

# Identifying Concerns of Preservice and In-service Teachers in Agricultural Education

Kristin S. Stair, Assistant Professor

*New Mexico State University*

Wendy J. Warner, Assistant Professor

Gary E. Moore, Professor

*North Carolina State University*

*Teacher educators have the task of identifying skills most needed by pre-service teachers and in-service teachers. The purpose of this study was to describe teacher concerns over different stages of teacher development. A three-part instrument consisting of a teacher concerns statement, a Likert-type scale of concerns and demographic data was given to three groups. The groups consisted of early career teacher education students (N = 40), advanced teacher education students (N = 15), and teachers who had completed their first year of teaching and were just beginning their second year (N = 22). The results of this study indicate concern levels do change over time and there is a distinct shift in both the level and type of concerns across these three groups. This shift may allow for agricultural education courses and in-service programming to be more uniquely designed to address the specific needs and concerns of our educational clientele.*

Keywords: teacher concerns; pre-service teachers; first year teachers; Teacher Concerns Instrument; agricultural education

## Introduction

One of the challenges experienced by teacher educators is providing pre-service teachers with the necessary skills they need to be successful in the classroom. By identifying the concerns of pre-service teachers and early career teachers, instructional content can be designed, selected, and sequenced based on need (Hillison, 1977). Fuller and Brown (1975) suggested by identifying the concerns of students in teacher education programs and developing educational materials to address these concerns, the motivation of learners increases and positively influences student learning. Many education programs provide several teacher education courses as part of a course sequence. This systematic structure allows pre-service teachers to progress through purposely constructed experiences and coursework. Initial coursework contributes to the beliefs and practices playing a key role in the development of beginning teachers (Wang, Odell, & Schwille, 2008). Research suggests pre-service teachers are often initially concerned

with their own actions as teachers in the classroom; but by specifically addressing these concerns, programs can encourage these neophytes to move past thinking about self and develop a more student-centered focus (Darling-Hammond & Bransford, 2005). In order to address specific needs in different teacher preparation courses, teacher educators must first understand the concerns pre-service students and early career teachers have at various stages of their academic and teaching career.

Multiple studies have been conducted in education to identify the problems and concerns faced by teachers. Veenman (1984) conducted a thorough examination of educational research and identified 91 studies involving early career teacher concerns. Within these studies, Veenman identified the most frequently reported problems for beginning teachers as classroom discipline, motivating students, accommodating individual differences, assessing student work, relationships with parents, organizing class work, insufficient supplies, addressing individual student problems, insufficient

preparation time due to high teaching loads, relationships with colleagues, planning lessons, and the effective use of different teaching methods. Many of these concerns have been addressed through research conducted in agricultural education. Previous research focused on in-service training, pre-service needs, and teacher concerns indicated teachers often believe additional training is needed for them to be successful in the classroom. These studies have also identified several different areas of concerns for new teachers in the agricultural education field (Edwards & Briers, 1999; Garton & Chung, 1997; Joerger, 2002, Mundt, 1991; Myers, Dyer & Washburn, 2005; Talbert, Camp & Heath-Camp, 1994; Warnick, Thompson, & Gummer, 2007).

Concerns of early career agriculture teachers can be further complicated by the extra responsibilities of managing Supervised Agricultural Experience (SAE) projects and the advisement of the student youth organization, the FFA chapter. Johnson, Lindhardt and Stewart (1989) found first and second year teachers placed the greatest importance on teaching daily classes, advising FFA activities, and supervising SAE projects; reflecting the three traditional components of the agricultural education program. The self-imposed pressure to successfully incorporate the total program model may lead to increased stress in new teachers as they also try to balance the changing demands and expectations of teaching. Myers et al. (2005) identified eleven major problems faced by beginning agriculture teachers. Of the top five problems, three were directly related to the development of the FFA program (organizing an effective alumni chapter, organizing and planning FFA chapter events and activities, and recruiting and retaining alumni members). Likewise, a study by Joerger (2002) found new teachers had in-service needs related to preparing FFA degree and proficiency award applications and establishing alumni chapters. In regards to pre-service teachers, Fritz and Miller (2003) found student teachers' concerns extended beyond the traditional agricultural model to include student discipline and time management. Novice teachers also expressed a concern specific to student discipline (Myers et al., 2005).

The aforementioned concerns contribute to the large list of problems teachers identify as

reasons contributing to their decision to leave the classroom. A study by Ingersoll (2001) estimated almost a third of teachers will depart the profession in the first three years and half will leave after five years. Ingersoll's research identified four main factors contributing to teacher loss: salaries, working conditions, preparation, and lack of mentoring support. To retain teachers in agricultural education, the identified problems and concerns need to be adequately addressed through pre-service or in-service educational opportunities (Boone & Boone, 2007).

