

THE INFLUENCE OF TEACHER EFFICACY ON
NORTH CAROLINA AGRICULTURE TEACHERS' PERCEIVED SUCCESS
IN WORKING WITH STUDENTS WITH SPECIAL NEEDS

A Thesis presented to the Faculty of the Graduate School
University of Missouri-Columbia

In Partial Fulfillment
of the requirements for the Degree

Master of Science

by
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AUGUST 2006

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Dedicated to Buddy and Scruffy.

ACKNOWLEDGEMENTS

Throughout my education there have been a number of people who have offered their support and encouragement. Without their help I would not have been able to accomplish the things I have and would not be prepared for the teaching career that is ahead of me. For everything they have done for me I would like to thank the following people:

Above all I want to thank my family, especially my parents, James and Vivian Ross, and my sister Ashley. You have been the most influential people in my life and without you I would not be who I am today.

To Reverend Louis Andrews, from the time I was a freshman in college there were very few weeks that went by without receiving a letter of encouragement and support. Thank you for giving me the spiritual guidance I needed.

To Dr. Gary Moore, thank you for inspiring me and believing that I was capable of excelling in graduate school. Without your support and guidance I never would have left North Carolina and I certainly would not have taken on the challenge of a thesis. I could not have asked for a better university supervisor and mentor.

To Dr. Flowers, Dr. Croom, and Dr. Wilson, thank you for giving me the educational foundation necessary to succeed in graduate school as well as in my teaching career.

To Dr. Marshal Stewart, the opportunity to work for you as a State Officer and then as part of your staff was an honor and an experience that made me a better person. Your leadership and dedication are an inspiration. Thank you for showing me it is

possible to be a huge success while holding on to your values and always making time for your family.

Christy Thornton, I hope that when I start teaching my students will love and be as dedicated to me as yours are to you. I am thankful that you were not only my cooperating teacher but my friend. Thank you for your love and support through that challenging time in my life and now.

To the North Carolina FFA State Staff, thank you for everything you have done for me over the years. My transition home and into my teaching position will be easier because of your help.

To Dr. Garton, thank you for being my advisor this year. Your organization, drive, and meticulous editing have truly pushed me and I am grateful for that. I am sure another research advisee was not on your list of “must haves” especially one that was taking on a subject that was not in your area of interest. Thank you for doing it anyway and constantly supporting my efforts.

Dr. Jon Ulmer, you were my first impression of what Mizzou really was. It is in part because of you that I chose to do my graduate work here. Thank you for helping me feel like I belonged here and for offering me a friendship that made a difference in my year.

Dr. Torres and Dr. Terry, I was told how great the professors were going to be but they did not do the two of you justice. Thank you for a wonderful year and classes that were both interesting and challenging.

To Amy, James, and Shane, thank you for letting me stop by your offices to work or just chat. I have had a wonderful time in and outside of class with you all.

To the Aschenbrener family, especially Mollie, thank you for being my family away from home. You have taken me into your home from the start and have always made me feel welcomed and looked out for. I will truly miss spending time with you.

To Missy, Leah, Kim, and Mason, I have felt your love and support even over the miles that separate us. Thank you for understanding that this was something I needed to do and for not questioning why. The distance between us certainly did not cause a distance in our friendships.

To Donald, our friendship has lasted over a decade of classes and FFA. I have always been able to count on you. Thank you for looking out for me even after I left the state. I am extremely excited about the opportunity to work with you and there is no one else I would rather have as a teaching partner.

And finally to the people who have made my stay in Missouri so enjoyable, thank you. Marie, Di, Audra, Lena, Davin, and Scott it has been a wonderful year and I am so glad that I have been able to have each of you as a friend. The hardest part of going home is that I can not take all of you with me.

Eric, thank you for everything. There really isn't anything I can say that you don't already know.

Jenny, my one and only "S.O.," thank you. You were the reason I did not pack up the first two weeks I was here and head home. Your support, sense of humor, and ability to have fun doing just about anything are what I like the most about Missouri. This year would have not have been nearly as great an experience if you had not been a part of it.

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CHAPTER I

INTRODUCTION

Over 40 years ago, in 1963, a group of concerned parents and educators met in Chicago with the purpose of creating a large, uniform organization to represent children with special needs. It was from this meeting that the term learning disabilities was introduced and the Learning Disabilities Association was created (Lerner, 2003).

The first federal law to acknowledge learning disabilities was the Children with Specific Learning Disabilities Act (PL 91-230) of 1969. This law provided funding for teacher training and led the way for future laws concerning learning disabilities services (Lerner, 2003). In 1975 the Education for All Handicapped Children Act (PL 94-142), considered by many to be the most influential federal law concerning learning disabilities, was passed (Lerner, 2003; Salend, 2001). This law mandated “free and appropriate” education for all students regardless of the disability. PL 94-142 also outlined the Individualized Education Plans (IEPs) and Least Restrictive Environment (LRE) (Salend, 2001).

Since PL 94-142 came into place it has been amended a number of times. In 1990, an amendment (PL 101-476) changed the title of the law to the Individuals with Disabilities Education Act (IDEA) (Lerner, 2003; Salend, 2001). The latest amendment occurred in 2004 with PL 108-446. However the major principles of the law have not changed (Heward, 2006).

One of the major principles of the Individuals with Disabilities Education Act is Least Restrictive Environment. Public Law 108-446 defines LRE as:

The maximum extent appropriate, children with disabilities, including children in public or private institutions or other care facilities, are educated with children who are not disabled, and special classes, separate schooling, or other removal of children with disabilities from the regular educational environment occurs only when the nature or severity of the disability of a child is such that education in regular classes with the use of supplementary aids and services cannot be achieved satisfactorily (PL 108-446, 20 U.S.C., Sec. 1412 [a] [5]).

It is in the concept of least restrictive environment that mainstreaming of students with special needs was developed. Mainstreaming refers to programs that place students with disabilities into general classrooms with their peers who are not disabled. Mainstreaming can be accomplished partially or on a full time basis depending upon the disabled student (Salend, 2001). In the state of North Carolina 98% of students with special needs are mainstreamed into the regular classroom for at least a portion of the school day (United States Department of Education, 2004).

Theoretical Framework

The mix of students in today's classroom has become more complex and diverse (O'Shea, Hammitte, Mainzer, & Crutchfield, 2000). School based agricultural education programs are no exception. An increasingly higher percentage of students with special needs have been enrolled in agriculture programs. The significance of this is that

secondary agriculture teachers face a number of challenges in the mainstreamed classroom (Elbert & Baggett, 2003). With the increasing number of students with special needs in the general classroom, teachers are concerned with their preparation and the resources available for working with students with special needs (Treder, Morse, & Ferron, 2000).

Research has shown that teachers are more likely to take on a responsibility for students with special needs if they have a more positive attitude toward working with students with special needs (Treder et al., 2000). Wigfield, Eccles, and Rodriguez (1998) concluded that “when individuals have a positive sense of their ability and efficacy to do a task, they are more likely to choose to do the task, persist at it, and maintain their effort” (p. 75). Self-efficacy describes when a person feels confident in their ability to handle a specific domain. The higher the self-efficacy, the more likely a person is to engage in behaviors related to that domain (Ormrod, 2004). This can be seen in the fact that teachers who have high self-efficacy beliefs concerning students with special needs are more likely to provide the students with the help needed to succeed (Brownell & Pajares, 1999). Brownell and Pajares (1999) also found that a teacher’s perception of their pre-service preparation, administrative support, and in-service programs in the area of students with special needs affected their self-efficacy of working with students (Figure 1).

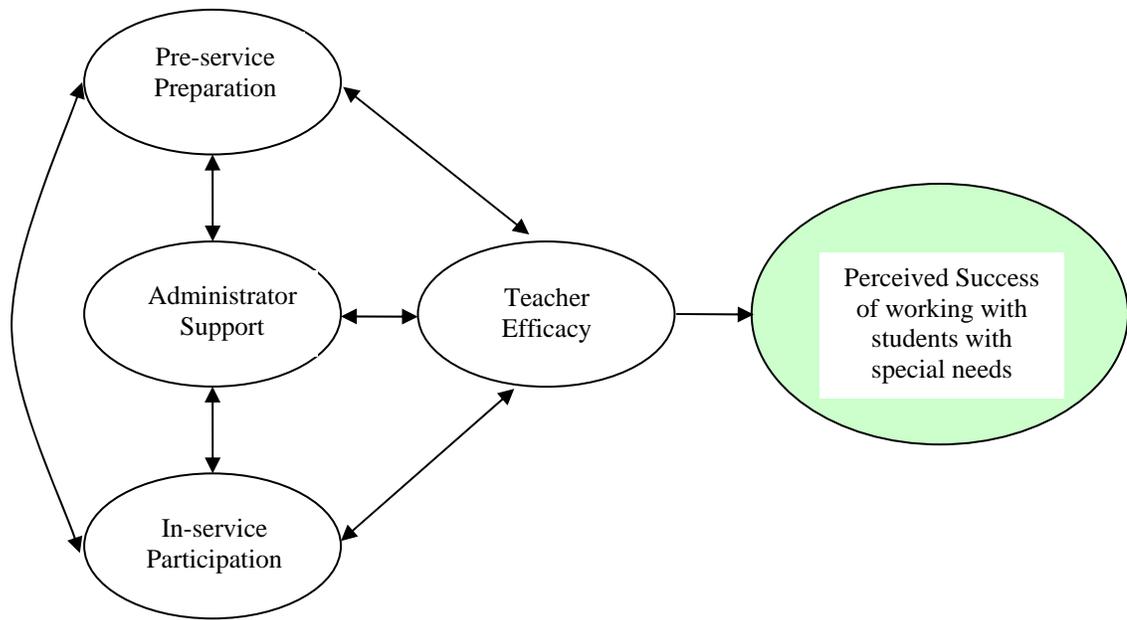


Figure 1. Conceptual Model of Factors Affecting Self-Perceived Success
Adapted from Brownell and Pajares (1999)

Need for the Study

The National Council for Accreditation of Teacher Education's (NCATE) *Professional Standards for the Accreditation of Schools, Colleges, and Departments of Education* establishes the bar for teacher education programs. Standard four focuses on diversity and states that acceptable teacher preparation makes "Candidates become aware of different teaching and learning styles shaped by cultural influences and are able to adapt instruction and services appropriately for all students, including students with exceptionalities" (2002, p. 29). While the target for a school's preparation in diversity is that teacher candidates "learn how to challenge students toward cognitive complexity and engage all students, including students with exceptionalities, through instructional

conversation.” The NCATE *Professional Standards* also specify that it is necessary for teachers to be prepared to meet the needs of “all students” (NCATE, 2002).

The North Carolina Department of Public Instruction (NCDPI) also has established standards for teacher preparation program approval. The standards specify that a teacher preparation program should prepare teachers to work with “all students.” NCDPI’s standard on diversity states that “The program designs, implements, and evaluates curriculum and experiences for candidates to acquire and apply the knowledge, skills, and dispositions necessary to help all students learn” (NCDPI, 2004, p. 1). According to NCDPI the basic standards are being met by the agriculture teacher preparation programs in North Carolina. However, is just meeting the standards enough to provide teachers a high self-efficacy concerning teaching special needs students in their classroom?

