5-2006

Perceived Teacher Self-Efficacy in Early Childhood Settings: Differences between Early Childhood and Elementary Education Candidates.

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A thesis
presented to
the faculty of the Department of Human Development and Learning
East Tennessee State University

In partial fulfillment
of the requirements for the degree
Master of Arts in Early Childhood Education

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by
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May 2006

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Keywords: Early Childhood, Elementary Education, Licensure, No Child Left Behind (NCLB), Highly Qualified Teacher, Perceived Self-efficacy, Perceived Teacher Self-efficacy

ABSTRACT

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This study examined the degree of perceived teacher self-efficacy between early childhood pre-service teachers and elementary education pre-service teachers. There were 88 participants: 44 elementary education pre-service teachers and 40 early childhood pre-service teachers. Participants were mostly white, female pre-service teachers enrolled at East Tennessee State University. Using Bandura's 30-item "Teacher Self-Efficacy Scale" pre-service teachers rated their perceived self-efficacy on 7 subscales: decision-making, influence on school resources, instructional efficacy, disciplinary efficacy, enlisting parent involvement, enlisting community involvement, and creating a positive school climate. Significant differences were found between groups for 3 of the 7 subscales. Early childhood education pre-service teachers reflected higher levels of efficacy in influencing decision making, $t(86)=3.36$, $p<.001$; enlisting parental involvement, $t(86)= 2.14$, $p < .05$; and creating a positive school climate, $t(86) = 3.01$, $p < .01$. No significant differences between groups were found in overall perceived teacher self-efficacy, $t(86)=1.44$, n.s.

DEDICATION

I dedicate this thesis to all the future teachers of America.

ACKNOWLEDGEMENTS

First and foremost, I thank my friend and major advisor, Dr. Amy Malkus, for her consistent time and support, which she freely gave during my thesis project. She has not only guided me through this project but has also inspired my educational ambitions. Thank you to Dr. Laurelle Phillips and Dr. Clarissa Willis, my committee members, for their assistance and patience. I would also like to thank Dr. Pam Evanshen and Dr. Mary Langenbrunner for their support and expertise.

I would like to thank Heather Cheri Carter, whose patience, and loving support was constant throughout this process. For your loving consideration and persistence I am forever grateful to you. I would also like to thank the entire Human Development and Learning faculty and staff for the assistance they have given and the opportunities they have afforded me. Thanks to Dr. Elizabeth Ralston, Dr. Hal Knight, and the Clemmer College of Education and for the generous access to faculty and students. Thanks to Katherine DeVault, Dr. Patricia Robertson, Betsy Cunningham, and Chief Jack Cotrel for their support and assistance.

A special thanks goes to the city of Johnson City, which has employed me over the past few years, especially, David Ferrell, who has encouraged me, supported me, and accommodated my changing schedule. I would also like to thank Jim Hughes and the entire staff of Buffalo Valley Golf Course.

Last, but not least, thanks to my family and friends who supported and enabled me to complete this project and to all the pre-service teachers who participated in this study.

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CHAPTER 1

INTRODUCTION

Statement of the Problem

Teacher certification in the early childhood arena is an issue that has become a heated topic among teachers, administrators, and higher education institutions. The crux of the debate hinges on the establishment of specialized early childhood teacher certification standards for teachers working with children from birth through age 8. The current certification standards (PreK-3, PreK-4, K-6, K-8, PreK-12), it is argued, are outdated and obsolete in the changing education environment. Existing organizational structures in school systems are limiting and vary a great deal (NAEYC & NAECS/SDE, 2002). Across the country states have varying teacher standards, which cause a variety of problems. The No Child Left Behind Act of 2001 sought to improve standards, qualifications, and procedures for placement. However, many obstacles and discrepancies remain (NAEYC & NAECS/SDE, 2002). Over the past 20 years much research on early childhood development has been conducted, and many in the education and scientific fields do not believe public school system structures have evolved to reflect the research findings (NAEYC & NAECS/SDE, 2002). The main issue is that of distinguishing the distinct differences between early childhood (birth-age 8) and middle childhood (ages 6-12).

Current teacher certification standards allow teachers with PreK-3 or PreK-4 licensure (early childhood concentration) as well as K-6 or K-8 licensure (kindergarten to age 12, or middle childhood) to teach in the early childhood setting. The question therefore is, “How does perceived teacher self-efficacy effect K-6 or K-8 licensed teachers in the early childhood classroom particularly when compared to their PreK-3 or PreK-4 counterparts?” The existing

public school construct of age/grade separation was established before early childhood programs came into use. Extensive research findings in early childhood development have come out since the current age/grade separation was established within the majority of public school systems (NAEYC & NAECS/SDE, 2002). The growing concern is that K-8 licensed teachers are possibly not as confident or capable in their abilities within early childhood settings as a PreK-3 or PreK-4 (early childhood specialists) may be.

Research Questions

1. What are the levels of perceived teacher self-efficacy for early childhood and elementary education pre-service teachers?
2. When compared, who has more perceived self-efficacy, early childhood or elementary education pre-service teachers?
3. What specific aspects of perceived teacher self-efficacy are most and least exhibited by early childhood and elementary education pre-service teachers?
    - 3a. Are there differences in perceived efficacy to influence decision-making among early childhood pre-service teachers and elementary education pre-service teachers?
    - 3b. Are there differences in perceived efficacy to influence school resources among early childhood pre-service teachers and elementary education pre-service teachers?
    - 3c. Are there differences in levels of perceived instructional efficacy among early childhood pre-service teachers and elementary education pre-service teachers?
    - 3d. Are there differences in levels of perceived disciplinary efficacy among early childhood pre-service teachers and elementary education pre-service teachers?

3e. Are there differences in perceived efficacy in regard to the level of influence on parental involvement among early childhood pre-service teachers and elementary education pre-service teachers?

3f. Are there differences in perceived efficacy in regard to the level of influence on community involvement among early childhood pre-service teachers and elementary education pre-service teachers?

3g. Are there differences in the level of perceived efficacy in regard to creating a positive school climate among early childhood pre-service teachers and elementary education pre-service teachers?

Hypotheses

According to National Association of the Education of Young Children (NAEYC) a clear mandate exists for the establishment of specialized early childhood teacher certification standards for teachers working with children from birth through age 8 (NAEYC & NAECS/SDE, 2002). The proposed certification needs to be structured specifically for early childhood education and be clearly distinctive from, and independent of, existing elementary and other certification standards (NAEYC, 1991). Great concern about inappropriate teaching practices in the early childhood classroom setting emerged in 1986 when the NAEYC published a series of articles expressing concern and giving possible solutions to rectify the problems (Charlesworth, 1989; Kagan & Zigler, 1987). The inappropriate practices included the premature formal teaching of reading instead of the facilitating of general language competence (Willert & Kamii, 1985), the exercise of whole group direct instruction rather than stressing play as a learning medium (Saracho, 1986), and also the practice of teacher-controlled, highly structured abstract materials (e.g., workbooks and photocopied handouts) rather than concrete child-initiated and

child-interest driven learning activities (Kamii, 1985; Schweinhart & Weikart, 1988). Beyond the NAEYC, many other organizations including the Association for Childhood Education International (Moyer, Egerton, & Isenberg, 1987), the National Association of Early Childhood Specialists in State Departments of Education (NAEYC; NAECS, & SDE, 1991) and the National Association of State Boards of Education (NASBE, 1988) state that a reevaluation of what constitutes appropriate educational practice in the early childhood classroom is clearly needed for educational debate and reform (NAEYC & NAECS/SDE, 2002).