Even with the concerns identified in previous research, it is critical to examine the concerns of pre-service and in-service teachers' specific to the current classroom environment. An ever-changing educational climate contributes to a change in types and levels of concerns experienced by teachers. A more thorough knowledge of present concerns and deeper examination of how concerns change throughout a pre-service education program will allow teacher educators to assist pre-service students in developing a greater understanding of appropriate instructional strategies, course sequencing, and personal efficacy that will contribute to teacher success upon entering the field (Stripling, Ricketts, Roberts, & Harlin, 2008). The results of this research will also allow teacher educators to address concerns more appropriately during coursework and teacher in-service in an effort to increase retention and support of novice teachers.

### **Conceptual Framework**

Fuller, Parsons, and Watkins (1974) suggested teachers continuously express concerns regarding classroom instruction, however the focus and level of concerns changes over time. Initially, teachers express a high level of self-concern regarding their own ability to be successful in the classroom. These primary concerns must be addressed before teachers can begin to think about the larger scope of teaching. Earlier research by Fuller (1969) examined concerns expressed by prospective teachers. From this work, three phases of concerns were identified: pre-teaching phase, an early teaching phase, and a late teaching. Continuing this line of inquiry, Fuller and Case (1972) developed seven specific categories of concerns using the

Teacher Concerns Statement instrument. These categories were condensed into three main categories: self, task, and impact (Fuller, et al. 1974). As described by Kagan (1992),

In the first preteaching state, candidates identify realistically with pupils but unrealistically with teachers. The second stage is characterized by concerns for survival: class control, mastery of content, the teacher's own adequacy in fulfilling his or her role. In the third stage, concerns turn to teaching performance, the limitations and frustrations of teaching situations. (p. 160)

Later research by Fuller and Brown (1975) described beginning teachers as being concerned primarily with self, in other words, believing themselves to be capable of teaching students and becoming a part of the educational environment. As self concerns were settled, teachers expressed task concerns or fears about developing appropriate instructional materials and working with students. Teachers only become concerned about the last category, impact concerns, when self and task concerns have been resolved. Impact concerns encompass larger educational decisions and considerations of the impact of current trends and issues on students in the classroom.

While other research contradicts the notion that concerns are expressed in levels independent of each other, the early research conducted by Fuller and associates has served as a foundation for other stage theorists who have investigated teacher concerns (Bartell, 2005). This continued inquiry proves relevance to educational concerns and teacher development in the present context (Burn, Hagger, Mutton, & Everton, 2003). Kagan (1992) reviewed 40 studies examining the process of professional growth among teachers and developed an emerging model of professional development. Five components of professional growth were identified, including increased awareness of beliefs about the context of teaching, acquisition of information about students that challenges pre-existing images, transfer of attention from an introspective focus to emphasis on student learning, development and implementation of consistent procedures, and expanded problem solving skills (Kagan, 1992). The components of this proposed model reflect the shift of teacher

concerns away from the self as described by Fuller and Brown (1975).

Pigge and Marso (1997) conducted a longitudinal study to examine the change in teacher concerns over a seven-year period. The data collected at the beginning of a teacher preparation program, at the completion of student teaching, and at the conclusion of the third and fifth years of teaching, reflected an increase in task concerns and decrease in self concerns as proposed by Fuller and Brown (1975). Research conducted by Conway and Clark (2003) also supported the outward progression of Fuller's model, from self concerns, to task concerns, to concerns about student development and successful teaching. Additionally, their research described an inward journey as pre-service teachers continued to express a greater self-awareness and self-knowledge, encouraging self-organization and self-development. While teacher concerns have been studied extensively within the broad scope of educational research, agricultural education has unique challenges and expectations of its teachers. This unique perspective merits additional investigation of how the concerns of pre-service and in-service agriculture teachers may reflect or differ when compared to similar studies within the educational field.

### **Purpose and Objectives**

The purpose of this descriptive research study was to identify the current concern level for three distinct groups involved in agricultural education at North Carolina State University: introductory level students enrolled in the Introduction to Teaching Agriculture course, advanced students in the Methods of Teaching Agriculture course and teachers who have completed their first year teaching in North Carolina and were just beginning their second year. Specifically, this study had two main objectives:

1. To identify concern levels of introductory level students, advanced students, and first year teachers in agricultural education at North Carolina State University and compare those concern levels across the three participant groups.
2. To identify the number of agricultural education specific concerns and compare the

number of concerns across the three participant groups.

