial mailing with a 92.3% response rate. One questionnaire was returned blank resulting in a 91.2% usable response rate. Ten weeks later, up to four contacts were made for the posttest data collection with a with an 89.2% usable response rate.

The data were analyzed using the Statistical Package for the Social Sciences, Personal Computer version (SPSS/PC+). A reversed item was recoded and subscales were aggregated into composite scores before analyzing the data. Participants whose responses were incomplete were excluded automatically by SPSS in the data analysis procedures. Domains for first week teacher efficacy, tenth week teacher efficacy, and career commitment were summed. Descriptive statistics were used to analyze the data because the study was a census. Population means and population standard deviations were calculated. Groups were compared using a median split of the data set. Cases at or below the median were split into the lower half and cases above the median were put into the upper half for each domain. The relationship between tenth week teacher efficacy and career commitment was described using the Pearson product-moment coefficient and Davis' (1971) conventions. Effect sizes were computed using Cohen's (1988) *d* coefficients and indices. Population means, population standard deviations, and effect sizes were rounded to the nearest 1/100th. The effect size decision criterion was established *a priori* at 0.50 for *d* and 0.30 for *r* (Fraenkel & Wallen, 2000).

RESULTS AND FINDINGS

For Objective 1, the median of career commitment (long-term goal, teach next year, teach five years, matches personal needs) for novice teachers was 5.00 (Range = 4.50). Therefore, teachers with a career commitment value of 5.00 or lower were grouped as teachers with a lower career commitment and teachers with a value greater than 5.00 were grouped as teachers with higher career commitment. There were 44 novice teachers in the lower career commitment group and were represented by 17 first-year teachers (39%), 14 second-year teachers (32%), and 13 third-year teachers (29%). The teachers with lower career commitment had a population mean of 4.25 (*s* = .84) for career commitment, 6.83 (*s* = .78) for first week teacher efficacy, and 6.49 (*s* = .83) for tenth week teacher efficacy (Table 1). There were 38 novice teachers in the higher career commitment group and were represented by 13 first year teachers (34%), 10 second-year teachers (26%), and 15 third-year teachers (40%). Teachers with higher career commitment had a population mean of 5.65 (*s* = .28) for career commitment, 6.88 (*s* = .91) for first week teacher efficacy, and 6.89 (*s* = .89) for tenth week teacher efficacy. The effect size for the difference in career commitment was 321% greater than a large effect size (3.37). The effect size for differences in first week teacher efficacy was negligibly small (.07) and tenth week teacher efficacy was medium (.54).

Table 1

A Comparison of First Week Teacher Efficacy, Tenth Week Teacher Efficacy, and Career Commitment

	Career Commitment ^A	First Week Teacher Efficacy ^B	Tenth Week Teacher Efficacy ^B
Lower C. C. (<i>N</i> = 44, 43, 44)	4.25 (.84)	6.83 (.78)	6.49 (.83)
Higher C. C. (<i>N</i> = 38, 36, 38)	5.65 (.28)	6.88 (.91)	6.89 (.89)
Effect size	3.37 Large	.07 Small	.54 Medium

Scales: A: 1 = Strongly Disagree, 2 = Moderately Disagree, 3 = Slightly Disagree, 4 = Slightly Agree, 5 = Moderately Agree, 6 = Strongly Agree; and, B: 1 = Nothing, 3 = Very Little, 5 = Some Influence, 7 = Quite A Bit, 9 = A Great Deal.

For Objective 2, teachers with lower career commitment had a teacher efficacy change of 0.34 (*s* = .65) with a medium effect size of 0.55 (Table 2). Teachers with higher career commitment had a teacher efficacy change of 0.03 (*s* = .64) with a negligibly small effect size (.05). Collectively, there was a nearly large effect size (.74) for the difference between teacher efficacy change of the two groups.

Table 2

A Comparison of Teacher Efficacy Change and Career Commitment

Career Commitment	Group Mean	SD	Effect Size	Cohen's Index
Lower Group (<i>N</i> = 43)	-.34	.65	.55	Medium
Higher Group (<i>N</i> = 36)	-.03	.64	.05	Small

Scale: 1 = Nothing, 3 = Very Little, 5 = Some Influence, 7 = Quite A Bit, 9 = A Great Deal.

For Objective 3, the relationship between tenth week teacher efficacy and career commitment was small (*r* = .23, *N* = 82). The relationship had a small effect size (Cohen, 1988).