Ho1. It is predicted that early childhood education pre-service teachers will show significantly higher overall perceived teacher self-efficacy compared to elementary education pre-service teachers.

Ho2. It is predicted that early childhood education pre-service teachers will show significantly higher perceived teacher self-efficacy related to decision making compared to elementary education pre-service teachers.

Ho3. It is predicted that early childhood education pre-service teachers will show significantly higher perceived teacher self-efficacy related to influence on school resources compared to elementary education pre-service teachers.

Ho4. It is predicted that early childhood education pre-service teachers will show significantly higher perceived teacher self-efficacy related to instruction compared to elementary education pre-service teachers.

Ho5. It is predicted that early childhood education pre-service teachers will show significantly higher perceived teacher self-efficacy related to discipline compared to elementary education pre-service teachers.

Ho6. It is predicted that early childhood education pre-service teachers will show significantly higher perceived teacher self-efficacy related to parent involvement compared to elementary education pre-service teachers.

Ho7. It is predicted that early childhood education pre-service teachers will show significantly higher perceived teacher self-efficacy related to community involvement compared to elementary education pre-service teachers.

Ho8. It is predicted that early childhood education pre-service teachers will show significantly higher perceived teacher self-efficacy related to creating a positive climate compared to elementary education pre-service teachers.

Significance of the Study

The National Assessment of Educational Progress states that only 31% of fourth graders read at a proficient level; for eighth graders the percentage rose to 32%. Many argue that spending more money is not the answer but rather how we approach education and the learning process. Kindergarten, which has been in existence since the 1800s, marked the beginning of early childhood education. Over the past 15 years a great deal of debate has occurred concerning aspects of early childhood education and its purpose (NAEYC, NAECS/SDE, 2002). A growing number of groups assert a clear distinction should be made between early childhood (PreK-3 and PreK-4) and primary grade years (4^{th}-8^{th} grades) (File & Gullo, 2002). Current research strongly demonstrates that the beginning of a child's education has a significant effect upon proper development and future learning. Supporters of this research find that young children should be placed in specific and carefully designed environments in order to enhance the many components of appropriate development (File & Gullo, 2002). The various developmental dynamics of

young children from birth to age 8 help guide decision-makers regarding the aspects of appropriate forms of learning (Bredekamp, 1987; Elkind, 1986).

The National Research Council reported a need for all early childhood teachers to have a bachelor's degree with a specialty in early childhood. The National Center for Early Development and Learning at the University of North Carolina found that many pre-service teacher institutions did not properly prepare candidates for the various challenges and obstacles that specifically confront an early childhood teacher (NAEYC & NAECS/SDE, 2002).

A major component of learning is the teacher's specialization of the age/grade level, which each teacher must feel comfortable administering and facilitating. State departments of education, school boards, and certification agencies must determine in the coming years whether they will recognize early childhood (birth-8) as an established separate division of childhood (NAEYC & NAECS/SDE, 2002). The current policy is broad and allows K-8 licensed teachers to teach in the early childhood setting without an extensive and specific knowledge of the early childhood (birth-age 8) spectrum.

The educational dilemma is whether or not K-6 or K-8 (elementary education) pre-service teachers feel as comfortable and capable in the early childhood setting (K-3) as do preK-3 or preK-4 (early childhood) concentration pre-service teachers. The foundation for significant success in young students is dependent upon quality early education teachers and programs. The essential first step in improving the quality of programs for all young children lies in the preparation of early childhood educators (NAEYC & NAECS/SDE, 2002). Early childhood teachers educate and care for young children in kindergartens, early childhood centers, or pre-schools. Teachers organize and provide experiences that cater to all areas of the children's learning and development. Early childhood specialists argue that in order to successfully teach

children birth to age 8, individuals must acquire knowledge and understanding of the dominant theories of human development and learning; as well as research in cognitive, motor, and perceptual modes of learning (http://www.fes.iastate.edu).

Limitations of the Study

This study is limited to undergraduate licensure (K-8, K-6) students in elementary education (Department of Curriculum and Instruction) and undergraduate early childhood (Department of Human Development and Learning) licensure (PreK-4) students. The aforementioned pre-service teachers have been formally admitted into their respective teacher education programs.

Assumptions

It is assumed that the Bandura Teacher Self-Efficacy Scale (Appendix A) supplies appropriate, accurate information regarding the degree of perceived teaching self-efficacy an individual exhibits. The 30 questions are designed to provide an overall assessment of perceived self-efficacy levels with regards to teaching.

Definitions of Terms

1. Early Childhood - children between birth and 8 years of age.
2. Middle Childhood - Children between 6 and 12 years of age.
3. Pre-service Teachers - Pre-service teachers are individuals who have been formally accepted into a teacher licensure program and have completed much of their college level course work but have yet to perform their student teaching.
4. Self-Efficacy – “the belief in one’s capabilities to organize and execute the sources of action required to manage prospective situations” (Bandura,1997, p.3).

5. Teacher Self-efficacy- a teacher's "judgment of his or her capabilities to bring about desired outcomes of student engagement and learning" (Tschannen-Moran & Woolfolk-Hoy, 2001, p.783).
6. Early Childhood Setting-academic environment that involves instruction and guidance for children from birth to age eight.
7. Praxis Exams- a series of exams that are taken before, during, and after college courses in teacher training – passing scores on PRAXIS II exams are necessary for licensure.

CHAPTER 2

LITERATURE REVIEW

Self-Efficacy

A person's belief in his/her ability to produce desired results by his/her own actions is critical in determining one's capabilities to complete tasks. Self-efficacy, as described by Bandura (1977) demonstrates that an individual's perception has a profound effect on actions and intended outcomes. Bandura's (1977, 1986) theory of self-efficacy suggests that one's ability to execute an action with success is determined by one's belief in one's ability to do so. If a person establishes a goal and strongly believes that his or her actions will lead to the success of that goal, he or she will produce more effective coping strategies and higher levels of achievement.

Self-efficacy affects one's motivation and produces self-appraisals that have a direct effect upon motivation (Bandura 1986). Self-efficacy beliefs influence thought processes and emotions that enable actions in which people expend substantial effort in pursuit of goals, persist in the face of challenge, rebound from temporary setbacks, and exercise some control over events that affect their lives (Bandura, 1986, 1993,1997). Naturally, people feel more comfortable tackling a given task if they feel prone to succeed at that task. On the other hand, when people doubt their abilities, motivation suffers and productivity weakens. Simply stated, self-efficacy is determined by certain situations and one's belief in one's abilities in that specific arena. Self-efficacy is a process of determining how well one can execute tasks, which are required to deal with prospective situations (Bandura, 1982).

Human action is influenced by personal qualities, social factors, and past experience, all of which help determine one's self-efficacy (Schunk, 1991). Bandura's social cognitive theory outlines four elements of developing a strong sense of efficacy, which include mastery, social modeling, social persuasion, and lastly, one's physical and emotional states (Bandura, 1986). Mastery involves people achieving goals. An important element of mastery involves overcoming or managing failures. Social modeling involves people seeing others like themselves being successful. Social persuasion is exhibited when people are persuaded by others that they can succeed and are given experiences that expand their abilities and confidence. The last element is one's ability to gauge one's physical and emotional states. Self-efficacy encompasses the judgments of what people can do with their ability, and not simply their level of ability (Bandura, 1986).