Elbert and Baggett (2003) found that most agriculture teachers do not feel competent when working with students with special needs. From their research Elbert and Baggett recommended that more research be conducted on agriculture teachers working with students with disabilities. It was also recommended that in-service and pre-service programs be designed to increase teachers’ awareness and knowledge base concerning working with students with disabilities (Elbert & Baggett, 2003). Will providing teachers with in-service and pre-service programs that focus on working with students with special needs increase their personal teaching efficacy?

The personal teaching efficacy is the teacher’s perception of their abilities as a teacher and the belief that they can use these abilities to help a student learn. A teacher whose teaching efficacy is high views disabilities as challenges and believe that all

children can reach their potential with the appropriate teaching methods and classroom environment (DiBella-McCarthy, McDaniel, & Miller, 1995). In a study by Brownell and Pajares (1999) a teacher's efficacy beliefs have a pronounced influence on their self-perceived success in working with special need students. Does having a higher sense of self-efficacy give teachers a greater feeling of confidence in their success when working with students with special needs?

Statement of the Problem

Beginning teachers are faced with a number of unique challenges and learning experiences in their induction years of teaching. In North Carolina, in preparing teachers for the challenges of teaching, pre-service programs are designed to educate and prepare future teachers on important aspects of teaching. County school systems also provide in-service programs for beginning teachers that help ease the transition from student to teacher. These programs are meant to supply teachers with a base of knowledge as well as increase their self-efficacy of handling situations that arise in the classroom.

However, just because a program increases a teacher's confidence in one area does not necessarily mean the program is helping the teacher handle all situations. Overall a teacher can have high self-efficacy and yet still have aspects of their job that they lack confidence or knowledge in handling. The areas that teachers are not as versed in and have less experience dealing with typically become the most challenging.

One of these challenges is meeting the needs of students who require special modifications for learning. The challenges agriculture teachers face and their classroom

dynamics are no different from that of other educators and they often have a wide range of students with special needs. Which leads to the following questions: 1) Are agriculture teachers in North Carolina prepared to effectively teach and manage students with special needs in their classrooms? 2) What is the self-efficacy of North Carolina agriculture teachers' toward teaching students with special needs? And 3) what personal characteristics and professional experiences influence beginning agriculture teacher's self-efficacy concerning working with students with special needs?

Purpose and Research Objectives

The purpose of this study was to examine and explain the variance in the self-perceived success in working with students with special needs of beginning agriculture teachers in North Carolina. The following research objectives were constructed to guide the study:

1. Describe the personal and professional characteristics of beginning agriculture teachers in North Carolina in terms of age, sex, years of teaching, location of teaching, pre-service background, and educational level.
2. Describe the beginning agriculture teachers' assessment of their university preparation for working with students with special needs.
3. Describe the beginning agriculture teachers' participation in in-service programs concerning working with students with special needs.
4. Describe the beginning agriculture teachers' assessment of their administrator's general support.

5. Describe the teacher efficacy of beginning agriculture teachers to meet the competencies necessary for working with students with special needs.
6. Describe the self-perceived success of beginning agriculture teachers when working with students with special needs.
7. Explain the variance in self-perceived success of working with students with special needs accounted for by teacher efficacy while controlling for pre-service preparation, administrative support, and in-service programs.

Definitions

For the purpose of this study the following terms were defined:

Beginning Agriculture Teacher: An agriculture teacher with five years or less teaching experience.

General Education Teacher: A teacher who is certified in a subject other than special education.

Location of Teaching: Classification of the area the school is located, rural or urban.

Personal Characteristics: Includes the teachers' sex, age, and attitude toward working with students with special needs.

Pre-service Background: How the teacher received their initial certification whether it was from a university teacher preparation program or North Carolina's lateral entry program.

Professional Factors: Includes the teachers' years of teaching, location of teaching, school support, and in-service available.

Student with Special Needs: A student who because of disabilities needs special education and related services (PL108-446, 20 U.S.C., Sec. 1401 [3] [A]).

Assumptions

For the purpose of this study, it was assumed that:

1. Beginning agriculture teachers responded based on actual and not socially accepted responses.
2. The instrument used was able to adequately assess and measure a teacher's self-efficacy concerning working with students with special needs.

Limitations

1. Data collection was limited to beginning agricultural education teachers in North Carolina.
2. Results of this study should be used with caution and results should only be applied to agricultural education teachers with similar characteristics to the population in the study.

CHAPTER II

LITERATURE REVIEW

Purpose of the Study

The purpose of this study was to examine and explain the variance in the self-perceived success in working with students with special needs of beginning agriculture teachers in North Carolina.

Challenges of Working with Special Needs Students

Adolescence is a difficult period of adjustment and struggles. This natural stage of life places stress on a student and can affect his or her learning. Students with special needs not only battle the normal learning challenges that adolescence creates but also the ones created by their individual disabilities (Lerner, 2003). General education teachers undergo training and coursework on how to teach students in this difficult time frame; however, they normally are not trained in how to address the specific learning deficits of students with special needs (Mims, Harper, Armstrong, & Savage, 1991).

Many students with special needs display characteristics that make learning difficult and teaching a challenge. High school students with special needs generally are passive learners and often develop learned helplessness. These students lack self-esteem and self-confidence and often do not believe in their own ability to learn and achieve. Students with special needs can often develop a low persistence level and lack resiliency. They give up as soon as a situation seems difficult. To compound these issues many

students with special needs lack the attention span necessary for most high school classes (Lerner, 2003).

Another aspect that makes teaching students with special needs challenging is the nature and set-up of secondary school systems. Teachers are required to reach a wide range of ability levels in a single classroom and the traditional instructional methods are not always compatible with a student's preferred or necessary learning style. Curriculum is also very focused and teachers are driven by high stakes testing (Campbell & Olsen, 1994). Teachers also face the challenge using suitable text in class. Most textbooks are difficult for students with special needs to pull information from and the process of modifying them is often a complex task (Meese, 1992).

Regardless of the approach a teacher uses in the classroom most students with special needs will need modifications and/or adaptations (Mastropieri & Scruggs, 1995). Individualized Education Plans (IEPs) provide teachers with clear statements on what type of modifications and services the student with special needs should receive (Algozzine, Ysseldyke, & Campbell, 1994). General educators must understand what their role is in implementing the Individualized Education Plan (Sharpe & Hawes, 2003). This is often difficult since the instructions on each plan "represent philosophies of what should be taught rather than illustrations of how it should happen" (Algozzine et al., 1994, p. 34).

Challenges of Working with Special Needs Students Specific to Agricultural Education

Students with special needs that are enrolled in career and technical education classes experience challenges similar to those in academic classes (Evers & Bursuck,

1993). Agriculture instructors experience a number of challenges in their classroom due to the dynamics of students with special needs (Elbert & Baggett, 2003). Technical classes often require the use of complex charts and graphs as well as the ability to learn technical jargon. The challenge in making modifications for students with special needs is often compounded by the fact that special education teachers have limited experience working in technical classrooms (Evers & Bursuck, 1995).

Safety is always a concern in technical classes. To ensure the safety of all students in the classroom, students with special needs must learn that their actions not only affect them but also other students, as well as the teacher. Most students with special needs require additional help in remembering what they need to do. This makes it necessary to have a plan for learning the equipment and safety practices that are effective for reaching students with special needs. Some students with special needs become overwhelmed when they are required to do tasks that involve numerous steps and a variety of equipment. These students could find class and individual projects difficult and often will work much slower than other students in the class (Campbell & Olsen, 1994).

Self-Efficacy

Self-efficacy describes a person's confidence in his or her ability to handle a specific domain. The higher the self-efficacy, the more likely a person is to engage in behaviors related to that domain (Ormrod, 2004). The perception of self-efficacy is based not on the number of skills a person has obtained or any specific action but on the

judgment of how well they can perform in a given situation. Self-efficacy is the person's judgment of his or her personal capability and how well they will do in variety of circumstances. The overriding theme of self-efficacy theory is that of enablement (Bandura, 1997). Self-efficacy is the connection between knowledge and action (Plourde, 2002).

People who do not believe in themselves and their abilities are unlikely to empower others to believe that they can successfully handle the challenges that have confronted them. However, a self-efficacious person will increase their efforts and try to change inequitable practices enabling others to do likewise. Those who doubt their capability in a particular domain will often shy away from the difficult task in that domain (Bandura, 1997). Low self-efficacy leads people to believe that situations are tougher than they really are and promotes an increase in stress and depression (Soto & Goetz, 1998). A person who has a tenacious belief in their ability will persevere in spite of difficulties and obstacles. A difficult task is a challenge to be mastered rather than a threat. In the face of failures a person with a high sense of self-efficacy will invest even more effort in the task. The higher a person's self-efficacy the more likely he or she will be to succeed since self-efficacy beliefs are active contributors to personal attainment (Bandura, 1997).

A person's perception of their self-efficacy affects the way they think, motivate themselves, feel, and behave. Once a person determines their self-efficacy in a situation they act on that established belief without re-evaluating their abilities. "Self-efficacious thinking fosters effective use of skills" (Bandura, 1997, p. 105). It is the perceived efficacy that predicts the goals people will set for themselves and their successes. A

person's belief also affects the effort a person puts in to skill development (Bandura, 1997). Self-efficacy is a strong determinant in the accomplishments a person will attain (Soto & Goetz, 1998).

Self-Efficacy's Influence on Teaching

A high personal teaching efficacy indicates that a teacher feels confident in his or her ability and that he or she is capable of making a difference with students (DiBella-McCarthy et. al, 1995). Teacher efficacy is the conviction held by the teacher that the desired outcome with a student can be achieved (Soto & Goetz, 1998). The structure of the academic activities in the classroom is in part determined by the teaching efficacy of the teacher. A teacher with a high sense of self-efficacy will devote more time to academic pursuits and provide students who are having difficulties the guidance they need to succeed (Bandura, 1997). Classroom practices such as praise instead of criticism, enthusiasm, and acceptance of students' opinions are influenced by the level of teacher efficacy (Soto & Goetz, 1998). Teaching efficacy also affects the teacher's likelihood of accepting new educational technologies and implementing them in the classroom. A teacher who is secure in their ability is more likely to invite and support a parent's educational efforts (Bandura, 1997). A study by Colardarci in 1994 found that teaching efficacy was the greatest predictor of a teacher's commitment to the profession.

A teacher's sense of efficacy plays a role in his or her students' learning. Students who have a teacher with a high sense of efficacy will learn more than those who have one that is full of self-doubt. To a teacher with a high self-efficacy difficult students

are teachable through additional effort and the appropriate teaching methods. The student's problems are surmountable by being creative and working hard (Bandura, 1997).