CONCLUSIONS, RECOMMENDATIONS, AND IMPLICATIONS

Novice teachers had positive perceptions of career commitment (Edwards & Briers, 2000), and the two groups of teachers were noticeably different in their career commitment. Teachers with lower career commitment were in slight agreement with the domain and teachers with higher career commitment were in moderate-to-strong agreement that they had a long-term career goal to teach, would be teaching next year and at least five years, and felt teaching as a career matched their personal and family needs.

Teachers with higher career commitment were more efficacious after the first 10 weeks of the school year, and are more likely to persist in the face of difficulties (Tschannen-Moran et al., 1998) that they experience during the first 10 weeks of the school year. Comparatively, teachers in both groups had the same teacher efficacy at the first week of the school year. Therefore, differences in teacher efficacy at the tenth week of the school year were not due to differences in teacher efficacy at the first week of the school year.

Career commitment appears to be a source of teacher efficacy, which aligns with efficacy expectancy of successful teaching (Bandura, 1997; Tschannen-Moran et al., 1998). Teachers with a long-term career goal to teach, who plan to teach for at least five years, and who believes that teaching matches their personal needs possess greater professional commitment to teaching and supports several studies (Coladarci, 1992; Evans & Tribble, 1986; Grady, 1990; McCracken & Etuk, 1986; Tentham et al., 1985).

These findings may suggest that teachers with greater anticipation of being in teaching long-term are more likely to be intrinsically motivated about teaching as a career (Fischman et al., 2001). Similarly, teachers with lower career commitment may be more extrinsically motivated due to being less efficacious after experiencing the challenges of the first 10 weeks in a school year. Novice teachers who had a long-term career goal to become a teacher, plan to teach next year and for at least five years, and felt their career matched their personal and family needs were more efficacious after the first 10 weeks of the school year than their counterparts who had lower career commitment.

Teachers with lower career commitment experienced a decline in teacher efficacy after the first 10 weeks of the school year. This finding supports Lynch's (1994) observation that teachers can experience frustrations in the first few months of teaching. Teachers with higher career commitment experienced no change in teacher efficacy after the first 10 weeks of the school year. Teachers with a higher degree of career commitment appear to be more resilient in maintaining their sense of efficacy than teachers with a lower degree of career commitment. Teachers who do not see themselves committed to teaching long-term or not matching their personal needs are less likely to persevere when faced with teaching challenges during the first 10 weeks of the school year. Moreover, these teachers who may have more doubt about their career longevity as a teacher appear to feel less confident in their ability to organize and execute actions to successfully carry out specific teaching tasks after the first 10 weeks of the school year.

Although career commitment is an important variable in maintaining teacher efficacy after the first 10 weeks of the school year, it has a small relationship with teacher efficacy measured at the 10th week. Plausibly, there are more variables that explain teacher efficacy at the 10th week of

the school year. It is unrealistic to suggest that one variable will be highly related to teacher efficacy. However, the relationship between career commitment and teacher efficacy should be considered in a multiple regression model with other pertinent variables.

One implication of these findings is that novice teachers with higher career commitment are more committed to their teaching careers, more efficacious in carrying out tasks that lead to successful teaching, and result in greater student success. Career commitment should be considered when selecting teacher education candidates, preparing preservice teachers, developing student teachers, hiring first year teachers, supervising beginning teachers, and mentoring novice teachers. Preservice and novice teachers with greater commitment to their careers are more efficacious after real teaching experiences in the classroom with students during the first 10 weeks of the school year. The initial experiences as a teacher can determine whether or not a teacher stays in the profession and makes a difference in helping students learn and develop. Goddard and Foster (2001) recommended that researchers seek out novice teachers who are resilient and do more than simply survive their beginning years. Understanding why novice teachers leave may be best learned by listening to those who faced the same challenges and decided to stay in teaching (Goddard & Foster, 2001; Herbert & Worthy, 2001).

The construct of career commitment should be further developed as it relates to teacher motivation. A limitation of this study was measuring career commitment with four summing rating items. More items should be identified and developed as a more comprehensive measure of this construct. Longitudinal trend studies should follow teachers to determine the relationship between career commitment and actual career longevity during the first five years of teaching. Further inquiry of environmental factors should be considered as they can influence and be influenced by personal factors, teacher efficacy, and teaching performances. This inquiry is critical because teachers who think they can teach plan to be in teaching profession longer.

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