The current study will address the dimensions of self-efficacy in the early childhood classroom. Research over the last 30 years has suggested a clear distinction between early childhood development and later development, yet educational teaching standard requirements (K-8) have not adjusted accordingly (NAEYC & NAECS/SDE, 2002). In order to have positive self-efficacy, early childhood teachers must have appropriate and specific training in early childhood education. A teacher's self-efficacy and perceived capabilities can directly affect students' achievement (Armor et al., 1976; Ashton & Webb, 1986; Moore & Esselman, 1992; Ross, 1992; Saklofske, Michayluk, & Randhawa, 1988), motivation (Midgley, Feldlaufer, & Eccles, 1989), and sense of efficacy (Anderson, Greene, & Loewen, 1988). In addition, teacher efficacy is connected with a teacher's behavior, performance, ambition, resilience, creativity, and the reluctance to use criticism (Tschannen-Moran, Woolfolk-Hoy, & Hoy, 1998).

The importance of positive self-efficacy can be wide ranging. Self-efficacy beliefs determine how people think, motivate themselves and perform (Bandura, 1982). Past studies, which address concepts of self-efficacy, have covered many topics, from academic self-efficacy (Solberg, O'Brien, Villareal, Kennel, & Davis, 1993) to the self-efficacy of computer preparedness (Downes, 1993). Bandura (1986) asserts that when measuring self-efficacy for any reason, the measure should be case specific. This thesis is specifically addressing perceived teacher self-efficacy within the context of the early childhood classroom environment; therefore, a measure specific to perceived teacher self-efficacy was used. The importance and implications of self-efficacy have diverse effects upon teachers and their abilities in the classroom (Pajares 1992). A positive sense of efficacy increases teacher achievement and overall satisfaction in performance (Pajares, 1996).

Another considerable impact of self-efficacy lies in how much effort an individual will expend on a particular activity, how long he/she will persist when faced with unfamiliar problems, whether one's mindset and emotional responses are self-impeding or self-facilitating, what degree of stress and discouragement one confronts in dealing with taxing environmental (classroom) demands, and the degree of success that is achieved (Kagan, 1992). A strong sense of self-efficacy in an individual enables one to address difficult tasks and environments (in this case, the early childhood classroom) as challenges to be overcome instead of obstacles that result in a sense of helplessness (Pajares, 1996). An individual (in this case a teacher) with low self-efficacy may perceive unfamiliar and difficult situations as overwhelming and unconquerable (Katz, 1996). Knowing the implications of these influences, self-efficacy beliefs are significant determinants and predictors of an individual's eventual success (Pajares, 1996).

Teacher Self-Efficacy

Teacher self-efficacy is defined as "the teacher's belief in his or her capability to organize and execute courses of action required to accomplish a specific teaching task in a particular context" (Tschannen-Moran et al., 1998). Using Rotter's (1966) theoretical starting point, teacher efficacy was initially conceptualized by Rand researchers as the degree to which teachers felt they could control the reinforcement of their performance, in other words, control of reinforcement falls under their power or lies within the environment. The studies, based on Rotter's social learning theory, established that teachers with a positive level of efficacy believed that they could control or to a degree influence student achievement and interest.

An early self-efficacy study was appraised by the Rand Corporation which published a study that examined the success of various reading programs and interventions (Armor et al., 1976). Rand discovered that teacher efficacy was strongly related to outcomes in reading achievement among minority students. Student performance was greatly enhanced by teacher's sense of efficacy (Tschannen-Moran et al., 1998). Rand also found that violence, substance abuse, the importance placed on education at home, race, gender and emotional and cognitive needs of each individual child are all influential factors when considering motivation and performance in school. Educators who agree that the influence of a given classroom environment can overwhelm a teacher's ability to directly have an influence on a student's learning demonstrate a feeling that reinforcement of their teaching efforts lies outside their control or is external (Lazar & Darlington, 1982). Whereas teachers who demonstrate confidence and mastery in their educational (age specific) training believe that reinforcement of teaching activities and student success lies within their control or is internal (Rotter, 1966).

Another study that examined the relationship between efficacy and achievement was introduced by implementing the Gibson and Dembo (1984) instrument to measure teachers' beliefs. Students from second and fifth grades who had instructors who exhibited a greater sense of teacher efficacy excelled beyond their fellow students in math on the Iowa Test of Basic Skills (Moore & Esselman, 1992). The Anderson et al.(1988) study examined third graders and found the personal teaching efficacy of their instructors at the outset of the school year was substantially connected to students' achievement on the Canadian Achievement Test. Another study of sixth graders showed that a teacher's sense of efficacy was related to a student's own sense of efficacy in regards to learning but not necessarily to their achievement (Anderson et al.,).

Along with student achievement, teacher efficacy can be a determinant in molding students' attitudes toward school, the particular subject being taught, and even the instructor. Teachers with a positive sense of personal efficacy received higher performance evaluations from their students (Woolfolk, Rososff, & Hoy, 1990). Research using the Gibson and Dembo instrument has shown connections to teachers' classroom performance, their theoretical viewpoint toward teaching, and a general open-mindedness toward new ideas. This research also implies that teacher efficacy influences student attitude, achievement, and affective growth (Tschannen-Moran et al., 1998).

Teachers' perceptions of their own capabilities are important in classroom success (Armor et al., 1976). "A capability is only as good as its execution. The self-assurance with which people approach and manage difficult tasks determines whether they make good or poor use of their capabilities. Insidious self-doubts can easily overrule the best of skills" (Bandura, 1997, p. 35).

Any teacher who is placed in an unfamiliar classroom environment and who is not specifically trained in that particular curriculum for that age group will understandably experience lower teacher efficacy. However, teachers with a strong sense of efficacy are open to new ideas and more willing to experiment with new methods to better meet the needs of their students (Berman et al., 1977; Guskey, 1988; Stein & Wang, 1988) and to exhibit greater levels of planning and organization (Allinder, 1994). Teachers with a higher sense of efficacy exhibit greater enthusiasm for teaching (Allinder; Guskey, 1984; Hall, Burley, Villeme, & Brockmeier, 1992), have a greater commitment to teaching (Coladarci, 1992; Evans & Tribble, 1986; Trentham, Silvern& Brogdon, 1985), and are more likely to stay in education (Burley et al., 1991; Glickman & Tamashiro, 1982).

Of Bandura's four sources of efficacy (mastery, social modeling, social persuasion, and physical and emotional states), mastery, or "enactive experience," is the most powerful influence on self-efficacy (Woolfolk & Hoy, 1990). Through "enactive experience" self-efficacy for a behavior is increased by successfully performing the behavior. A Science Teaching Efficacy Beliefs Instrument (STEBI) was established by Riggs and Enochs (1990). It has been used in order to study the consequences of variations in course design on elementary teachers (Waters & Ginns, 1997). Enochs implemented the STEBI as the crux for development of Microcomputer Utilization in Teaching-efficacy Beliefs Instrument (MUTEBI) that was used in the assessment of a staff development program that sought to encourage microcomputer use in teaching science (Borchers et al., 1992). The study concluded that when teachers' self-efficacy beliefs in their ability to use computers were increased through appropriate development they were more likely to incorporate computers into their teaching strategies (Albion, 1996). Marcinkiewicz (1994)

also reported that teachers' use of computers for teaching increased with their belief in their ability to do so.

Teacher efficacy has been defined as both context and subject-matter specific (Tschannen-Moran et al., 2001). A teacher may feel very competent in one area of study and feel less able in other areas. Presumably, a teacher who has specialized training in a specific area will feel more competent in his or her abilities in that specific area. If a teacher has been trained in K- 8 education, he or she may not be extensively trained in the development of early childhood or early childhood education. The Association of Teacher Educators and the National Association for the Education of Young Children recommend specialized early childhood certification standards for teaching children from birth through age 8 and also recommend that this certification should be independent of existing elementary and secondary certifications.