### Methods and Procedures

#### *Data Collection*

This descriptive research study used a survey instrument to gather data. The research population consisted of pre-service students in the sophomore level Introduction to Teaching Agriculture course ( $N = 40$ ), and pre-service students in the Methods of Teaching Agriculture course ( $N = 15$ ) at North Carolina State University. The study also involved teachers in North Carolina who had just completed their first year teaching ( $N = 22$ ) during the 2008–2009 school year and were beginning their second year. The population frame for first year teachers was established through the North Carolina Agricultural Education Directory and through contact with the North Carolina Agricultural Education Coordinator. While it was recognized Fuller and Brown compared teacher concerns across a pre-teaching phase, early teaching phase, and late teaching phase, this study intended to focus on concerns of preservice teachers and novice teachers to address their needs at the most appropriate times within their coursework and teaching career.

Students were given the survey instrument in class with response rates of 89% for the Introduction to Teaching Agriculture course and 100% for the Methods of Teaching Agriculture course. First year teachers were sent the online survey instrument using SurveyMonkey.com. An initial e-mail was sent to teachers informing them of the study. The e-mail containing the survey link was sent one week later. Subsequent reminder e-mails were sent to non-respondents and a follow-up paper copy of the survey

instrument was provided for teachers who had not responded after the third reminder. The total response rate for first year teachers was 68%.

#### *Instrumentation*

The survey instrument contained three main parts. The first part of the instrument collected basic demographic data including gender, anticipated teaching level, classification, involvement in agricultural education as a student and age for the student groups. Gender, level currently teaching, certification, level of education, and involvement in an agricultural education program during high school were collected for the teacher group.

The second part of the instrument was based on the Teacher Concerns Statement instrument designed by Fuller and Case (1972). The instrument consisted of one open-ended question, “When you think about teaching, what are you concerned about? (Do not say what you think others are concerned about but only what concerns you now) Please be frank.” The statements made by the respondents were categorized into one of four categories. These categories were non-teaching concerns, self concerns, task concerns, and impact concerns. Examples of typical statements and the categories in which they belong are shown in Table 1. To ensure correct coding of the material, Fuller and Case developed a manual for coding the Teacher Concerns Statement. This instrument’s content validity was established by Fuller et al. (1974) through interviews and sessions with teachers. In this study, the concerns were categorized following the guidelines in the Fuller and Case manual and then repeated three weeks later to ensure reliability of the process. The correlation between the two rounds of coding was .98.

Table 1  
*Examples of Concerns and the Coding of the Concerns*

Statement	Category
I am more concerned about exams and getting my degree than actually teaching.	Non-teaching Concerns
I am concerned that I will have to work in a school outside of the county that I want.	Self Concerns
Will I be able to do all of the tasks I am expected to do?	Self Concerns
I worry that the students won't like me.	Task Concerns
I am concerned about finding a way to present material in a way that makes it interesting and easy for students to understand.	Task Concerns
I want to provide classroom activities that help my students problem solve and think critically.	Impact Concerns
Is our curriculum really preparing students to work in the current agricultural industry?	Impact Concerns

*Note.* Examples of concerns in the Teacher Concerns Statement Manual (Fuller & Case, 1972).

The third part of the instrument was a Likert-type scale of 20 items identified through agricultural education research as problems or areas of concern for agriculture teachers (organizing an effective alumni chapter, organizing an effective advisory committee, organizing FFA activities, managing student discipline in the classroom, recruiting and retaining alumni members, balancing personal and professional responsibilities, recruiting and retaining students, building support of faculty, counselors and administrators, time management, managing finances of the agricultural program, making special education/ESL accommodations, class preparation, developing and managing effective SAE programs for students, motivating students, completing paperwork, developing community support, self confidence, reputation of the previous teacher, multi-teacher issues, and managing and developing program facilities). For each item, participants were asked to rate their level of concern on a scale of one to five with one being *not concerned* and five being *extremely concerned*. Part three was reviewed for content validity by a panel of teachers and teacher educators in agricultural education and was determined to have a final Cronbach's alpha reliability coefficient of .89.

#### *Data analysis*

Data were analyzed using the Statistical Package for the Social Sciences SPSS v. 17.0

(2008). Descriptive characteristics were used to describe the demographics of the groups, overall concerns, and the frequency of concerns identified in the study. The chi square test for independence was used to determine if the types of concerns expressed by the respondents were independent of their experience level. An alpha level of .05 was set *a priori*.