In a study by Midgley, Feldlaufer, and Eccles (1989) students' achievement and attitudes towards learning were affected by the level of efficacy beliefs their teacher held. Those students whose teacher had a high level of efficacy felt that they were performing better and the subject was less difficult than those students who had teachers with low levels of efficacy. Another study found that both general and special education teachers with a high sense of teacher efficacy were more likely to recommend a student placement in a regular classroom than a teacher with low teacher efficacy (Soodak & Podell, 1993).

Factors Influencing Teaching Self-Efficacy

Bandura (1997) stated that "perceived self-efficacy is an integrated emergent judgment rather than simply the sum of microcomponent functions" (p. 62). The factors that affect efficacy vary in the amount of information provided and how it relates to the person's efficacy. Some factors are more reliable indicators than others. Self-efficacy beliefs are formed through integrating a variety of sources of information (Bandura, 1997).

A study by Raundenbush, Rowan, and Cheong (1992) investigated 315 high school teachers in an attempt to predict indicators of teacher efficacy. The research showed that vocational and general level class teachers were less efficacious than those teachers that taught honors classes. While the academic level has been found to play a

role in teacher efficacy, Watson (2006) found that there was no relationship between the years a teacher had been teaching and their level of efficacy. Brownell and Pajares (1999) determined that three of the factors affecting a teacher's self-efficacy when working with students with disabilities are their pre-service preparation, in-service participation, and administrative support (Figure 1).

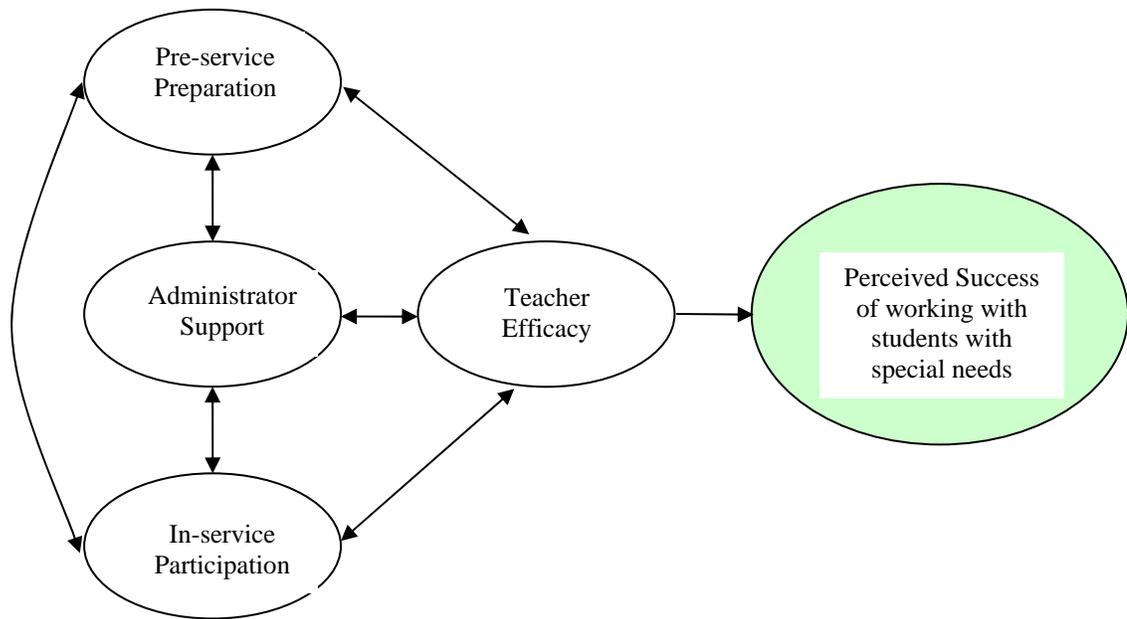


Figure 1. Conceptual Model of Factors Affecting Self-Perceived Success
Adapted from Brownell and Pajares (1999)

Pre-Service Preparation

The primary focus of the pre-service program is to provide prospective teachers with the requisite skills necessary to be successful teachers (North Carolina State University, 2006). Experiences have the most influence on a person's self-efficacy due to the fact that they provide the most realistic view of a person's capabilities.

Performance successes, even small ones, help enable a person to higher accomplishments. To make a judgment of a person's ability to perform in a specific area the person needs to have the appropriate knowledge of what is required in that domain. Once a person is convinced they are capable of succeeding in a domain they will persevere through difficult times (Bandura, 1997).

The student teaching experience during pre-service preparation places a student in a classroom setting under the supervision of a university supervisor and an experienced teacher (North Carolina State University, 2006). A person's self-efficacy can be enhanced through modeling and Bandura (1997) states that "seeing or visualizing people similar to oneself perform successfully typically raises efficacy beliefs" (p. 87). In research conducted by Brownell and Pajares (1999) the pre-service experience was found to be a direct indicator of a teacher's self-efficacy and self-perceived success when working with students with special needs. Student teachers who have developed a high sense of self-efficacy will behave in a manner that will make them efficacious teachers (Plourde, 2002). Self-efficacy not only determines the experiences a person chooses to undertake it is also formed based on the experiences of that person (Bandura, 1997).

In-Service Participation

In-service education is conducted to assist teachers in enhancing the knowledge and skills necessary to be successful (Garton & Chung, 1996). In-service programs provide teachers a chance to enhance their teaching abilities (Telljohann, Everett, Durgin, & Price, 1996). In-service opportunities for secondary agriculture teachers in North

Carolina are designed to increase the effectiveness of the instructor and his or her ability to manage the agricultural education program (North Carolina FFA Association, 2006). In-service participation was also found to directly affect a teacher's self-efficacy and self-perceived success when working with students with special needs (Brownell & Pajares, 1999). This in part is because the acquisitions of effective means of performance raise a person's self-efficacy beliefs. As a person gains the ability to predict and manage situations that could be problematic they develop a sense of efficacy that helps them master new challenges (Bandura, 1997).

Evaluation of health education programs found that there was a positive relationship between the teacher's in-service training and the teacher implementing the curriculum. A study of elementary health teachers found that there was a significant increase in the self-efficacy of teachers who participated in a 30 hour health in-service program compared to the teachers who did not participate (Telljohann et. al., 1996). Another study that looked at teacher efficacy when using the internet in class found that not only did the in-service increase the teacher's efficacy it also had a positive effect on the teacher's efficacy in the long run (Watson, 2006).

Administrative Support

One factor in a teacher's commitment to the profession is the educational leadership of the administrator (Colardarci, 1994). Principals that are supportive of their teachers increase the teacher's efficacious beliefs (Brownell & Pajares, 1999). A strong principal will create an environment that emphasizes academic success and collegiality

among teachers. This environment as well as the principal acting as an advocate for the teachers will increase the teaching efficacy of a teacher. With the principals support teacher's beliefs in their own teaching ability increase and their efforts to persevere will increase (Bandura, 1997).

Summary

There are a number of challenges when working with students with special needs. Most general education teachers have not received the training in specific disabilities and are unsure of how to make the correct modifications. The nature of secondary education makes individualizing lessons difficult due to the focus on testing and the wide range of ability levels found in one classroom. Teachers are required to follow the guidelines provided by the individualized educational plan yet the vague instructions do not help in implementation.

Adding to the challenge of teaching students with special needs are the demands of a technical education class. Safety is a major concern and students with special needs must understand that their actions will affect everyone. With technical classes there is a lot of jargon and graphics that can be difficult for students with special needs. It is necessary for teachers to make modifications however their training might not have been enough to be successful in modifying instruction and activities. Special education teachers have a limited amount of experience in technical classes and are not always able to suggest helpful modifications.

Influencing a teacher's instruction is his or her level of self-efficacy. Self-efficacy affects the way a person thinks, feels, and acts. Someone with a higher level of efficacy is more likely to take on difficult task and attain high levels of accomplishment. Teachers' with a high sense of teaching efficacy are more likely to use praise and encouragement in their classroom and spend more time on instruction. Difficult students become challenges to teachers with high teacher efficacy and they believe that with the right techniques and effort they will be successful.

There are a number of factors that influence teacher efficacy. From previous studies it has been determined that years of teaching has no relationship with teacher efficacy while the academic level of the class being taught does have a relationship (Raundenbush, et. al., 1992; Watson, 2006). Brownell and Pajares (1999) found that the factors of pre-service preparation, in-service participation, and administrator general support has a direct effect on teacher efficacy.

Pre-service preparation is designed to prepare prospective teachers for working in the classroom. A positive pre-service experience can increase teacher efficacy. Student teachers who develop a high sense of self-efficacy during the pre-service experience will behave in a manner that will make them efficacious teachers.

In-service participation also has an impact on a teacher's level of efficacy. The purpose of in-service is to provide teachers with the information they need to be successful in the classroom. Previous studies show that in-service programs that focus on a specific area increase the teacher's confidence as well as implementation (Telljohann et. al., 1996; Watson, 2006).

Having a strong leadership from the administration can increase a teacher's level of efficacy. Teacher's who have supportive administration show an increase in their confidence and teacher efficacy. Colardarchi (1994) found that administrative support was a key factor in teacher commitment.

CHAPTER III

METHODOLOGY

Purpose and Research Objectives

The purpose of this study was to examine and explain the variance in the self-perceived success in working with students with special needs of beginning agriculture teachers in North Carolina. The following research objectives were constructed to guide the study:

1. Describe the personal and professional characteristics of beginning agriculture teachers in North Carolina in terms of age, sex, years of teaching, location of teaching, pre-service background, and educational level.
2. Describe the beginning agriculture teachers' assessment of their university preparation for working with students with special needs.
3. Describe the beginning agriculture teachers' participation in in-service programs concerning working with students with special needs.
4. Describe the beginning agriculture teachers' assessment of their administrator's general support.
5. Describe the teacher efficacy of beginning agriculture teachers to meet the competencies necessary for working with students with special needs.
6. Describe the self-perceived success of beginning agriculture teachers when working with students with special needs.

7. Explain the variance in self-perceived success of working with students with special needs accounted for by teacher efficacy while controlling for pre-service preparation, administrative support, and in-service programs.

Research Design

This was a descriptive survey study. “The purpose of a survey is to use questionnaires or interviews to collect data from a sample that has been selected to represent a population to which the findings of the data analysis can be generalized” (Gall, Gall, & Borg, 2003, p. 223). The study utilized a questionnaire to survey beginning agriculture teachers in North Carolina. The purpose of the survey was to determine the self-efficacy beliefs of teachers concerning working with students with special needs and the factors that play a role in this belief.

Description of Variables

Five variables were investigated in this study (Figure 1). The variables of perception of pre-service preparation, perception of in-service participation, and administrative support were assessed to investigate factors influencing a teacher’s self-efficacy when working with students with special needs as well as their influence on teachers’ self-perceived success. A teachers’ self-efficacy was assessed to determine its influence on teachers’ self-perceived success when working with students with special needs.