Many current state standards do not reflect the distinctive developmental and educational needs specific to children from birth to age 8 (NAEYC & NAECS/SDE, 2002). Teachers in the early childhood setting should be adequately knowledgeable about the specific developmental facets of young children and the implications for appropriate curriculum and instructions (NAEYC & NAECS/SDE, 2002). Nespor (1987) found that many of the obstacles experienced by teachers were in direct relation to teachers' beliefs playing a considerable role in defining tasks and selecting strategies since, unlike many types of knowledge, beliefs can be applied flexibly to other arising problems. Pajares (1992) noted a "strong relationship between teachers' educational beliefs and their planning, instructional decisions, and classroom practices" (p. 326); in addition "educational beliefs of pre-service teachers play a pivotal role in their acquisition and interpretation of knowledge and subsequent teaching behavior" (p. 328).

No Child Left Behind: Highly Qualified Teachers

The No Child Left Behind Act of 2001- a renewed Elementary and Secondary Education Act (ESEA) - requires teachers who teach core academic subjects to be "highly qualified." The law defines a highly qualified teacher as one who:

- has obtained full state certification (including alternative certification) or has passed the state teacher licensing exam; and
- holds a license to teach in the state; and
- has not had certification or licensure requirements waived on an emergency, temporary, or provisional basis.

There are also requirements for demonstrating subject-matter knowledge. These requirements differ depending on whether one is an elementary, middle, or high school teacher and whether one is a teaching veteran or new to the profession. By the end of the 2005-06 school year all teachers of core academic subjects must be highly qualified. The core academic subjects include English, language arts, reading, science, civics, government, mathematics, foreign language, economics, geography, and history (AFT, 2003).

New teachers who have been hired by Title I school systems must meet the standards immediately; however, veteran teachers have until the end of the 2005-2006 school year in order to attain "highly qualified" status. Title I schools must notify parents if their child has a teacher who is not considered highly qualified (AFT, 2004). For teachers who are new to the profession, requirements for meeting the new "highly qualified" definition include holding at least a bachelor's degree and being able to demonstrate a high level of subject-matter competence. New elementary teachers must demonstrate knowledge and teaching skills in reading, mathematics,

and other areas of the basic elementary school curriculum by passing a test. Some state certification or licensure may count toward this requirement.

According to the American Federation of Teachers, veteran teachers must also hold at least a bachelor's degree and be licensed by the state. In addition, they must either meet the requirements for new teachers or demonstrate competence in each academic subject they teach. The law states seven characteristics that make up the definition of a "high, objective, uniform state standard of evaluation" (AFT, 2003, p. 5). Such a system:

- is determined by the state for "grade-appropriate academic subject-matter knowledge and teaching skills"
- is committed to challenging state academic content and student academic achievement standards
- provides coherent information regarding a teacher's attainment of core content knowledge in specific subjects being taught
- is applied consistently throughout a state to all teachers in the same academic subject and grade level
- considers the amount of time a teacher has been teaching specific subject
- is available to the public; and
- may involve various, objective measures of teacher competency.

Each state will specify what the high, objective state standard of evaluation will look like.

The American Federation of Teachers (AFT) stands behind the teacher quality provisions of NCLB, which are to provide a better education for students by ensuring that teachers know their subject matter and how to effectively teach it. The AFT points out problems in the implementation of these provisions and states that the goals of NCLB cannot be met without

necessary funding, effective implementation, and changes in the law. They list some of the problems as:

- the "highly qualified" teacher requirements are unworkable for some teachers and are not always applicable to all teachers in public schools;
- the public school choice provision can undermine schools rather than improve student achievement; and
- the adequate yearly progress (AYP) formula accurately credit improvements in student achievement. The results of the AYP do not present reliable evidence of student progress.

The American Federation of Teachers continues to urge the U.S. Department of Education to make changes so all students are taught by well-qualified teachers. Specifically, the AFT recommends that:

- states provide teachers with options, other than a test, for demonstrating that they are "highly qualified".
- states that have delayed defining the appropriate sources to accommodate becoming a "highly qualified" teacher must offer an extension to meet the law's deadline.
- veteran middle school teachers who passed state-approved exams when they received their license and who have proven to teach satisfactorily should be considered "highly qualified."

The AFT continues to monitor the law's implementation to ensure teacher quality and intends to ensure that they are applied in ways that are fair to teachers and are in the best interest of the children they teach.

Licensure

Standards for early childhood educators (PreK-3, PreK-4) and elementary educators (K-6, K-8) vary from state-to-state. Tennessee preparation programs help early childhood and elementary teacher candidates meet the developmental and academic needs of all children. The Tennessee State Board of Education (2004) states that the specific purpose of these preparation program guidelines is to ensure that prospective teacher candidates are fully capable of effectively and appropriately teaching young children and students. The state of Tennessee stresses that the role of a teacher is a meaningful and significant pursuit that begins in college and is sharpened with field experiences throughout their career.

Standards for early childhood education (PreK-3, PreK-4) teacher candidates and elementary education (K-6, K-8) teacher candidates differ, yet both performance standards are set up to support teacher preparation programs which have a comprehensive program of study that "integrates the general education core, professional education, an academic major and a variety of field experiences to ensure teacher candidates meet all the following standards"(TN State Board of Education, 2004).

Content Area Standards

Early Childhood Education.

- Standard 1: Child Development and Learning - Candidates use their understanding of young children's characteristics and needs and the multiple influences on children's development and learning to create environments that are healthy, respectful, supportive, and challenging for all children.

- Standard 2: Family and Community Relationships - Candidates know about, understand, and value the importance and complex characteristics of children's families and communities. They use these understandings to create respectful, reciprocal relationships that support and empower families and involve all families in their children's development and learning.
- Standard 3: Observation, Documentation, and Assessment - Candidates know about and understand the goals, benefits, and uses of assessment. They know about and use systematic observations, documentation, and other effective assessment strategies in a responsible way and in partnership with families and other professionals, to influence positively children's development and learning.
- Standard 4: Professionalism - Candidates know and use ethical guidelines and other professional standards related to early childhood practice. They are continuous, collaborative learners who demonstrate knowledgeable, reflective, and critical perspectives on their work.
- Standard 5: Teaching and Learning - Candidates integrate their understanding of and relationships with children and families; their understanding of developmentally effective approaches to teaching and learning; and their knowledge of academic disciplines to design, implement, and evaluate experiences that promote positive development and learning for all young children.

English Language Arts.

- Standard 1: Early Literacy - Candidates know, understand, and use research- based knowledge and skill in promoting and developing listening, speaking, reading, and writing.
- Standard 2: Reading - Candidates know, understand, and use appropriate practices for promoting and developing beginning literacy skills, for integrating reading instruction across all subject matter areas, and for enabling all children to become proficient and motivated readers.
- Standard 3: Writing - Candidates know, understand, and use the writing process for communication, expression, and reflection in all subject areas, for a variety of purposes, in a range of modes, and for multiple audiences.
- Standard 3: Algebra - Candidates know, understand, and use algebraic concepts and create learning experiences that develop algebraic thinking in children.
- Standard 4: Geometry - Candidates know, understand and use geometric concepts and create learning experiences that develop geometric concepts and spatial reasoning in children.
- Standard 5: Measurement - Candidates know, understand, and use measurement and create learning opportunities that teach children to apply the units and processes of measurement in mathematical and real-world problems.
- Standard 6: Data Analysis and Probability - Candidates know, understand and use data analysis and probability concepts and design instructional activities to teach children to understand and apply basic statistical and probability concepts.

Science.