#### **Findings/Results**

For group one, the pre-service students in the Introduction to Teaching Agriculture course, 69% were female ( $n = 24$ ) and 31% were male ( $n = 11$ ). The majority of respondents (66%) were sophomores in college ( $n = 23$ ), while 31% were juniors ( $n = 11$ ) and one student was classified as a senior (3%). Out of the population, 83% ( $n = 29$ ) planned to teach at the high school level, 11% ( $n = 4$ ) at the middle school/junior high level and 6% ( $n = 2$ ) planned to teach at the community college level or higher. Thirty-one respondents (89%) were involved in agricultural education in high school. The age range of this group varied from 18 to 23 with most students being either 19 (51.4%) or 20 (25.7%) years of age. The second group consisted of pre-service students in the Methods of Teaching Agriculture course and was made up of 60% ( $n = 9$ ) females and 40% ( $n = 6$ ) males. Because this course is only available to students during their last year in the education program, 100% of the students

were seniors. The majority of this group planned to teach at the high school level (93%), one respondent planned to teach in a middle school/junior high setting (7%). Thirteen of the respondents were involved in agricultural education in high school (87%). Ages of this group were from 20 to 26 with 50% ( $n = 7$ ) of respondents being 21 and 29 % ( $n = 4$ ) of respondents being 22.

Of the first year teachers, 53% ( $n = 8$ ) were female and 47% ( $n = 7$ ) were male. Most of the first year teachers surveyed were teaching at the high school level (93%,  $n = 14$ ) though one respondent was teaching at the middle school/junior high level (7%). Over half of the teachers were certified through traditional certification program (60%,  $n = 9$ ). For most of the teachers ( $n = 8$ ) the highest level of education completed was their bachelor's degree (53%). Only 40% had completed their master's degree ( $n = 6$ ) and one was currently enrolled in a master's degree program (7%). The majority (73%) of the first year teacher respondents were

involved in agricultural education programs when they were in high school ( $n = 11$ ).

*Identification of concern levels and comparison of concern levels across groups*

Table 2 presents a summary of concerns data across groups. Using chi square analysis there was a statistically significant difference between the expected and the actual number of concerns expressed across groups ( $X^2 = 18.47$ ,  $df = 6$ ,  $p < .001$ ). Eighty-seven percent (87%) of the concerns of the Introduction to Teaching group centered on self compared to 60% for the Methods of Teaching Agriculture students and 48% for the first year teachers. The Introduction group had few concerns (4%) regarding their impact on students. In the Methods group, the impact concerns rose to 14%. However, impact concerns comprised 45% of the concerns of the first year teachers. Clearly, the types of concerns expressed by teacher candidates and teachers do change over time depending on where they are in their educational career.

Table 2  
*Levels of Concerns Across Groups*

Level of Concern	Introduction to Teaching Agriculture Students		Methods of Teaching Agriculture Students		First Year Teachers	
	Number of Concerns	%	Number of Concerns	%	Number of Concerns	%
Non-Teaching	11	10%	0	0	0	0%
Self	99	87%	30	60%	20	48%
Task	10	9%	13	26%	3	7%
Impact	4	4%	7	14%	19	45%
Total concerns	113		50		42	

*Identification of types of agricultural education specific concerns and comparison of concerns across groups*

Part three of the instrument used a Likert-type scale to indicate the types of agricultural concerns of twenty items as defined by previous research in agricultural education (Table 3). The scale was based on a five point Likert-type scale. Most of the items listed were of some concern to the respondents. However, the researchers chose to concentrate on the areas of highest concern which were identified as items with a mean score higher than 4.0. The

Introduction to Teaching students had only one concern above a 4.0, Managing Student Discipline (4.09). The Methods of Teaching students had only two items they rated at 4.0 or higher—Managing Student Discipline (4.4) and Recruiting and Retaining Students (4.07). The first year teachers had eight items that scored higher than 4.0. These items can be identified in Table 3. This indicates that once a person starts teaching, they do have a greater number of concerns regarding teaching and the management of the agricultural education program.