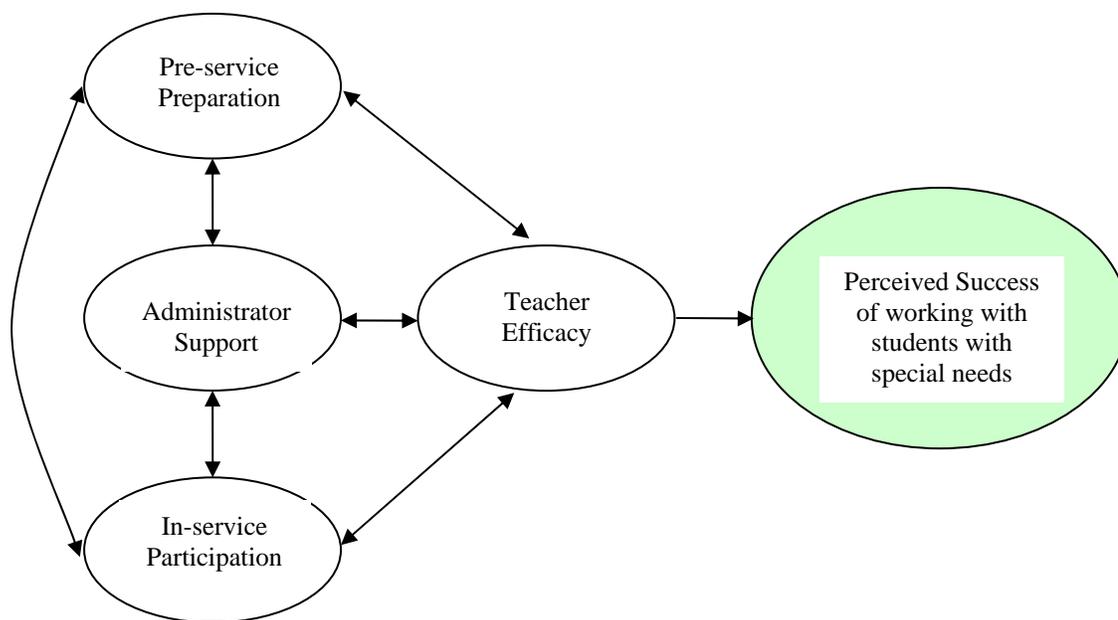


Figure 1. Conceptual Model of Factors Affecting Self-Perceived Success
Adapted from Brownell and Pajares (1999)

Population

The target population for this study was beginning agriculture teachers in the state of North Carolina with five or less years of teaching experience. The population consisted of 115 teachers ($N = 115$). No sampling procedures were employed due to the size of the target population.

The population frame was developed using the *North Carolina Agriculture Teacher Directory* and a list developed by the North Carolina Department of Public Instruction. The list included all persons that had been certified in North Carolina in Agricultural Education in the last five years as well as the number of years of teaching

experience. The two resources were cross-referenced for accuracy and to create a comprehensive frame.

Both resources were considered reliable. The *North Carolina Agriculture Teacher Directory* is maintained by North Carolina FFA state staff and is updated annually. The list from North Carolina Department of Public Instruction was created by personnel in human resources using the data from the licensure and payroll departments.

Instrumentation

The data collection instrument used was a modified version of *Working with Diverse Students: The General Educator's Perspective* (Brownell & Pajares, 1999) (Appendix A). The original questionnaire was modified by removing certain sections that did not address the objectives of this study. The areas addressed by the questionnaire were measured on a six-point Likert-scale (Table 1).

Table 1
Individual Research Areas and Instrument Coding

Areas Covered	Coding
Reported Success <i>I have successfully taught students with learning problems.</i>	Sum of 4 items on 6 point Likert-scale 1 = disagree to 6 = agree
Teachers' Efficacy Beliefs <i>Considering your current instructional situation and teaching responsibilities, how much can you do to keep students with behavior problems.</i>	Sum of 11 items on 6 point Likert-scale 1 = nothing to 6 = a great deal
Quality of Pre-service Preparation <i>From participating in university coursework, I have the ability to manage the behavioral difficulties of students with disabilities.</i>	Sum of 4 items on 6 point Likert-scale 1 = disagree to 6 = agree
In-service Participation <i>I have actively participated in staff development programs in my school or district that focus on adapting curriculum for students with disabilities.</i>	Sum of 4 items on 6 point Likert-scale 1 = disagree to 6 agree
Administrator's General Support <i>My building administrator supports educators in mainstreaming students with disabilities.</i>	Sum of 12 items on 6 point Likert-scale 1 = disagree to 6 agree

The questionnaire was validated through prior research (Bandura, 1993; Billingsley, Pyecha, Smith-Davis, Murray, & Hendricks, 1995; Morvant & Gersten, 1991; Rosenholtz, 1989). It was deemed reliable through prior research using elementary school teachers in the state of Florida (Brownell & Pajares, 1999). Cronbach's alpha coefficients were reported for each area assessed by the questionnaire (Table 2).

Table 2
Cronbach Alpha Coefficients of Stability of Individual Research Areas

Area	Cronbach Alpha
Reported Success	.81
Teachers' Efficacy Beliefs	.90
Quality of Pre-service Preparation	.94
Participation in In-service Preparation	.96
Administrator's General Support	.95

Data Collection

The questionnaire *Working with Diverse Students: The General Educator's Perspective* was administered to North Carolina's beginning agriculture teachers through an online survey tool (Appendix A). Teachers received an initial email on May 8th informing them of the forthcoming study (Appendix B). On May 10th the first email with the web link to the questionnaire was sent with a deadline of May 21st (Appendix C). On May 22nd and then again on May 30th reminder emails were sent to non-responders (Appendix D). Data collection ended on June 5th.

To ensure that the results of the study were representative of the population, non-response error was addressed. Miller and Smith (1983) stated that late respondents are often similar to non-respondents. By categorizing respondents into two separate groups of early and late respondents they can be compared for statistical differences (Ary, Jacobs, & Razavieh, 2002). To allow for the greatest discrepancy the first 25% of

respondents (early respondents) were compared to the last 25% to respond (late respondents). Early respondents were compared to late respondents in the five areas addressed by the questionnaire.

Data Analysis

The data were analyzed using SPSS/PC+. Descriptive statistics such as frequencies, percentages, means, standard deviations, minimums, and maximums were used to simplify and characterize the data. Pearson product correlation coefficients were calculated between variables and interpreted using Bartz's (1999) descriptors.

<u>Value of r</u>	<u>Description</u>
.80 or higher	Very High
.60 to .80	Strong
.40 to .60	Moderate
.20 to .40	Low
.20 or lower	Very Low

Hierarchical multiple linear regression was used to explain the variance in North Carolina's beginning agriculture teachers' self-perceived success of working with students with special needs.

CHAPTER IV

FINDINGS

Purpose of the Study

The purpose of this study was to examine and explain the variance in the self-perceived success in working with students with special needs of beginning agriculture teachers in North Carolina.

Population

The target population for this study was beginning agriculture teachers in the state of North Carolina with five or less years of teaching experience. The population consisted of 115 teachers ($N = 115$). No sampling procedures were employed due to the small scale of the target population.

Response Rate

Upon collection of the data a frame error occurred when 10 of the initial correspondence were returned undeliverable due to address errors. This reduced the population of the study to 105 ($n = 105$). Of the 105 beginning agriculture teachers to receive the questionnaire 70 responded, for a response rate of 67%.

Non-response Error

Non-response error was controlled by comparing early to late respondents using an independent samples t-test. To allow for the greatest discrepancy the first 25% of respondents (early respondents; $n = 18$) were compared to the last 25% to respond (late respondents; $n = 18$). Early respondents were compared to late respondents in the six areas addressed by the questionnaire.

The variances were assumed equal after calculating Levene's test for equality of variances. The independent samples t-test showed no significant difference ($p < .05$) between early and late respondents (Table 3).

Table 3
Early to Late Respondents

<i>Variable</i>	<i>t-value</i>	<i>p-value</i>
Assessment of Pre-service Preparation	.086	.93
Participation in In-service Programs	-1.987	.05
Assessment of Administrative General Support	.162	.87
Teacher Efficacy	.023	.98
Self-Perceived Success	1.292	.20

Findings Reported by Objective

Research Objective One – Personal and Professional Characteristics

To address the first research objective descriptive statistics of the personal and professional characteristics of beginning North Carolina agriculture teachers were calculated. Mean, standard deviation, and minimum and maximum scores were reported for the age and years of teaching experience of the beginning agriculture teachers. Frequency and percentage were reported for all other characteristics (Table 4).

Table 4
Demographics of North Carolina Beginning Agriculture Teachers (n = 70)

<i>Variable</i>	<i>f</i>	<i>%</i>	<i>Mean</i>	<i>SD</i>	<i>Min.</i>	<i>Max.</i>
Age			26.7	6.7	22	63
Years of Teaching			2.5	1.3	1	5
Sex						
Female	33	47.8				
Male	36	52.2				
Location of School						
Rural	52	75.4				
Urban	17	24.6				
Pre-Service Background						
NCSU	51	73.9				
Lateral Entry	7	10.1				
NC A&T	3	4.3				
Other	8	11.6				
Educational Level						
Bachelors	42	60.9				
Masters	27	39.1				

The beginning agriculture teacher in North Carolina was, on average, 27 years old with 2.5 years of teaching experience. The percentage of female teachers to male teachers was almost even with 48% and 52% respectively. The majority of beginning agriculture teachers were teaching at schools located in rural areas (75%) and received their pre-service teacher preparation at North Carolina State University (74%). Sixty-one percent of beginning agriculture teachers held a bachelors degree and 39% held a

masters. No beginning agriculture teacher reported holding a degree greater than a masters.

Research Objective Two – Pre-service Preparation

To address the second research objective, the mean, standard deviation, and minimum and maximum scores were determined for the individual items used to assess the university coursework of the beginning agriculture teacher’s pre-service preparation program. A summated score for pre-service preparation was also calculated (Table 5).

Table 5
Teachers’ Assessment of Pre-Service Preparation Concerning Working with Students with Disabilities (n = 70)

<i>Variable</i>	<i>Mean</i>	<i>SD</i>	<i>Min.</i>	<i>Max.</i>
Included in Coursework				
Knowledge of the different needs of students with disabilities.	3.54	1.34	1	6
The ability to adapt instruction for students with disabilities.	3.53	1.17	1	6
The ability to manage the behavioral difficulties of students with disabilities.	3.35	1.29	1	6
The ability to adapt curriculum for students with disabilities.	3.34	1.25	1	6
Overall Assessment of Pre-Service (Summated Score)	3.44	1.11	--	--

Note. Scale: 1 = disagree, 6 = agree

Beginning agriculture teacher’s overall (summated) pre-service assessment of coursework including working with students with special needs had an average of 3.44 (S.D. = 1.11). Knowledge of the different needs of students with disabilities was the highest rated individual item with a 3.54. The individual item of coursework that ranked the lowest was the ability to adapt curriculum for students with disabilities (M = 3.34).

Research Objective Three – In-service Programs

To address research objective three, descriptive statistics were calculated for individual in-service assessments items and then a summated score was calculated (Table 6).