- Standard 1: Elements of Effective Science Instruction - Candidates demonstrate understanding of science and technology in daily life through the use of inquiry-based, open-ended and materials-based investigations, incorporating habits of mind and pedagogical techniques required to deliver the content in a safe environment.
- Standard 2: Life Science - Candidates know, understand and use the central concepts of life science.
    - *Supporting Explanation* - Candidates have a solid knowledge base in the major concepts, issues, and processes related to cells, diversity of life, interdependence among living things and the environment, inheritance, flow of matter and energy in nature, and biological change.
- Standard 3: Earth/Space Science - candidates know, understand and use the central concepts of earth/space science.
    - *Supporting Explanation* - Candidates have a solid base of knowledge of the earth's resources, features, cycles and place in the universe.
- Standard 4: Physical Science - Candidates know, understand and use the central concepts of physical science.
    - *Supporting Explanation* - Candidates demonstrate a solid base of understanding of the major concepts, issues and processes that surround matter-its composition, properties and interactions-and the relationships that exist among force, matter and energy.

Social Studies.

- Standard 1: Social Studies Processes - Candidates use effective instructional strategies that integrate social studies content and knowledge.
    - *Supporting Explanation* - Candidates recognize how culture; economics; geography; governance and civics; history; and individuals, groups and interactions impact the various elements of the Tennessee curriculum: local communities, Tennessee communities, and some world communities. Candidates provide hands on experiences to help children understand core concepts that may be abstract or distant in time and space. Candidates understand and use a variety of instructional strategies to encourage the development of necessary age appropriate social studies skills.
- Standard 2: Culture - Candidates understand and demonstrate appreciation of and respect foe a variety of human cultures including the similarities and differences in beliefs, knowledge bases, changes, values and traditions.
- Standard 3: Economics - Candidates understand basic economic concepts.
    - *Supporting Explanation* - Candidates create learning experiences to help children understand the difference between needs and wants. Candidates create experiences to help children understand basic concepts of spending and saving to achieve desired goals on personal and community levels.
- Standard 4: Geography - Candidates use knowledge of geography to explain the web of relationships among people, places, and environments with a primary focus on the local community.

- Standard 5: Governance and Civics - Candidates understand the concepts of governance and civics.
    - *Supporting Explanation* - Candidates convey the structure and purpose of governance in a democracy in language that is meaningful and appropriate for children. Candidates demonstrate and understanding of individual rights and responsibilities, including respectful and ethical behaviors, and the role of citizens within their homes, classrooms, schools, communities, nation, and world.
- Standard 6: History - Candidates understand the importance of history and its relationship to informed decisions in contemporary life.
- Standard 7: Individuals, Groups, and Interactions - Candidates understand that personal development and identity are shaped by factors including family, culture, groups, and institutions.

Arts Education.

- Standard 1 - Candidates know, understand, and use basic knowledge and skills in the arts to integrate them with other subject areas and to coordinate with arts specialists to support knowledge and skill development in the arts.

Health/Wellness.

- Standard 1 - Candidates know, understand, and use basic health knowledge and skills to promote healthy living in children and families and to integrate health and wellness concepts and practices into other subject disciplines of the curriculum.

Physical Activity and Physical Education.

- Standard 1 - Candidates know, understand, and use knowledge to provide high-quality, meaningful, and developmentally appropriate physical activity and physical education experiences in all settings (TN State Board of Education, 2004, p.1-17).

Early Childhood vs. Elementary Education

In order to understand and establish one methodology as being more appropriate and beneficial for students in early childhood settings, the differences between these approaches must be distinguished. Understanding the differences in early childhood teacher preparation versus elementary education teacher preparation is essential for this study. These two philosophies are striking in their differences and reflect very distinct approaches to teacher preparation.

The traditional classroom has a strong history in the American educational system. Just by way of being the most commonly accepted and widely used means of instruction, the traditional approach is constantly perpetuating itself within generations of teachers and learners (Haste, 1987). Most teachers teach as they were taught, a stumbling block that is recognized as a trait to overcome in teacher preparation (Fosnot, 1996). The traditional learning theory, which has dominated education in the late 19th and 20th centuries, is generally behaviorist: students expect a reward for completed tasks; students are viewed as blank slates to be filled by the teacher; and intelligence is determined by genetics (Abbot & Ryan, 1999). Traditional methods, however, show persistent shortcomings in students' understanding and a large amount of passive knowledge from early childhood to the university level (Gardner, 1991).

Constructivism is a theory about learning not a description of teaching. It defines learning as an interpretive, recursive, building process by active learners who interact with the physical and social realm (Fosnot, 1996). Constructivists emphasize that there is not one standard

approach to this style of instruction; rather, it can be interpreted through a variety of learning styles and approaches. Further, research has shown that active engagement in learning could lead to increased retention, understanding, and use of knowledge (DeVries & Kohlberg, 1990). The advantage of the constructivist philosophy is that when a student constructs his or her own solution to a problem, that solution becomes innate in the child's self (DeVries & Kohlberg, 1990). If students are forced to learn material that they view as irrelevant, it may soon be discarded. If, however, students are allowed to construct meaning and discover knowledge for themselves, they will grow and develop as critical thinkers, problem solvers, and lifelong learners.

The traditional and constructivist approaches are theoretical and ideally should be defined through attitude and beliefs rather than through specific techniques. Attitudes and beliefs, however, are difficult to define and identify. To an extent, however, these philosophies are reflected in classroom practices, and it is by observing these practices that one can establish which philosophy the teacher embraces and accepts as his or her own. At times, an educator may in fact believe that he/she adheres to a certain philosophy, but the actual classroom practices are not reflective of this belief. It is because of this that the philosophy of a teacher is best evaluated not by what the teacher thinks that he or she believes but by how she or he teaches.

As stated earlier, teachers trained in elementary education programs tend to rely on a more traditional approach to teaching. Jonassen (1991) reviewed the historical basis of the traditional approach as an explanation for current teaching techniques. He states that behaviorists believe in the existence of knowledge about the world, and it is the responsibility of the teacher to transmit this knowledge to the learner. Learners are instructed about the world and are then expected to reproduce its content and structure in their own thinking (Jonassen, 1991). John

Locke contributed to the foundation of the behaviorist approach in his work as well. Locke stated that the human mind begins as a type of blank slate wanting to be fed information (Crain, 2005). It is clear that the translation of this belief into classroom practices would be reflected in the direct instruction by the teacher as found in traditional classrooms. Fosnot (1996) expanded on the paradigm of behaviorism by stating that behaviorists rely on the effects of reinforcement, practice and external motivation in association with learned behavior. An educator relying on the tenets of behaviorism would, for example, preplan a curriculum by breaking the content into parts and basic skills and then building upon the skills to a more complex whole. In essence, behaviorism offers theoretical rationale for the traditional approach to teaching by using direct instruction with sequenced goals and preplanned, corresponding information

In addition, Fosnot (1996) notes that the learner is viewed as passive and requires external motivation and reinforcement to learn. The educator's sole purpose is to develop a sequential curriculum that provides motivation and reinforcement in order to facilitate learning. The progress of the learner is assessed by his/her ability to reach predetermined outcomes. The mastery-learning model (Bloom, 1976), although rarely used in schools today, exemplifies this philosophy and still provides a foundation for the behaviorist/traditional classroom. This model makes the assumption that wholes are made up of parts and that these parts represent skills and subskills. The learner, who is in need of acquiring these skills, must learn the basic parts of the content and thus, by doing so, will have an understanding of the whole. By understanding the theory behind the behaviorist approach to education, the traditional classroom can be identified by several characteristics that are representative of that philosophy.