Table 3  
 Summary of Likert-type Concerns Scale

Statement	Introduction to Teaching Agriculture			Methods of Teaching Agriculture			First Year Teachers		
	<i>n</i>	<i>M</i>	<i>SD</i>	<i>n</i>	<i>M</i>	<i>SD</i>	<i>n</i>	<i>M</i>	<i>SD</i>
Managing student discipline	35	4.09	1.29	15	4.4	0.82	15	4.27	1.16
Managing finances of the program	35	3.89	1.08	15	3.80	0.86	15	3.67	1.18
Recruiting and retaining students	35	3.86	1.22	15	4.07	0.88	15	4.00	1.36
Developing community support	35	3.83	1.01	15	3.27	0.96	15	3.67	1.35
Building support of faculty, counselors and administrators	35	3.80	1.20	15	3.67	0.9	15	4.13	1.25
Organizing FFA activities	35	3.74	1.20	15	3.40	1.24	15	4.07	1.34
Making special education/ESL accommodations	35	3.71	1.13	15	3.20	0.68	15	4.20	0.86
Balancing personal and professional responsibilities	35	3.69	1.32	15	3.73	1.39	15	4.40	0.91
Maintaining and developing facilities	35	3.63	1.11	15	3.53	0.84	15	3.93	1.03
Motivating students	35	3.51	1.38	15	3.73	1.22	15	4.20	1.27
Developing and managing effective SAE programs	35	3.51	1.04	15	3.33	1.23	15	3.93	1.22
Time management	35	3.46	1.08	15	4.00	0.92	15	4.00	1.20
Completing paperwork	35	3.26	1.46	15	3.00	1.00	15	3.93	0.96
Class preparation	35	3.26	1.25	15	3.40	1.06	15	3.80	1.20
Organizing an advisory committee	35	3.23	1.09	15	3.13	0.64	15	3.00	1.20
Recruiting and retaining alumni	34	3.18	0.97	15	3.33	0.83	15	3.27	1.34
Self confidence	35	3.14	1.44	15	3.33	1.29	15	2.93	1.34
Reputation of the previous teacher	35	2.97	1.27	15	3.73	3.20	14	2.14	1.56
Organizing an effective alumni	35	2.94	1.09	15	3.07	0.59	15	3.27	1.44
Multi-teacher issues	35	2.86	1.09	15	3.20	1.80	15	2.73	1.75

Note. 1 = not concerned, 2 = slightly concerned, 3 = somewhat concerned, 4 = moderately concerned and 5 = extremely concerned.

## Conclusions and Discussion

### Objective One

Based on this study, different levels of concerns were identified across the three groups. The pre-service students enrolled in the Introduction to Teaching Agriculture course expressed the highest number of both non-teaching and self concerns, while the pre-service students in the Methods of Teaching Agriculture course expressed no non-teaching concerns and a higher percentage of task concerns. The first year teachers expressed the highest percentage of impact concerns. Among the three groups the respondents did indicate a shift from non-teaching concerns to the higher-level impact concerns. These results are in general agreement with Fuller and Brown's (1975) research and the

outward moving developmental model described by Conway and Clark (2003). However the findings do not reflect the level of increased self-awareness described by Conway and Clark (2003). While the models proposed by Fuller and Brown (1975) and Conway and Clark (2003) do not completely explain teacher development, the models and the results of this study should encourage teacher educators to consider how pre-service teachers' thinking may evolve and change over the course of their educational career. Additionally, teacher educators can also examine how course content and in-service programming can better address the evolution in teacher thinking and types of concerns.

*Objective Two*

The results of this research indicate a difference in the number of agricultural education specific concerns between the three groups of participants. The largest number of concerns was expressed by the first year teachers. These teachers were not only beginning to express higher-level impact concerns but they were also identifying more areas that are of higher concern. First year teachers identified eight items to be of high level of concern, while the Methods of Teaching students had two items, and the Introduction to Teaching student had one item. These findings are consistent with earlier research conducted using the Teacher Concerns Statement instrument and similar instruments (Fuller & Brown, 1975; Fuller, et al, 1972; Hillison, 1977; Reeves & Kazelskis, 1985). First year teachers expressed greater concerns about completing paperwork, balancing work and personal responsibilities, building support, motivating students and working with students with special needs/English as a Second Language students than the other groups surveyed. Similar to previous research, classroom management was one of the highest concerns among all three groups (Myers et al., 2005; Mundt, 1991; Mundt & Connors, 1999; Talbert, Camp, & Heath-Camp, 1994; Veenman, 1984).

This research demonstrates differences in both the types and levels of concern expressed by teacher education students and beginning teachers. Fuller (1974) indicated that as students are more exposed to teaching through coursework, observations, and student teaching, their levels of concern begins to increase. This change was also evident in the present study. The types and levels of concerns expressed by participants varied based on where they were in the progression of teacher education coursework and/or in their first year of teaching. This shift indicates that students may have different educational needs that must be addressed as they move through a typical teacher training program and being their teaching career. This need may be even more evident when one takes into consideration the additional concerns of these students to manage the total Agricultural Education program.

**Recommendations**

If concerns change over time, it may be beneficial to provide pre-service teachers with educational experiences earlier in their college careers to address some of the lower level self and impact concerns. These opportunities would allow pre-service teachers to gain confidence in their personal abilities that could then be followed by methods courses, addressing the higher levels of teaching concerns. While this study is limited in its nature to pre-service teachers within this specific program, development may be consistent across other states and programs.