Table 6
Teachers' Participation in In-Service Concerning Working with Students with Special Needs (n = 70)

<i>Variable</i>	<i>Mean</i>	<i>SD</i>	<i>Min.</i>	<i>Max.</i>
Focus of In-Service				
The needs of students with disabilities.	3.51	1.72	1	6
Adapting curriculum for students with disabilities.	3.43	1.48	1	6
Adapting instruction for students with disabilities.	3.38	1.59	1	6
Managing the behavioral difficulties of students with disabilities.	3.38	1.50	1	6
Overall Assessment (Summated Score)	3.42	1.44	--	--

Note. Scale: 1 = disagree, 6 = agree

The overall assessment of the in-service available for beginning agriculture teachers had a summated score of 3.42. With an average of 3.51 in-service programs that focused on the needs of students with disabilities had the highest level of participation. In-services that focused on adapting instruction for students with disabilities and managing the behavioral difficulties of students with disabilities both had the least participation (M = 3.38).

Research Objective Four – Administrator's General Support

Research objective four was addressed through descriptive statistics of the twelve individual items where a teacher could receive support from their administrator. The

mean, standard deviation, and minimum and maximum scores were calculated for the individual items as well as a summated score (Table 7).

Table 7
Teachers' Assessment of Administrative Support (n = 70)

<i>Variable</i>	<i>Mean</i>	<i>SD</i>	<i>Min.</i>	<i>Max.</i>
Has my respect and trust.	4.59	1.43	1	6
Supports me in my interaction with parents.	4.50	1.32	1	6
Helps me solve problems.	4.45	1.39	1	6
Informs me about school/district policies.	4.45	1.32	1	6
Supports my actions and ideas.	4.42	1.39	1	6
Supports general educators in mainstreaming students with disabilities.	4.12	1.27	1	6
Attends to my feelings and needs.	4.03	1.37	1	6
Understands my program and what I do.	4.00	1.67	1	6
Provides leadership about what I am trying to achieve.	3.99	1.50	1	6
Explains to me the reasons behind programs and practices.	3.96	1.51	1	6
Assists general educators in successfully including students with disabilities in the mainstream.	3.90	1.34	1	6
Provides me with current information about teaching/learning.	3.77	1.43	1	6
Overall Assessment of Administrative Support (Summated Score)	4.20	1.20	--	--

Note. Scale: 1 = disagree, 6 = agree

The summated score for general administrative support was 4.20 (S.D. = 1.20). With a mean score of 4.59 the administrator has “my trust and respect” was the highest rated individual item. Supporting “general educators in mainstreaming students with disabilities” averaged a 4.12 “while assists general educators in successfully including students with disabilities in the mainstream” averaged 3.90. Ranking the lowest in the

individual items of administrative support was “provides me with current information about teaching/learning” with an average of 3.77.

Research Objective Five – Teacher Efficacy

To address research objective five the mean, standard deviation and minimum and maximum scores were determined for the individual indicators of teacher efficacy.

Descriptive statistics for a summated score was also calculated (Table 8).

Table 8
Teachers’ Self-Efficacy of Working with Students with Special Needs (n = 70)

<i>Variable</i>	<i>Mean</i>	<i>SD</i>	<i>Min.</i>	<i>Max.</i>
How much you can do to:				
Get children to follow classroom rules.	4.86	0.98	2	6
Manage disruptive behavior in the classroom.	4.79	0.96	2	6
Prevent problem behavior on school grounds.	4.34	1.21	2	6
Get through to students with the most learning problems.	4.19	1.10	2	6
Help special education students learn in a regular classroom.	4.16	0.99	2	6
Individualize learning for students with learning problems.	4.06	1.17	1	6
Get through to students with the most behavior problems.	4.01	1.25	2	6
Keep students with learning problems on task with difficult assignments.	3.84	1.09	2	6
Overcome the influence of environment on students’ learning and behavior problems.	3.77	1.13	1	6
Individualize learning for students with behavior problems.	3.73	1.15	1	6
Keep students with behavior problems on task with difficult assignments.	3.63	1.13	2	6
Teachers’ Self-Efficacy (Summated Score)	4.11	0.84	--	--

Note. Scale: 1 = nothing, 6 = a great deal

The teacher efficacy of the beginning agriculture teachers' summated score was 4.11 (S.D. = 0.84). The individual indicator of self-efficacy that ranked the highest was the teacher had the ability to "get children to follow classroom rules" with an average of 4.86. The ability to "help special education students learn in a regular classroom" had a mean of 4.16. The individual indicator that ranked the lowest was "keep students with behavior problems on task with difficult assignments" with a mean of 3.63.

Research Objective Six – Self-Perceived Success

To address research objective six, mean, standard deviation and minimum and maximum scores were calculated for individual indicators of success when working with students with special needs. A summated score was also calculated to determine the self-perceived success of the beginning agriculture teachers when working with students with special needs (Table 9).

Table 9
Self-Perceived Success of Beginning Agriculture Teachers When Working with Students with Special Needs (n = 70)

<i>Variable</i>	<i>Mean</i>	<i>SD</i>	<i>Min.</i>	<i>Max.</i>
I have successfully taught students with learning problems.	4.86	0.98	3	6
I have successfully taught students with behavior problems.	4.63	1.16	1	6
Special education students have been successfully included in my classes.	4.44	1.11	2	6
I have successfully worked with special education teachers to include students with disabilities in my classes.	4.41	1.20	1	6
Self-Perceived Success (Summated Score)	4.59	0.87	--	--

Note. Scale: 1 = disagree, 6 = agree

Beginning agriculture teachers in North Carolina possessed a self-perceived success of working with students with special needs ($M = 4.59$; $S.D. = .87$). The highest individual item of success for the beginning agriculture teachers was “successfully teaching students with learning problems” with mean of 4.86. Working with special education teachers to include students with disabilities in the classroom ranked the lowest with 4.41.

Research Objective Seven – Variance in Self-Perceived Success

To address research objective seven a hierarchical regression analysis was calculated. Prior to conducting the hierarchical regression analysis an intercorrelation matrix was generated to reveal the presence of multicollinearity – a potential violation of the assumption in using multiple linear regression (Table 10). The intercorrelation matrix contained the dependent variable (self-perceived success), the variable of interest (teacher efficacy), control variables (pre-service preparation, administrative support, in-service programs), and potential confounding variables (sex, years of teaching experience, age, level of education). Using guidelines offered by Lewis-Beck (1980) to combat multicollinearity, bivariate correlations between the predictor (independent variable) near .8 are potential threats and should be removed prior to conducting regression analysis. Furthermore, it was pre-determined that if the confounding variables had a very low to no relationship with the dependent variable the respective confounding variable would be removed from further consideration in the regression equation.

Table 10
Intercorrelation Matrix

Variable	X ₁	X ₂	X ₃	X ₄	X ₅	X ₆	X ₇	X ₈	Y
Sex (X ₁) ^a	1.00	-.24	-.20	.07	.04	-.04	-.26	.09	.16
Years of Teaching Experience (X ₂)		1.00	.39	.14	-.29	.07	.19	-.02	.10
Age (X ₃)			1.00	.06	-.20	.03	.05	-.11	.01
Level of Education (X ₄) ^b				1.00	.02	-.07	-.12	.15	.09
Pre-service Preparation (X ₅)					1.00	.02	.26	.26	.22
Administrative Support (X ₆)						1.00	.17	.32	.29
In-service (X ₇)							1.00	.25	.30
Teacher Efficacy (X ₈)								1.00	.62
Self-Perceived Success (Y)									1.00

^a 1 = male, 2 = female; ^b 1 = bachelors, 2 = masters, 3 = doctorate

Each of the four potential confounding variables (sex, years of teaching experience, age, and level of education) had very low relationships with the dependent variable (self-perceived success), therefore they were removed from further consideration. The bivariate correlations between the three control variables were .26 or less, therefore posed no threat of multicollinearity. The three control variables all had positive, low relationships with self-perceived success of working with students with special needs.

The relationships between the control variables, the variable of interest, and the dependent variable were also calculated (Figure 2). There was a low, positive relationship (.26) between pre-service preparation and in-service programs. With a .02 the relationship between pre-service preparation and administrator support was very low. In-service programs and administrator support had a low relationship of .17. The relationship between teacher efficacy and pre-service preparation was .26, teacher

efficacy and in-service programs .25, and teacher efficacy and administrator's support .32. All of these relationships were positive and low.

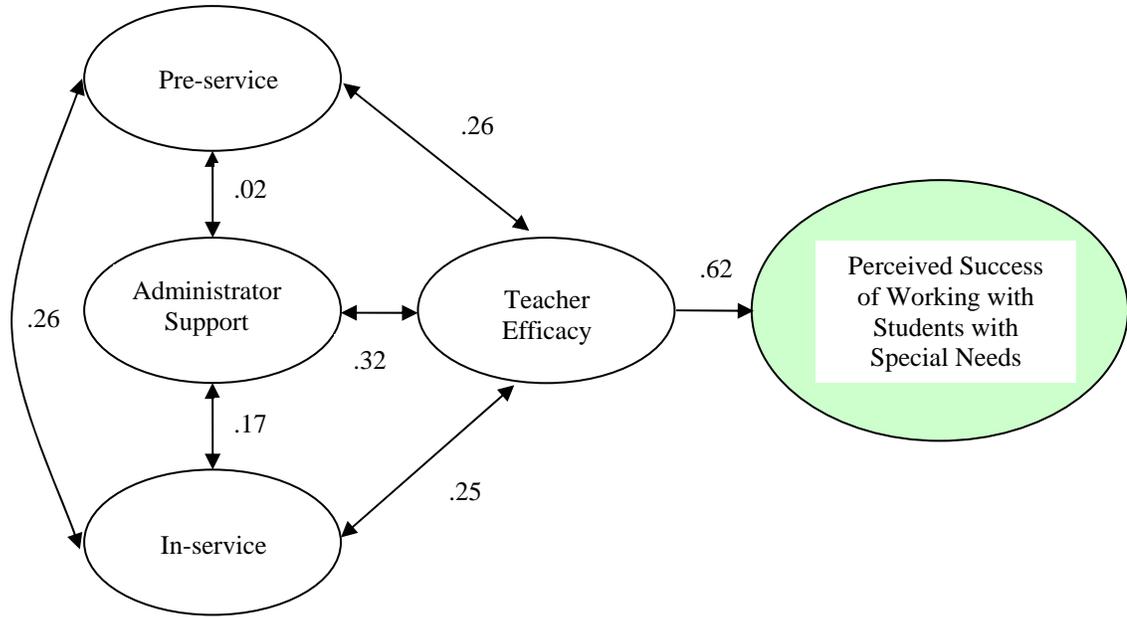


Figure 2. Relationship of Variables

To explain the variance in beginning agriculture teachers' self-perceived success of working with students with special needs a hierarchical regression analysis was used (Table 11). The control variables of administrative support, pre-service preparation, and in-service programs were entered first and together accounted for 15% ($R^2 = .15$) of the variance in self-perceived success of working with students with special needs. When the variable of interest, teacher efficacy, was added to the control variables, 40% ($R^2 = .40$) of the variance in self-perceived success of working with students with special needs could be explained. The change in teacher efficacy variance, after accounting for the control variables, was 25%.