Understanding the perspective of the teacher as transmitter of knowledge is fundamental in understanding the traditional method of instruction. Brooks and Brooks (1999) described the

traditional classroom as having specific characteristics, one of which is teacher- directed instruction. They described the traditional classroom as being teacher directed and feature the teacher as the primary speaker in the room. Airasian and Walsh (1997) confirmed this by defining a characteristic of the traditional approach as the teacher giving information to the student and the student receiving the information with little contribution during instruction. As a result, students often have little control over their own learning within this teacher-directed classroom (Harasim, 1990). Again, definitions of traditional classroom settings draw clear pictures of the teacher as a giver of information and the student simply as the receiver.

Other defining characteristics of the traditional classroom are outlined in current research as well. A second characteristic is that in this type of classroom students primarily work alone as opposed to in groups. The traditional classroom often features the student as the sole receptor of knowledge, without opportunity for group work and collaboration (Morrison, 2000). Research also notes differences in the curriculum and primary means of instruction in the traditional classroom. Most traditional teachers rely on textbooks in order to teach a lesson (Ben-Peretz, 1990). Instead of presenting varying viewpoints, then, students are limited in their exposure to an issue (Brooks & Brooks, 1999). Finally, students in a traditional setting receive emphasis on knowledge that already exists and not on the construction of new knowledge or meaning. Gardner (1991) elaborated those even students who have been well educated and who show outward signs of success often do not show a clear conceptualisation of the material that they have been applying themselves. Thus, the traditional classroom emphasizes a teacher-centered environment where students attend to generalize tasks without cooperative learning.

Educators studying in early childhood programs receive a strikingly different philosophical approach to education. These programs tend to negate the traditional approach to

educating young children and instead turn to the constructivist approach. Fogarty (1999) defined the constructivist philosophy as one where the mission is to create "learning experiences that invite students to construct knowledge and to make meaning of their world" (p. 76). Fogarty (1999) also provided historical information that addressed the theoretical basis for the constructivist philosophy. For example, John Dewey supported the idea of embedding learning in experience. He proposed that field studies and immersions in learning were viable means of stimulating learning. Dewey also stressed the necessity of interest in education on the learner's part (DeVries & Zan, 1994).

Jean Piaget influenced constructivist education through his concept of discovery learning (Fogarty, 1999). He theorized that the learner's interactions lead to changes in how he or she cognitively perceives data and assimilates information. This type of discovery learning clearly supported the hands-on approach in constructivist classrooms and identifies a characteristic of the philosophy. Piaget sought answers in discovering how children acquire information and learn, and it was through this search that he established stages of development that guide research in early childhood today. By understanding that children think differently from adults, Piaget was able to support the belief that they are not merely blank canvases but active learners and small investigators who construct their own ideas of the world (DeVries, 1997). His concept of discovery learning is translated in the constructivist classroom through the active participation of students in their learning.

Constructivist educators may also turn to the work of Lev Vygotsky in understanding this approach to education. From Vygotsky's work comes the tenet of the constructivist classroom that supports individualized instruction as opposed to whole group learning (or direct instruction). His theory suggests that humans learn first through person-to-person interactions

and then individually process the information that, in turn, will lead to a deeper understanding (Fogarty, 1999). Vygotsky believed that students learn first through person-to-person interactions and then gain a deeper understanding after an internalization process (Fogarty, 1999). In addition, Vygotsky supported the role of the teacher as a guide in the social interactions among the learners in order to support this person-to-person interaction. Vygotsky also created the idea of the zone of proximal development in order to describe the process he believed children underwent when learning new information. He believed that this zone could vary from child to child and reflected the individual ability to understand and learn. Because of this, he did not support tests or assessments that looked primarily at the child's individual problem-solving skills as inadequate, and that a more accurate understanding could only be reached through understanding the progress made by a child in cooperation with an adult (Fosnot, 1996).

Finally, the work of Howard Gardner has contributed to the constructivist philosophy in that he conceptualized intelligence as multidimensional and believed that the cultural setting contributes to the ability to solve problems (Morrison, 2000). Gardner's work supports authentic assessment in constructivist classrooms over the more traditional standardized means. His work supports the idea that there are many ways that students will express what knowledge they have attained and it is through varied, performance-based assessments that a genuine understanding of the child's learning can be determined.

Brooks and Brooks' (1999) outlined five practices of the constructivist classroom that are reprinted in numerous research articles today and considered a standard for defining the philosophy. The first practice outlined in their research is that teachers seek and value their students' points of view. In other words, teachers who practice direct instruction and whole-

group learning are not considering the individual perspectives on the material important. In a constructivist classroom, however, the perspective of the student acts as a guide for directing curriculum (Katz, 1996).

The second practice, or characteristic, listed is that the classroom activities challenge students' assumptions (Roopnarine & Johnson, 1993). Every child in the classroom has an individual life experience that will lead him or her in assuming truths about the world. Meaningful class experiences will either support or contravene these beliefs. Third, teachers in a constructivist classroom pose problems of emerging relevance. Constructivist teachers structure the classroom so that the children engage in meaningful activities that will lead to a deeper and personal understanding. In the fourth practice, constructivist teachers understand that there must exist a relevant link between the content and the learner's own life experience. With this relevance, comes interest (DeVries & Zan, 1994).

Teachers in a constructivist classroom will also build lessons around primary concepts and "big" ideas. In order for students to comprehend information and fully understand it, as opposed to rote memorization for an exam, educators must offer problems that challenge students to explore issues and problems and then individually establish the areas that require more investigation. Finally, teachers in a constructivist classroom assess student learning in the context of daily teaching. Assessment in the constructivist philosophy is not a separate and distinct aspect of the classroom. It is not compartmentalized in one day of standardized testing or a weekly quiz. Instead, constructivist educators observe each child in an individual way on a daily basis and seek to identify areas where they can facilitate greater learning and exploration.

Still, there needs to be a sustainable and research-based explanation for why this teaching approach should be considered as a means of instruction in today's classroom. Decker and

Decker (2001) offer support for the constructivist classroom by relying on the brain research from the 90s. They cite research that shows in considerable detail how humans learn. Scientists no longer view the brain as a computer but as a much more flexible, unique and growing organism. With this new understanding, scientists are able to identify which model best reflects the current research on how the brain learns (Feldman, 1994).

Brooks and Brooks (1993), translate their five points describing the constructivist philosophy into observable classroom techniques. These techniques distinctly differentiate the constructivist setting from the traditional one. They draw concise differences between the two. First is the presentation of curriculum. Constructivist teachers present the curriculum in a whole-to-part with emphasis on the big concepts as opposed to part-to-whole with emphasis on basic skills as done in the traditional classroom. In addition, the teacher in the traditional classroom does not veer from the fixed curriculum. The curriculum in the traditional classroom tends to rely on textbooks and workbooks, whereas the constructivist teacher uses data as well as manipulatives.

The traditional teacher views the student as a blank slate on which to dictate information. The constructivist teacher does not share this view. Finally, the traditional teacher is primarily didactic, but the constructivist teacher interacts with the learner. The constructivist teacher also appreciates the students' point of view and interprets that as the best way to understand the child's conception. The traditional teacher seeks out "correct answers." Additionally, the assessment of this understanding is separate from teaching and is conducted through the use of testing. The traditional teacher constantly assesses a child's development throughout and by using a variety of tools. Finally, students work alone in the traditional classroom but tend to work more cooperatively in the constructivist one.