McKeachie (1963) suggested student learning is closely tied to motivation. By identifying the concerns of pre-service teachers and early career teachers in the field, teacher educators can better determine appropriate course content and sequence coursework and in-service to better reflect the needs of these different groups. While both of the pre-service teacher groups identified concerns about their ability to complete basic skills associated with teaching, the first year teachers were more focused on impact concerns and the tasks associated with the daily teaching environment including paperwork, motivating students, working with students with special needs, time management, organizing FFA activities, and building support for their program. This suggests a need for in-service workshops and professional development for beginning teachers focusing on the "survival skills" necessary for working in a school setting. It is almost impossible to assume that teachers concerns can be completely addressed within a teacher preparation program. Instead focusing on teacher development in stages can allow for long-term support.

Many different concerns emerged after the student teaching program. Murray-Harvey et al. (2000) described stress and new teacher concerns as being a critical factor in teacher behavior and a factor that can reduce classroom effectiveness, especially in regards student achievement. Consequently, establishing and maintaining consistent mentoring programs to help address novice teachers' changing needs is of critical importance. Darling-Hammond (2003) found that one of the four major factors contributing to teacher attrition was an absence



of teacher induction programs and mentoring. She also stressed the importance of well-designed mentoring programs that were supported on both a local and state level. Research by Ingersoll and Smith (2004) concluded several of the most effective mentoring practices included pairing a novice teacher with a mentor from the same field, arranging for common planning time and regular collaboration, and establishing networks among teachers. As teacher educators, it is necessary to begin promoting the development of a professional network throughout teacher preparation courses and student teaching. This will allow pre-service teachers to become more comfortable with sharing ideas and seeking suggestions from other teachers and provide a foundation for continued teacher collaboration. For some beginning teachers who may be the only agriculture teacher in their school, opportunities for mentoring that are available through the use of technology may also need to be introduced and promoted. For example, the Communities of Practice available through the National Association of Agricultural Educators website allows agriculture teachers to obtain advice and resources from a multitude of teachers. Ultimately, by understanding teacher concerns and providing targeted support for different concerns, teacher educators can assist in the effort to increase job satisfaction and retention (Boone & Boone, 2007).

This study found early career teachers and pre-service students are openly concerned with discipline and classroom management. These results are similar to previously mentioned studies in agricultural education. Therefore, it seems this is a concern area not being addressed adequately within all educational programs. Some programs may find it beneficial to provide opportunities through workshops or entire courses that are dedicated to classroom management. Ideally, this would allow students to address specific concerns about how to use classroom management appropriately and move

past related concerns. Also, suggestions and ideas should be solicited from teacher education programs effectively preparing new teachers in this area to provide recommendations on the best approaches to address this concern.

In regards to further research, it is recommended this study be replicated on a larger scale to examine if other agricultural education students experience similar changes over time related to concern levels. Also, additional research would be beneficial to investigate what factors contribute to this shift in concerns over time. Can specific teacher preparation coursework allow teacher educators to address student concerns in a way that will result in a cadre of better-prepared and more confident teachers or should this be primarily a focus of in-service programs? Previous research has identified the influence of personal and contextual variables, such as gender (Pigge & Marso, 1987; Pigge & Marso, 1997), pre-existing beliefs about classroom practice based on prior school experiences (Calderhead & Robson, 1991), teacher efficacy (Ghaith & Shaaban, 1999), and the point of time in which pre-service teachers decided to become teachers (Pigge & Marso, 1987). Future research should examine the relationship between such variables and teacher concerns.

Participants in this study did seem to begin the process of shifting their concerns from self concerns to task and impact concerns. What specifically contributed to this change? What can teacher educators continue and improve on to aid pre-service teachers and novice teachers in addressing concerns successfully? The answers to these questions could better inform teacher education programs in the development of course content and sequencing and the continued implementation of strategies deemed successful in addressing various concerns. Lastly, a longitudinal study should be conducted to explore how concern levels impact long-term teacher development and retention.

## References

- Bartell, C. A. (2005). *Cultivating high-quality teaching through induction and mentoring*. Thousand Oaks, CA: Corwin Press.
- Boone, H. N., & Boone, D. A. (2007). Problems faced by high school agricultural education teachers. *Journal of Agricultural Education*, 48(2), 36–45. doi: [10.5032/jae.2007.02036](https://doi.org/10.5032/jae.2007.02036)