Table 11
Hierarchical Regression of Self-Perceived Success on Control Variables and Teacher Efficacy

<i>Variable</i>	<i>R²</i>	<i>R²</i> <i>Change</i>	<i>b</i>	<i>t</i>	<i>p</i>
Control Variables					
Administrator's General Support	.15	.15	.05	.63	.53
Pre-service Preparation			.07	.75	.46
In-service Programs			.05	.73	.47
Variable of Interest					
Teacher Efficacy	.40	.25	.55	4.93	.01
(Constant)			1.55		

CHAPTER V
SUMMARY, CONCLUSIONS, IMPLICATIONS,
AND RECOMMENDATIONS

Purpose and Research Objectives

The purpose of this study was to examine and explain the variance in the self-perceived success in working with students with special needs of beginning agriculture teachers in North Carolina. The following research objectives were constructed to guide the study:

- 1) Describe the personal and professional characteristics of beginning agriculture teachers in North Carolina in terms of age, sex, years of teaching, location of teaching, pre-service background, and educational level.
- 2) Describe the beginning agriculture teachers' assessment of their university preparation for working with students with special needs.
- 3) Describe the beginning agriculture teachers' participation in in-service programs concerning working with students with special needs.
- 4) Describe the beginning agriculture teachers' assessment of their administrator's general support.
- 5) Describe the teacher efficacy of beginning agriculture teachers to meet the competencies necessary for working with students with special needs.
- 6) Describe the self-perceived success of beginning agriculture teachers when working with students with special needs.

- 7) Explain the variance in self-perceived success of working with students with special needs accounted for by teacher efficacy while controlling for pre-service preparation, administrative support, and in-service programs.

Research Design

This was a descriptive survey study. “The purpose of a survey is to use questionnaires or interviews to collect data from a sample that has been selected to represent a population to which the findings of the data analysis can be generalized” (Gall, Gall, & Borg, 2003, p. 223). The study utilized a questionnaire to survey beginning agriculture teachers in North Carolina. The purpose of the survey was to determine the self-efficacy beliefs of teachers concerning working with students with special needs and the factors that play a role in this belief.

Population

The target population for this study was beginning agriculture teachers in the state of North Carolina with five or less years of teaching experience. The population consisted of 115 teachers ($N = 115$). No sampling procedures were employed due to the size of the target population.

Instrumentation

The data collection instrument used was a modified version of *Working with Diverse Students: The General Educator's Perspective* (Brownell & Pajares, 1999) (Appendix A). The original questionnaire was modified by removing certain sections that did not address the objectives of this study. Six areas addressed by the questionnaire were measured on a six-point Likert-scale.

The questionnaire was validated through prior research (Bandura, 1993; Billingsley, Pyecha, Smith-Davis, Murray, & Hendricks, 1995; Morvant & Gersten, 1991; Rosenholtz, 1989). It was deemed reliable through prior research using elementary school teachers in the state of Florida (Brownell & Pajares, 1999). Cronbach's alpha coefficients were reported for each area assessed by the questionnaire.

Data Collection

The questionnaire *Working with Diverse Students: The General Educator's Perspective* was administered to North Carolina's beginning agriculture teachers through an online survey tool (Appendix A). Teachers received an initial email on May 8th informing them of the forthcoming study (Appendix B). On May 10th the first email with the web link to the questionnaire was sent with a deadline of May 21st (Appendix C). On May 22nd and then again on May 30th reminder emails were sent to non-responders (Appendix D). Data collection ended on June 5th.

Data Analysis

The data were analyzed using SPSS/PC+. Descriptive statistics such as frequencies, percentages, means, standard deviations, minimums, and maximums were used to simplify and characterize the data. Pearson product correlation coefficients were calculated between variables and interpreted using Bartz's (1999) descriptors.

<u>Value of r</u>	<u>Description</u>
.80 or higher	Very High
.60 to .80	Strong
.40 to .60	Moderate
.20 to .40	Low
.20 or lower	Very Low

Hierarchical multiple linear regression was used to explain the variance in North Carolina's beginning agriculture teachers' self-perceived success.

Summary of the Findings

Research Objective One – Personal and Professional Characteristics

The beginning agriculture teacher in North Carolina was, on average, 27 years old with 2.5 years of teaching experience. The percentage of female teachers to male teachers was almost even with 48% and 52% respectively. The majority of beginning agriculture teachers were teaching at schools located in rural areas (75%) and received their pre-service teacher preparation at North Carolina State University (74%). Sixty-one percent of beginning agriculture teachers held a bachelor's degree and 39% held a

masters. No beginning agriculture teacher reported holding a degree greater than a masters.

Research Objective Two – Pre-service Preparation

Beginning agriculture teacher's overall (summated) pre-service assessment of coursework regarding working with students with special needs had an average of 3.44 (S.D. = 1.11). Knowledge of the different needs of students with disabilities was the highest rated individual item with a 3.54. The individual item of coursework that ranked the lowest was the ability to adapt curriculum for students with disabilities (M = 3.34).

Research Objective Three – In-service Programs

The overall assessment of the in-service participation for beginning agriculture teachers had a summated score of 3.42. With an average of 3.51, in-service programs that focused on the needs of students with disabilities had the highest level of participation. In-services that focused on adapting instruction for students with disabilities and managing the behavioral difficulties of students with disabilities both had the least participation (M = 3.38)

Research Objective Four – Administrator's General Support

The summated score for general administrative support was 4.20 (S.D. = 1.20). With a mean score of 4.59 the administrator has "my trust and respect" was the highest rated individual item. Supporting "general educators in mainstreaming students with disabilities" averaged a 4.12 "while assists general educators in successfully including students with disabilities in the mainstream" averaged 3.90. Ranking the lowest in the

individual items of administrative support was “provides me with current information about teaching/learning” with an average of 3.77.

Research Objective Five – Teacher Efficacy

The teacher efficacy of the beginning agriculture teachers’ summated score was 4.11 (S.D. = 0.84). The individual indicator of self-efficacy that ranked the highest was the teacher had the ability to “get children to follow classroom rules” with an average of 4.86. The ability to “help special education students learn in a regular classroom” had a mean of 4.16. The individual indicator that ranked the lowest was “keep students with behavior problems on task with difficult assignments” with a mean of 3.63.

Research Objective Six – Self-Perceived Success

Beginning agriculture teachers in North Carolina possessed a self-perceived success of working with students with special needs (M = 4.59; S.D. = .87). The highest individual item of success for the beginning agriculture teachers was “successfully teaching students with learning problems” with mean of 4.86. Working with special education teachers to include students with disabilities in the classroom ranked the lowest with 4.41.

Research Objective Seven – Variance in Self-Perceived Success

Each of the four potential confounding variables (sex, years of teaching experience, age, and level of education) had very low relationships with the dependent variable (self-perceived success), therefore they were removed from further consideration. The bivariate correlations between the three control variables (pre-service

preparation, in-service participation, administrator's general support) were .26 or less, therefore posed no threat of multicollinearity. The three control variables all had positive, low relationships with self-perceived success of working with students with special needs.

The relationships between the control variables, the variable of interest, and the dependent variable were also calculated. There was a low, positive relationship (.26) between pre-service preparation and in-service programs. With a .02 the relationship between pre-service preparation and administrator support was very low. In-service programs and administrator support had a low relationship of .17. The relationship between teacher efficacy and pre-service preparation was .26, teacher efficacy and in-service programs .25, and teacher efficacy and administrator's support .32. All of these relationships were positive and low.

To explain the variance in beginning agriculture teachers' self-perceived success of working with students with special needs a hierarchical regression analysis was used. The control variables of administrative support, pre-service preparation, and in-service programs were entered first and together accounted for 15% ($R^2 = .15$) of the variance in self-perceived success of working with students with special needs. When the variable of interest, teacher efficacy, was added to the control variables, 40% ($R^2 = .40$) of the variance in self-perceived success of working with students with special needs could be explained.

Conclusions and Implications

Research Objective One – Personal and Professional Characteristics

Beginning agriculture teachers in North Carolina are 48% female and 52% male. This percentage is much closer than that between all agriculture teachers in the state with 33% female and 67% male (North Carolina FFA Association, 2006). Three-fourths (75%) of the beginning teachers are teaching at schools located in rural areas. North Carolina State University prepared 74% of the teachers and 40% hold advanced degrees.

Research Objective Two – Pre-Service Preparation

The summated score of the beginning agriculture teachers' assessment of their pre-service preparation was 3.4. This score leans toward the disagreement side of the scale and is only slightly higher than the 3.3 reported by Brownell and Pajares (1999) in a study of elementary teachers in Florida. From this data we can conclude that the pre-service preparation programs are not providing adequate preparation for working with students with special needs. These results are similar to those found in a study of pre-service programs and the preparation the programs provided prospective teachers in working with students with special needs (Rieck, 1992). Rieck (1992) reported that two-thirds of the pre-service programs were graduating students who were not adequately prepared to work with students with special needs (Rieck, 1992).

Implications of these findings are that beginning agriculture teachers are not properly prepared to teach students with special needs. Would more experience and

training in the area of working with students with special needs during pre-service preparation increase the teachers' self-perceived success?

Research Objective Three – In-Service Programs

The findings of the study indicated that participation in in-service that focuses on working with students with special needs is limited. The summated score (3.4) is similar to the score reported by elementary teachers in Florida reported (Brownell & Pajares, 1999). The limited in-service opportunities could have implications for additional in-service focusing on working with students with special needs. A study by Telljohann et. al. (1996) found that as a result of health education in-service programs health education teachers' efficacy increased. If beginning agriculture teachers were able to participate in additional in-service that focused on working with students with special needs would their teacher efficacy also increase?

Research Objective Four – Administrator's General Support

The findings of this study indicate that beginning agriculture teachers consider their administrators to be relatively supportive (summated score of 4.2). The summated score, though lower than the elementary school teachers in Florida (4.8), is still leaning toward agreement (Brownell & Pajares, 1999). As part of their support beginning agriculture teachers consider their administrators to be supportive in helping mainstream students with disabilities. The area of least support is that current educational information is not being provided to the beginning agriculture teachers by the administration ($M = 3.8$).

The findings of the study imply that beginning agriculture teachers are supported by their administration. Colardarchi (1994) found that there is a direct connection between administrative support and teacher commitment. Another implication of the findings is that there is room for improvement in the amount of current educational information provided to beginning agriculture teachers by their administration.

Research Objective Five – Teacher Efficacy

The findings of the study reveal that beginning agriculture teachers in North Carolina are somewhat confident in their abilities to work with students with special needs (summated score of 4.1). This finding approximates those of Brownell and Pajares (1999) where elementary school teachers in Florida reported a summated score of 4.1. This finding is also supported by a study of student teachers in the southeastern United States who were found to be adequately confident when teaching students with special needs (Kessell et. al., 2006).