Strengths and weaknesses occur in nearly all theoretical constructs and the debate between the constructivist approach (early childhood education) and the traditional approach (elementary education) is no different. The goal of educators, however, must be to determine which approach is most appropriate for young children. The traditionalist philosophy is grounded in the belief that the role of the teacher is to transmit knowledge (Jonassen, 1991) to the student while the constructivist philosophy is states that learning is a collaborative process where the learner is active (Fosnot, 1996)

This study addresses the issue of university teacher preparation programs determining the key differences between PreK-3 /Pre-K-4 and K-6/K-8 teaching and learning processes and administering the most appropriate curriculum based on developmental level and proper assessment. A belief and understanding in a pre-service teacher's program of study fosters positive self-efficacy (source).

CHAPTER 3

RESEARCH METHODS

The purpose of this chapter is to describe the study participants, the method of selecting participants, the research design, instrumentation, and data collection.

Participants

Participants consisted of pre-service teacher candidates at East Tennessee State University. The group of pre-service teachers was made up of both early childhood specialists (PreK-4) and elementary education students (K-6). The participants were predominantly white, female, and from both rural and urban settings. The scale was distributed and completed by 88 students (40 from early childhood education and 48 from elementary education). The pre-service teachers participated in the survey completely voluntarily, anonymously, and without any form of incentive.

The early childhood participants (n=40) completed the Bandura instrument at the beginning of their regular scheduled class. The elementary education participants (n=48) were surveyed at the end of the semester before licensure testing. The age range of all the participants varied, but most were between 20 – 25 years of age. All participants were enrolled as students at East Tennessee State University in Johnson City, Tennessee.

The chairs of each program (HDAL and CUAI) were contacted and informed by phone. The researcher explained the study and asked for permission to conduct the study within both programs of study. Permission was granted to the researcher, and all pertinent faculty were notified. The researcher described the study and asked for permission to include the participants in the study. The participants from the early childhood program were from two early childhood core classes (n=40). The researcher explained the nature of the study at the beginning of each

class and distributed and collected the survey after completion. The elementary education participants (n=48) were surveyed simultaneously in one large classroom. The participants were allowed to complete the survey at their own pace with no time constraints. Due to the anonymous and voluntary nature of the study, no signatures were required nor taken.

Sampling Method

This study used a sample of convenience. Convenience samples can provide useful data and can be specifically beneficial in a pilot study (Lunsford & Lunsford, 1995). The goal of the method was to survey pre-service teachers using the Bandura Teacher Self-Efficacy Scale (Appendix A). The anonymous and voluntary nature of the questionnaire allowed for a broad spectrum for qualifying participants. The first group of subjects (n=40) was from the early childhood program (HDAL) at East Tennessee State University, and the instructor of two early childhood classes at the beginning of each class administered the BTS-ES. The second group (n=48) of subjects was from the elementary education program (CUAI) at East Tennessee State University. The researcher administered the survey to this group.

To evaluate the findings from a convenience sample properly, the researcher should characterize how the sample would differ from an ideal sample that was randomly selected and specifically recognize who might be left out or under represented in the survey (Babbie, 1995). Unfortunately, results from a convenience sample will be considered less definitive and often necessitates a repeated sampling in a more controlled setting (Wilkinson et al., 1999).

Instrumentation

Bandura (1997) pointed out that teachers' sense of efficacy is not necessarily uniform across that any different types of tasks teachers are asked to perform nor across different subject matter. Bandura created a 30-item instrument with seven subscales to measure efficacy

involving these tasks. The subscales include efficacy to influence decision-making, efficacy to influence school resources, instructional efficacy, disciplinary efficacy, efficacy to enlist parental involvement, efficacy to enlist community involvement, and efficacy to create a positive school climate. Each item is measured on a 9-point scale anchored with the notations: "nothing (0), very little (3), some influence (5), quite a bit (7), a great deal (9)." This measure attempts to provide a multi-faceted picture of teachers' efficacy beliefs without becoming too narrow or specific. Unfortunately, reliability and validity information about the measure have not been available.

The administration of the instrument involved explaining of the purpose of the study and informing all subjects of the voluntary and anonymous nature of their participation. The participants were then told to imagine that they were a teacher in a kindergarten classroom and based on their current knowledge to answer to the best of their ability. Bandura's Teacher Self-Efficacy Scale (Appendix A) was then distributed to all subjects and upon completion the investigator collected scales. Reliability for the scale for this sample was high, with a Cronbach's alpha score of .92 (N=88).

Administration and Scoring

Teacher candidates were presented with the BTS-ES (Appendix A) upon their verbal consent to participate in the study. The researcher was available to answer any questions or address any concerns regarding the scale. The investigator reviewed all written instructions and terminology in order to assure that the participants understood the scale. The time limit was open and based solely on the length of time all teacher candidates needed in order to complete the BTS-ES (Appendix A). However, the investigator estimated that the questionnaire would take 15 – 20 minutes to complete. The teacher candidates from both programs (early childhood

and elementary education) completed the BTS-ES (Appendix A), and the investigator collected them.

Bandura Teacher Self-Efficacy Scale

The researcher assessed the perceived self-efficacy of each participant via the Bandura Teacher Self-Efficacy Scale (Appendix A). Bandura (1997) stated that the role of establishing proper learning environments that are conducive and appropriate weighs significantly on the abilities and self-efficacy of teachers. Teachers who demonstrate a high sense of instructional efficacy do so because they believe difficult students can be reached through a determined effort coupled with proven teaching strategies (Bandura, 1997). In addition, some research indicates teachers who exhibit a solid sense of efficacy also demonstrate higher levels of preparation and enthusiasm (Allinder, 1994). Students have demonstrated higher levels of learning when taught by high self-efficacy teachers than those who exhibit self-doubt (Ashton & Webb, 1986).

The BTS-ES (Appendix A) consists of 30 items for assessment of the perceived self-efficacy in a teaching setting. The 30 items are organized into seven categories: 2 items in Decision Making, 1 item in Efficacy to Influence School Resources, 9 items in Instructional Self-Efficacy, 3 items in Disciplinary Self-Efficacy, 3 items in Efficacy to Enlist Parental Involvement, 4 items in Efficacy to Enlist Community Involvement, and 8 items in Efficacy to Create a Positive School Climate. Each item is presented as a 9-point scale, with descriptors for 1 (nothing), 3 (very little), 5 (some influence), 7 (quite a bit), and 9 (a great deal).

There is no current reliability or validity information on the BTS-ES (Appendix A). For this particular study, the measure of internal consistency, the Cronbach's alpha score, on the overall scale was .92. Cronbach's alpha scores for this study for six of the seven subscales were as follows: efficacy to influence decision-making (.75), instructional self-efficacy (.84),

disciplinary self-efficacy (.81), efficacy to enlist parental involvement (.62), efficacy to enlist community involvement (.84), and efficacy to create a positive school climate (.83). No internal consistency data was computed for the resources subscale as it consisted of only one question.

Procedures

Approval to conduct this study was requested from both the Institutional Review Board at East Tennessee State University and early childhood and elementary education program directors at ETSU. Institutional Review Board and program directors granted permission for the study to be conducted. The instructor from the early childhood program was contacted by phone and agreed to assist in the survey. Before two regularly scheduled early childhood classes, the investigator explained the anonymous and voluntary nature of the survey. The 40 participants (from two classes) were then given the Bandura Teacher Self-Efficacy Scale (Appendix A) to complete.

The survey for the second group of pre-service teachers from the elementary education program also required that the researcher explain the anonymity and voluntary nature of the survey. The group of pre-service were asked to "imagine themselves being a teacher in a kindergarten classroom" (an early childhood classroom setting) while completing the survey. All 48 elementary education pre-service teachers consented to the survey and completed the BTS-ES (Appendix A). All of the pre-service teachers (N=88) who were asked to participate in the study gave their consent to participate and completed the survey. In both cases, the principal investigator collected all surveys immediately. Due to the anonymous nature of the study, the questionnaires were photocopied in two different colors in order to eliminate any confusion between the respective groups. The early childhood pre-service teachers were given the BTS-ES

(Appendix A) printed on white paper while the elementary education teacher candidates were given the questionnaire printed on yellow paper.