- Burn, K., Hagger, H., Mutton, T., & Everton T. (2003) 'The complex development of student teachers' thinking', *Teachers and Teaching: theory and practice* 9(4), 309–331. doi: [10.1080/1354060032000097235](https://doi.org/10.1080/1354060032000097235)
- Calderhead, J., & Robson, M. (1991). Images of teaching: Student teachers early conceptions of classroom practice. *Teaching and Teacher Education*, 7(1), 1–8. doi: [10.1016/0742-051X\(91\)90053-R](https://doi.org/10.1016/0742-051X(91)90053-R)
- Conway, P. F., & Clark, C. M. (2003). The journey inward and outward: A reexamination of Fuller's concerns-based model of teacher development. *Teaching and Teacher Education*, 19(5), 465–482. doi: [10.1016/S0742-051X\(03\)00046-5](https://doi.org/10.1016/S0742-051X(03)00046-5)
- Darling-Hammond, L. (2003). Keeping good teachers: Why it matters, what leaders can do. *Educational Leadership*, 60(8), 6–13.
- Darling-Hammond, L., & Bransford, J. (Eds.). (2005). *Preparing teachers for a changing world: What teachers should learn and be able to do*. San Francisco, CA: Jossey-Bass.
- Edwards, M. C., & Briers, G. E. (1999). Assessing the in-service needs of entry-phase agriculture teachers in Texas: A discrepancy model versus direct assessment. *Journal of Agricultural Education*, 40(3), 40–49. doi: [10.5032/jae.1999.03040](https://doi.org/10.5032/jae.1999.03040)
- Fritz, C. A., & Miller, G. S. (2003). Concerns expressed by student teachers in agriculture. *Journal of Agricultural Education*, 44(3), 47–53. doi: [10.5032/jae.2003.03047](https://doi.org/10.5032/jae.2003.03047)
- Fuller, F. F. (1969). Concerns of teachers: A developmental conceptualization. *American Educational Research Journal*, 6(2), 207–226. doi: [10.3102/00028312006002207](https://doi.org/10.3102/00028312006002207)
- Fuller, F. (1974, April) *Achieving Affective Competencies through the Teacher Concerns-Self Confrontation Model of Personalized Teacher Education*. Paper presented at the American Educational Research Association, Chicago, IL.
- Fuller, F., & Brown, O. (1975). Becoming a teacher. In K. Ryan (Ed.), *Teacher education: Seventy-fourth yearbook of the National Society for the Study of Education*. Chicago, IL: University of Chicago Press.
- Fuller, F. F., & Case, C. (1972). *A manual for scoring the teacher concerns statement* (2nd ed., Eric No. ED079361). Austin, TX: Research and Development Center for Teacher Education. Retrieved from <http://www.eric.ed.gov/PDFS/ED079361.pdf>
- Fuller, F. F., Parsons, J. S., & Watkins, J. E. (1974) *Concerns of teachers: A developmental Research and reconceptualization* (Eric No. ED091439). Retrieved from <http://www.eric.ed.gov/PDFS/ED091439.pdf>
- Garton, B. L., & Chung, N. (1997). An assessment of the in-service needs of beginning teachers of agriculture using two assessment models. *Journal of Agricultural Education*, 38(3), 51–58. doi: [10.5032/jae.1997.03051](https://doi.org/10.5032/jae.1997.03051)
- Ghaith, G., & Shaaban, K. (1999). The relationship between perceptions of teaching concerns, teacher efficacy, and selected teacher characteristics. *Teaching and Teacher Education*, 15, 487–496. doi: [10.1016/S0742-051X\(99\)00009-8](https://doi.org/10.1016/S0742-051X(99)00009-8)