This finding implies that beginning agriculture teachers in North Carolina are somewhat confident yet still have room for improvement in teacher efficacy. Bandura (1997) stated that the more efficacious a person is the more likely he or she will find a difficult situation a challenge and continue to persist until successful.

Research Objective Six – Self-Perceived Success

The findings of the study indicate that beginning agriculture teachers in North Carolina perceive themselves as being fairly successful when working with students with special needs. The summated score of 4.6 is higher than the 4.3 reported by elementary school teachers in Florida (Brownell & Pajares, 1999). The area of least success for

beginning agriculture teachers is that of working with special education teachers to include students with special needs in the classroom setting. Evers and Bursuck (1995) pointed out that special education teachers have limited experience working in technical classrooms. Do beginning agriculture teachers perceive limited success working with special education teachers because of their limited preparation and experience working with students with special needs?

This finding implies that beginning agriculture teachers perceive that for the most part students with special needs are being successfully included in the agriculture classroom. In reality are these students really being mainstreamed and successful or is that just the perception of the beginning agriculture teacher? A study by Kessel et. al. (2006) found that agriculture student teachers in the southeastern United States had high levels of confidence teaching students with special needs but very limited knowledge about how to actually teach students with special needs.

Research Objective Seven – Variance in Self-Perceived Success

From the findings of the study it can be concluded that years of teaching experience and level of education have a very limited relationship with beginning agriculture teachers' and self-perceived success of teaching students with special needs. This finding is supported by a study by Watson (2006) who found no relationship between years of experience and level of teacher efficacy.

It can also be concluded that the variables of pre-service preparation, administrator support, and in-service programs account for a limited amount of the variance in beginning agriculture teachers' self-perceived success of working with

students with special needs. In addition it can be concluded that a major variable in beginning agriculture teachers' self-perceived success of working with students with special needs is their level of efficacy. This finding is supported by prior research where teacher efficacy had a pronounced effect on elementary school teacher's self-perceived success (Brownell & Pajares, 1999).

These findings imply that efforts should be made to increase beginning agriculture teachers' level of efficacy when it comes to working with students with special needs. The pre-service preparation, administrator support, and in-service programs can be a key factor in increasing teacher efficacy.

Recommendations

Recommendation One

The findings of this research dealt with beginning agriculture teachers in North Carolina. It is recommended that the variance in self-perceived success of beginning agriculture teachers when working with students with special needs be examined in other states. Experienced agriculture teachers and the variance in their self-perceived success when working students with special needs should also be examined.

Recommendation Two

From this study it was determined that 40% of the variance in self-perceived success of working with students with special needs could be accounted for by pre-service preparation, administrator's general support, in-service programs, and teacher

efficacy. Research should be conducted to determine what factors account for the other 60% of the variance in self-perceived success of working with students with special needs.

Recommendation Three

Teacher efficacy is a major variable in the self-perceived success of working with students with special needs. The findings of this study reveal that there is room for improvement in the teacher efficacy of beginning agriculture teachers in North Carolina. It is recommended that research be conducted to help determine the most effective measure for increasing teacher efficacy concerning working with students with special needs.

Recommendation Four

The findings of this study indicate that North Carolina's beginning agriculture teachers' pre-service programs were not providing adequate preparation for working with students with special needs. It is recommended that more preparation of working with students with special needs students be provided during the pre-service preparation. This can be implemented through additional course requirements, already existing methods and instructional classes, student teaching assignments, and/or workshops.

Recommendation Five

Beginning agriculture teachers in North Carolina expressed a limited amount of participation in in-service programs focusing on working with students with special needs. It is recommended that beginning agriculture teachers be offered more

opportunities to participate in in-service programs involving working with students with special needs. These in-service programs could be implemented as part of the school and/or county based beginning teacher in-service programs, county in-services, summer conferences, and professional development workshops offered by the state.

Recommendation Six

The findings of this study document that beginning agriculture teachers find their administration to be supportive. However, it was concluded that administrators could improve in the area of providing current information to teachers. It is recommended that beginning agriculture teachers, as a means to continue to receive support, keep their administrator informed of the activities taking place in their classroom and FFA chapter. It is also recommended that administrators provide updated and current information on teaching and learning to their teachers. Possible ways of implementing the transfer of information could be through emails, newsletters, and faculty meetings.

REFERENCES

- 108th Congress. (2004). Public law 108-446: Individuals with disabilities education improvement act of 2004. Washington, DC: Author.
- Algozzine, B., Ysseldyke, J.E., & Campbell, P. (1994). Strategies and tactics for effective instruction. *Teaching Exceptional Children*, 26(3), 34-36.
- Ary, D., Jacobs, L. C., & Razavieh, A. (2002). Introduction to research in education (6th ed.). Wadsworth Group: CA.
- Bandura, A. (1993). Perceived self-efficacy in cognitive development and functioning. *Educational Psychologist*, 28, 117-148.
- Bandura, A. (1997). *Self-efficacy: The exercise of control*. New York: W.H. Freeman and Company.
- Bartz, A. E. (1999). *Basic statistical concepts* (4th ed.). Upper Saddle River, NJ: Prentice Hall.
- Billingsley, B. S., Pyecha, J. N., Smith-Davis, J., Murray, K., & Hendricks, M. B. (1995). *Improving the retention of special education teachers*. (Final report for cooperative agreement H023Q10001). Washington, D.C.: Office of Special Education Programs.
- Brownell, M. T., & Pajares, F. (1999). Teacher efficacy and perceived success in mainstreaming students with learning and behavior problems. *Teacher Education and Special Education Journal*, 22, 154-164.
- Campbell, P., & Olsen, G. R. (1994) Improving instruction in secondary schools. *Teaching Exceptional Children*, 26(3), 51-54.
- Colardarci, T. (1994). Teachers' sense of efficacy and commitment to teaching. *Journal of Experimental Education*, 60, 323-337.
- Di-Bella-McCarthy H., McDaniel, E. A., & Miller, R. (1995). How efficacious are you. *Teaching Exceptional Children*, 27(3), 68-72.
- Elbert, C. D., & Bagget, C. D. (2003). Teacher competence for working with disabled students as perceived by secondary level agricultural instructors in pennsylvania. *Journal of Agricultural Education*, 44(1), 105-115.

- Evers, R. B., & Bursuck, W. D. (1995). Helping students succeed in technical classes: Using learning strategies and study skills. *Teaching Exceptional Children*, 27(4), 22-27.
- Gall, M. D., Gall, J. P., & Borg, W. R. (2003). *Educational research: An introduction* (7th ed.). Boston, MA: Allen and Bacon.
- Garton, B. L., & Chung, N. (1996). The inservice needs of beginning teachers of agriculture as perceived by beginning teachers, teacher educators, and state supervisors. *Journal of Agriculture Education*, 37(3), 52-58.
- Heward, W. L. (2006). *Exceptional children: An introduction to special education* (8th ed.). Upper Saddle River, NJ: Merrill Prentice Hall.
- Kessell, J., Wingenbach, G., Burley, H., Lawver, D., Frazee, S., & Davis, C. (2006, May). *Relationships between special education knowledge, confidence, and selected demographics*. Paper presented at the meeting of the American Association for Agriculture Education, Charlotte, NC.
- Kessell, J., Wingenbach, G., Burley, H., Lawver, D., Frazee, S., & Davis, C. (2006, May). *Student teacher's confidence in teaching special needs students in agricultural education classrooms and laboratories*. Paper presented at the meeting of the American Association for Agriculture Education, Charlotte, NC.
- Lerner, J. (2003). *Learning disabilities: Theories, diagnosis, and teaching strategies* (9th ed.). Boston, MA: Houghton Mifflin.
- Lewis-Beck, M. S. (1980). *Applied regression: An introduction*. Series: Quantitative Applications in the Social Sciences. A Sage University Paper, No. 22.
- Mastropieri, M. A., & Scruggs, T. E. (1995). Teaching science to students with disabilities in general education settings: Practical and proven strategies. *Teaching Exceptional Children*, 27(4), 10-13.
- Meese, R. L. (1992). Adapting textbooks for children with learning disabilities in mainstreamed classrooms. *Teaching Exceptional Children*, 24(3), 49-51.
- Midgley, C., Feldlaufer, H., & Eccles, J. S. (1989). Change in teacher efficacy and student self- and task-related beliefs in mathematics during the transition to junior high school. *Journal of Educational Psychology*, 81, 247-258. Retrieved June 28, 2006, from the PsycARTICLES database.
- Miller, L. E. & Smith, K. L. (1983). Handling nonresponse issues. *Journal of Extension*, 21, 45-50.

- Mims, A., Harper, C., Armstrong, S. W., & Savage, S. (1991). Effective instruction in homework for students with disabilities. *Teaching Exceptional Children*, 24(1), 42-44.
- Morvant, M. & Gersten, R. (1995). *Attrition/Retention of urban special education teachers: Multi-faceted research and strategic action planning*. (Final Report for cooperative agreement H023Q10001). Washington, D.C.: Office of Special Education Programs.
- National Council For Accreditation of Teacher Education (NCATE). (2002). *Professional standards for the accreditation of schools, colleges, and departments of education*. Washington, DC: Author.
- North Carolina Department of Public Instruction (NCDPI). (2004). *North carolina program approval standards*. Raleigh, NC: Author.
- North Carolina FFA Association. (2006). *Agriculture education professional development workshop series*. Retrieved June 20, 2006 from <http://www.ncffa.org/state%20mailings/2006%20Workshop%20Series.doc>
- North Carolina FFA Association. (2006). *North carolina agriculture education directory*. Retrieved July 3, 2006 from <http://www.ncffa.org/directory/main.html>
- North Carolina State University. (2006). *Course catalog*. Retrieved June 20, 2006 from http://www2.acs.ncsu.edu/reg_records/crs_cat/AEE.html#AEE427
- North Carolina State University, Department of Agriculture and Extension Education. (2006). *Undergraduate programs*. Retrieved June 20, 2006, from <http://www.cals.ncsu.edu/agexed/ugrad/ugrad.html>
- Ormrod, J. E. (2004). *Human learning* (4th ed.). Upper Saddle River, NJ: Pearson Education, Inc.
- O'Shea, D. J., Hammitte, D., Mainzer, R., & Crutchfield, M. D. (2000). From teacher preparation to continuing professional development. *Teacher Education and Special Education Journal*, 23, 71-77.
- Plourde, L. A. (2002). The influence of student teaching on preservice elementary teachers' science self-efficacy and outcome expectancy beliefs. *Journal of Instructional Psychology*, 29(4), 245-253. Retrieved June 28, 2006 from Wilson Web.
- Raudenbush, S. W., Rowan, B. & Cheong, Y. F. (1992). Contextual effects on the self-perceived efficacy of high school teachers. *Sociology of Education*, 65, 105-167.

- Rieck, W. A. (1992). *The current undergraduate pedagogical preparation of secondary school teachers*. Lafayette: University of Southwestern Louisiana, Department of Curriculum and Instruction. (ERIC Document Reproduction Service No. ED355202)
- Rosenholtz, S. J. (1989). *Teachers' workplace: The social organization of schools*. New York: Longman.
- Salend, S. J. (2001). *Creating inclusive classrooms: Effective and reflective practices* (4th ed.). Upper Saddle River, NJ: Prentice Hall, Inc.
- Sharpe, M. N., & Hawes, M. E. (2003). Collaboration between general and special education: Making it work. *Issue Brief: Examining Current Challenges in Secondary Education and Transition*. Minneapolis, MN: University of Minnesota, Institute on Community Integration. (ERIC Document Reproduction Service No. ED481548)
- Soodak, L. C. & Podell, D. M. (1993). Teacher efficacy and student problem as factors in special education referral. *Journal of Special Education, 27*, 66-81.
- Soto, G., & Goetz, L. (1998). Self-efficacy beliefs and the education of students with severe disabilities. *The Journal of the Association for Persons with Severe Handicaps, 23*(2), 134-143. Retrieved June 28, 2006 from PsychARTICLES database.
- Telljohann, S. K., Everett, S. A., Durgin, J., & Price, J. H. (1996). Effects of an inservice workshop on the health teaching self-efficacy of elementary school teachers. *The Journal of School Health, 66*, 261-265. Retrieved June 28, 2006 from PsychARTICLES database.
- Treder, D. W., Morse, W. C., & Ferron, J. M. (2000). The relationship between teacher effectiveness and teacher attitudes toward issues related to inclusion. *Teacher Education and Special Education Journal, 23*, 202-210.
- United States Department of Education. (2004). *Individuals with Disabilities Education Act Data* (table 2-2). Washington, DC: Author. Available at www.ideadata.org
- Watson, G. (2006). Technology professional development: Long-term effects on teacher self-efficacy. *Journal of Technology and Teacher Education, 14*(1), 151-165. Retrieved June 28, 2006 from PsychARTICLES database.
- Wigfield, A., Eccles, J. S., & Rodriguez, D. (1998). The development of children's motivation in school contexts. In P. D. Pearson & A. Iran-Nejad (Eds.), *Review of Research in Education, 23*, 73-118. Washington, DC: American Educational Research Association.

APPENDIX A:
WORKING WITH DIVERSE STUDENTS: THE GENERAL EDUCATOR'S
PERSPECTIVE

Working With Diverse Students

The questionnaire is divided into four sections. It should take approximately 10 minutes to complete the entire questionnaire. Please attempt to answer every question. Select the choice that best fits your situation. Thank you for your participation.

1) Please enter your identification number that was included in your email.

Your current teaching assignment and interactions with students.

2) To what extent do you agree with the following statements:
(check one box for each response)

	disagree 1	2	3	4	5	agree 6
Special education students have been successfully included in my classes.	<input type="checkbox"/>					
I have successfully worked with special education teachers to include students with disabilities in my classes.	<input type="checkbox"/>					
I have successfully taught students with learning problems.	<input type="checkbox"/>					
I have successfully taught students with behavior problems.	<input type="checkbox"/>					

3) What proportion of students with:
(Check one box for each response)

	none 1	few 2	some 3	most 4	all 5
Disabilities have been successfully included in your class?	<input type="checkbox"/>				
Learning problems have you successfully taught?	<input type="checkbox"/>				
Behavior problems have you successfully taught?	<input type="checkbox"/>				

4) Please indicate your opinion regarding each of the following statements by checking the appropriate box.

Considering your current instructional situation and teaching responsibilities, how much can you do to:

	nothing 1	2	3	4	5	a great deal 6
Get children to follow classroom rules?	<input type="checkbox"/>					

Manage disruptive behavior in the classroom?	<input type="checkbox"/>					
Prevent problem behavior on the school grounds?	<input type="checkbox"/>					
Get through to students with the most learning problems?	<input type="checkbox"/>					
Get through to students with the most behavior problems?	<input type="checkbox"/>					
Keep students with learning problems on task with difficult assignments?	<input type="checkbox"/>					
Keep students with behavior problems on task with difficult assignments?	<input type="checkbox"/>					
Individualize learning for students with learning problems?	<input type="checkbox"/>					
Individualize learning for students with behavior problems?	<input type="checkbox"/>					
Help special education students learn in a regular classroom?	<input type="checkbox"/>					
Overcome the influence of environment on students' learning and behavior problems?	<input type="checkbox"/>					

Preparation to work with diverse students.

5) Have you taken special education coursework as part of your preservice preparation?
(check one)

- Yes
- No

6) Have you taken or are you currently enrolled in special education coursework as part of your graduate program?
(check one)

- Yes
- No

7) Please indicate your level of agreement with each of the following statements about your university preparation.
(check one box for each response)

From participating in university coursework, I have:

	disagree 1	2	3	4	5	agree 6
Knowledge of the different needs of students with disabilities.	<input type="checkbox"/>					
The ability to adapt curriculum for students with disabilities.	<input type="checkbox"/>					
The ability to manage the behavioral difficulties of students with disabilities.	<input type="checkbox"/>					
The ability to adapt instruction for students with disabilities.	<input type="checkbox"/>					

8) Please indicate your level of agreement with each of the following statements.
(check one box for each response)

I have actively participated in staff development programs in my school or district that focus on:

	disagree 1	2	3	4	5	agree 6
The needs of students with disabilities.	<input type="checkbox"/>					
Adapting instruction for students with disabilities.	<input type="checkbox"/>					
Managing the behavioral difficulties of students with disabilities.	<input type="checkbox"/>					
Adapting curriculum for students with disabilities.	<input type="checkbox"/>					

Nature of your school environment.

9) Think about the one building administrator (i.e., principal, vice principal, dean) with whom you have the most contact. Indicate your level of agreement with each of the following statements about the support this administrator provides.
(check one box for each response)

My building Administrator:

	disagree 1	2	3	4	5	agree 6
Has my respect and trust.	<input type="checkbox"/>					
Helps me solve problems.	<input type="checkbox"/>					
Attends to my feelings and needs.	<input type="checkbox"/>					
Provides me with current information about teaching/learning.	<input type="checkbox"/>					
Informs me about school/district policies.	<input type="checkbox"/>					
Supports my actions and ideas.	<input type="checkbox"/>					
Explains to me the reasons behind programs and practices.	<input type="checkbox"/>					
Supports me in my interaction with parents.	<input type="checkbox"/>					
Understands my program and what I do.	<input type="checkbox"/>					
Provides leadership about what I am trying to achieve.	<input type="checkbox"/>					
Supports general educators in mainstreaming students with disabilities.	<input type="checkbox"/>					
Assists general educators in successfully including students with disabilities in the mainstream.	<input type="checkbox"/>					

Your personal and professional characteristics.

10) I am:

Male

Female

11) What is your age?

12) How many years have you been teaching?

13) The area I teach in is considered:

- Rural
- Urban

14) What county do you currently teach in?

15) What is the highest degree you hold?

- Bachelors
- Masters
- Doctorial

16) I received my teaching licensure through:

- University teacher preparation program
- Lateral entry
- Other (Please Specify):

17) What university preparation program did you graduate from?

- I am lateral entry
- North Carolina State University
- North Carolina Agricultural and Technical State University
- Other

APPENDIX B:
INITIAL EMAIL TO BEGINNING AGRICULTURE TEACHERS

Dear (insert name),

As a resident of North Carolina and a future agriculture teacher in the state, I have focused my master's thesis on a study that will be beneficial to North Carolina agriculture teachers. The study will focus on the self-efficacy of beginning agriculture teachers when working with students with special needs. Because you have been teaching for five years or less you have been selected to participate in this study. The findings from this study will provide valuable information to teacher preparation and professional development programs in North Carolina. Even though this study is not affiliated with the North Carolina Agricultural Education program it has the support of State Agricultural Education Coordinator, Gerald Barlowe.

The purpose of this email is to alert you to the forthcoming questionnaire and determine the email address that is the most convenient for you. If you would rather me use a different email address than the one in which this email was sent, please reply to alrck5@mizzou.edu to update your address.

Thank you for your assistance and participation in this study.

Sincerely,

Amanda Ross

APPENDIX C:
EMAIL TO BEGINNING AGRICULTURE TEACHERS CONTAINING THE
QUESTIONNAIRE

Dear (insert name),

As a resident of North Carolina and a future agriculture teacher in the state I have focused my masters' thesis on a study that will be beneficial to North Carolina agriculture teachers. The focus of the study is on the self-efficacy of beginning agriculture teachers when working with students with special needs. As an agriculture teacher in your first five years of teaching, your insight is highly valued. The purpose of this letter is to invite you to participate in the study.

Your participation in this study is completely voluntary; however, I ask that you take ten minutes to follow the Internet link provided below and complete the questionnaire no later than **May 21st**.

At the bottom of this email there is a **password** and **code number** that you will need when responding to the questionnaire. The number will not be used to match you with your responses to the questionnaire beyond this initial contact. Your responses to this study will remain *completely* confidential. Only summated, group data will be reported. Please respond to each question openly and honestly without reservation. While you are not obligated to participate in this study, your responses are very important. Furthermore, you may contact me if you desire a copy of the results.

Your participation in this study is strictly voluntary and you may choose not to participate. If you wish not to participate in this study please respond back to this email with "not participating" in the subject line. Your refusal to participate will involve no penalty or loss of benefits to which you might otherwise be entitled. If you should have any questions about this research project please feel free to contact me at alrck5@mizzou.edu or (573) 817-9904. You may also contact my Faculty Advisor, Dr. Bryan Garton at (573) 882-9599. For additional information regarding human participation in research, please feel free to contact the University of Missouri - Columbia Campus IRB Office at (573) 882-9585.

Thank you for your interest in this important study and I look forward to receiving your responses. Please take a moment to go to the link provided below which will direct you to the questionnaire.

<http://FreeOnlineSurveys.com/rendersurvey.asp?sid=9abttrb4osz3za167944>

Password: ncagteachers

Code number: (insert code number)

Respectfully,

Amanda Ross

APPENDIX D:
REMINDER EMAIL TO NON-RESPONDERS

Dear (insert name),

Recently you were mailed a questionnaire for a study on the self-efficacy of beginning agriculture teachers in North Carolina when working with students with special needs. As of today, I have not received your response. Please take a few moments to follow the link below and complete the questionnaire. I have also included the password and your code number, please remember to write them down so that they are available when you respond. Your responses are important to the overall findings of this study.

<http://FreeOnlineSurveys.com/rendersurvey.asp?sid=9abttrrb4osz3za167944>

password: **ncagteachers**

code number: (insert code number)

If you have already completed the questionnaire, thank you very much for your response and please disregard this message. If you have any questions regarding the questionnaire or the study please contact Amanda Ross by email at alrck5@mizzou.edu or call (573) 817-9904.

Thank you for your assistance and participation in this study.

Respectfully,

Amanda Ross