- Hillison, J. (1977). Concerns of agricultural education pre-service students and first year teachers. *The Journal of the American Association of Teacher Educators in Agriculture*, 18(3), 33–39. doi: [10.5032/jaatea.1977.03033](https://doi.org/10.5032/jaatea.1977.03033)
- Ingersoll, R. (2001). Teacher turnover and teacher shortages: An organizational analysis. *American Educational Research Journal*, 38(3), 499–534. doi: [10.102/00028312038003499](https://doi.org/10.102/00028312038003499)
- Ingersoll, R., & Smith, T. M. (2004). Do teacher induction and mentoring matter? *NASSP Bulletin*, 88, 28–40. doi: [10.1177/019263650408863803](https://doi.org/10.1177/019263650408863803)
- Joerger, R. M. (2002). A comparison of the in-service education needs of two cohorts of beginning Minnesota agricultural education teachers. *Journal of Agricultural Education*, 43(3), 11–24. doi: [10.5032/jae.2002.03011](https://doi.org/10.5032/jae.2002.03011)
- Johnson, D., Lindhardt, R., & Stewart, R. (1989). Priorities of first and second year teachers of agriculture in Missouri. *Journal of Agricultural Education*, 30(2), 55–61. doi: [10.5032/jae.1989.02055](https://doi.org/10.5032/jae.1989.02055)
- Kagan, D. M. (1992). Professional growth among pre-service and beginning teachers. *Review of Educational Research*, 62(2), 129–169. doi: [10.3102/00346543062002129](https://doi.org/10.3102/00346543062002129)
- McKeachie, W. J. (1963). Research on teaching at the college and university level. *Handbook of Research and Teaching*. In N. Gage (Ed.). Chicago, IL: Rand McNalley & Co.
- Murray-Harvey, R., Slee, P. T., Lawson, M. J., Silins, H., Banfield, G., & Russell, A. (2000). Under stress: The concerns and coping strategies of teacher education students. *European Journal of Teacher Education*, 23(1), 19–35. doi: [10.1080/026197600411607](https://doi.org/10.1080/026197600411607)
- Mundt, J. (1991). The induction year – A naturalistic study of beginning secondary teachers of agriculture in Idaho. *Journal of Agricultural Education*, 32(1), 18–23. doi: [10.5032/jae.1991.01018](https://doi.org/10.5032/jae.1991.01018)
- Mundt, J. P., & Connors, J. J. (1999). Problems and challenges associated with the first years of teaching agriculture: A framework for pre-service and in-service education. *Journal of Agricultural Education*, 40(1), 38–48. doi: [10.5032/jae.1999.01038](https://doi.org/10.5032/jae.1999.01038)
- Myers, B. E., Dyer, J. E. & Washburn, S. G., (2005). Problems of beginning agriculture teachers. *Journal of Agricultural Education*, 46(3), 47–55. doi: [10.5032/jae.2005.03047](https://doi.org/10.5032/jae.2005.03047)
- Pigge, F. L., & Marso, R. N. (1987). Relationships between student characteristics and changes in attitudes, concerns, anxieties, and confidence about teaching during teacher preparation. *Journal of Educational Research*, 81(2), 109–115. Retrieved from: <http://www.eric.ed.gov/PDFS/ED269399.pdf>
- Pigge, F. L., & Marso, R. N. (1997). A seven year longitudinal multi-factor assessment of teaching concerns development through preparation and early years of teaching. *Teaching and Teacher Education*, 13(2), 225–235. doi: [10.1016/S0742-051X\(96\)00014-5](https://doi.org/10.1016/S0742-051X(96)00014-5)
- Reeves, C. K., & Kazelskis, R. (1985). Concerns of pre-service and in-service teachers. *Journal of Educational Research*, 8(5), 267–271. <http://www.jstor.org/stable/27540135>
- Stripling, C., Ricketts, J. C., Roberts, T. G., & Harlin, J. F. (2008). Pre-service agricultural education teachers' sense of teaching self-efficacy. *Journal of Agricultural Education*, 49(4), 120–130. doi: [10.5032/jae.2008.04120](https://doi.org/10.5032/jae.2008.04120)

Talbert, B. A., Camp, W. G., & Heath–Camp, B. (1994) A year in the lives of three beginning agriculture teachers. *Journal of Agricultural Education*, 35(2), 31–36. doi: [10.5032/jae.1994.02031](https://doi.org/10.5032/jae.1994.02031)

Veemvan, S. (1984). Perceived problems of beginning teachers. *Review of Educational Research*, 54(2), 143–178. doi [10. 3102/00346543054002143](https://doi.org/10.3102/00346543054002143)

Warnick, B. K., Thompson, G. W., & Gummer, E. (2007). Investigating the needs of agricultural education graduates. *NACTA Journal*, 51(2), 40–47. Retrieved from [http://www.nactateachers.org/attachments/article/257/Warnick\\_NACTA\\_Journal\\_June\\_2007-2.pdf](http://www.nactateachers.org/attachments/article/257/Warnick_NACTA_Journal_June_2007-2.pdf)

Wang, J., Odell, S., & Schwille, S. (2008). Effects of teacher induction on beginning teachers' teaching. *Journal of Teacher Education*, 59(2), 132–152. doi: [10.1177/0022487107314002](https://doi.org/10.1177/0022487107314002)

KRISTIN S. STAIR is an Assistant Professor of Agricultural Education in the Department of Agricultural and Extension Education at New Mexico State University, NMSU Gerald Thomas Hall Room 111, P.O. Box 30003, MSC 3501, Las Cruces, NM 88003–8003, [ksstair@nmsu.edu](mailto:ksstair@nmsu.edu)

WENDY J. WARNER is an Assistant Professor of Agricultural Education in the Department of Agricultural and Extension Education at North Carolina State University, 1 Lampe Drive – Box 7607, Raleigh, North Carolina 27695–7607, [wjwarner@ncsu.edu](mailto:wjwarner@ncsu.edu)

GARY E. MOORE is an Professor of Agricultural Education in the Department of Agricultural and Extension Education at North Carolina State University, 1 Lampe Drive – Box 7607, Raleigh, North Carolina 27695–7607, [gary\\_moore@ncsu.edu](mailto:gary_moore@ncsu.edu)