CHAPTER 4

RESULTS

The purpose of this study was to determine if there were differences between early childhood and elementary education pre-service teachers in overall and specific perceived teacher self-efficacy. Descriptive statistics and *t*-tests were used to analyze the data. Scores on all Bandura Teacher Self-Efficacy Scale (BTS-ES) subscales and the BTS-ES overall scores were compared using *t*-tests to determine if there were any significant differences between early childhood and elementary education pre-service teachers.

Three main research questions and seven sub-questions guided this study. Eight hypotheses were tested.

Descriptive Statistics

Research Question 1 was answered using descriptive statistics. The mean, standard deviation, and range of BTS-ES overall scores and subscale scores were calculated to answer the following research question:

Research Question 1

What are the levels of perceived self-efficacy for early childhood and elementary education pre-service teachers? For the 88 participants, the mean overall score on the BTS-ES was 6.69, and the standard deviation was .74. The range was from 5.10 to 8.33. Table 1 shows the mean, standard deviation, and range for the overall scale and for each of the subscales for the entire sample (N=88):

Table 1

Mean & Standard Deviation of Self-Efficacy Scores for the Overall Sample (N=88)

BTS-ES & BTS-ES Subscales	M	SD	MIN	MAX
BTS-ES Overall	6.69	.74	5.10	8.33
Disciplinary Efficacy	7.23	1.04	5.33	9.00
Efficacy to Create a Positive School Climate	7.08	.91	4.13	9.00
Efficacy to Influence Parental Involvement	6.78	.09	4.00	9.00
Efficacy to Influence Community Involvement	6.54	1.17	4.00	9.00
Instructional Efficacy	6.45	.88	4.33	8.56
Efficacy to Influence School Resources	6.11	1.52	2.00	9.00
Efficacy to Influence Decision Making	5.87	1.36	3.00	9.00

Primary Data Analysis

To answer Research Questions 2 and 3 (including all sub-questions) and their corresponding hypotheses, a series of independent *t*-tests were conducted.

Research Question 2 and Hypothesis 1

When compared, who has more perceived self-efficacy, early childhood or elementary education pre-service teachers?

Ho1. It is predicted that early childhood education pre-service teachers will show significantly higher overall teacher perceived self-efficacy compared to elementary education pre-service teachers.

This hypothesis was not supported, $t(86)=1.44$, n.s. (For a more detailed description of the mean BTS-ES score for early childhood and elementary education groups see Table 2.)

Table 2

Mean & Standard Deviation of Self-Efficacy Scores for Early Childhood and Elementary Education Pre-service Teachers

BTS-ES & BTS-ES Subscales	Early Childhood (n=40)		Elementary Ed (n=48)	
	M	SD	M	SD
BTS-ES Overall	6.81	.76	6.69	.71
Efficacy to Influence Decision Making***	6.38	1.66	5.45	.86
Efficacy to Influence on School Resources	6.35	1.75	5.91	1.29
Instructional Efficacy	6.46	.91	6.44	.86
Disciplinary Efficacy	7.02	1.06	7.41	.99
Efficacy to Influence Parental Involvement*	7.04	1.01	6.56	1.11
Efficacy to Influence Community Involvement	6.49	1.25	6.58	1.12
Efficacy to Create a Positive School Climate**	7.38	.82	6.83	.91

* indicates a significant difference between the two groups, $p < .05$
** indicates a significant difference between the two groups, $p < .01$
*** indicates a significant difference between the two groups, $p < .001$

Research Question 3

What specific aspects of perceived teacher self-efficacy are most and least exhibited by early childhood and elementary education pre-service teachers? Among early childhood pre-service teachers, the highest rated BTS-ES subscales were Creating a Positive Climate (M = 7.38, SD = .82), and Influence on Parental Involvement (M = 7.04, SD = 1.00); the lowest rated

were Influence on School Resources (M = 6.35, SD = 1.75), and Decision Making (M = 6.38, SD = 1.66). Among elementary education pre-service teachers, the highest rated BTS-ES subscales were Discipline (M = 7.41, SD = 1.00) and Positive Climate (M = 6.83, SD = .91); the lowest rated were Decision Making (M = 5.45, SD = .86) and Influence on School Resources (M = 5.92, SD = 1.29). (See Table 2 for a more detailed description.)

In order to answer all sub-questions of Research Question 3, each of the seven BTS-ES subscales is examined here:

Research Sub-Question 3a and Hypothesis 2

Are there differences in perceived efficacy to influence decision-making among early childhood pre-service teachers and elementary education pre-service teachers?

Ho2. It is predicted that early childhood education pre-service teachers will show significantly higher perceived teacher self-efficacy related to decision making compared to elementary education pre-service teachers.

This hypothesis was supported, $t(86)=3.36$, $p<.001$. Early childhood pre-service teachers reported higher perceived self-efficacy in this area. (See Table 2 for a more detailed description.)

Research Sub-Question 3b and Hypothesis 3

Are there differences in perceived efficacy to influence school resources among early childhood pre-service teachers and elementary education pre-service teachers?

Ho3. It is predicted that early childhood education pre-service teachers will show significantly higher perceived teacher self-efficacy related to influence on school resources compared to elementary education pre-service teachers.

This hypothesis was not supported, $t(86) = 1.34$, n.s. (See Table 2 for a more detailed description.)

Research Sub-Question 3c and Hypothesis 4

Are there differences in levels of perceived instructional efficacy among early childhood pre-service teachers and elementary education pre-service teachers?

Ho4. It is predicted that early childhood education pre-service teachers will show significantly higher perceived teacher self-efficacy related to instruction compared to elementary education pre-service teachers.

This hypothesis was not supported, $t(86) = .073$ n.s. (See Table 2 for a more detailed description.)

Research Sub-Question 3d and Hypothesis 5

Are there differences in the level of perceived disciplinary efficacy among early childhood pre-service teachers and elementary education pre-service teachers?

Ho5. It is predicted that early childhood education pre-service teachers will show significantly higher perceived teacher self-efficacy related to discipline compared to elementary education pre-service teachers.

This hypothesis was not supported, $t(86) = -1.79$ n.s. (See Table 2 for a more detailed description.)

Research Sub-Question 3e and Hypothesis 6

Are there differences in perceived efficacy in regard to the level of influence on parental involvement among early childhood pre-service teachers and elementary education pre-service teachers?

Ho6. It is predicted that early childhood education pre-service teachers will show significantly higher perceived teacher self-efficacy related to parent involvement compared to elementary education pre-service teachers.

This hypothesis was supported, $t(86)= 2.14$, $p < .05$. Early childhood pre-service teachers indicated higher perceived self-efficacy in this area. (See Table 2 for a more detailed description.)

Research Sub-Question 3f and Hypothesis 7

Are there differences in perceived efficacy in regard to the community involvement among early childhood pre-service teachers and elementary education pre-service teachers?

Ho7. It is predicted that early childhood education pre-service teachers will show significantly higher perceived teacher self-efficacy related to community involvement compared to elementary education pre-service teachers.

This hypothesis was not supported, $t(86) = -.38$, n.s. (See Table 2 for a more detailed description.)

Research Sub-Question 3g and Hypothesis 8

Are there differences in the level of perceived efficacy in regard to creating a positive school climate among early childhood pre-service teachers and elementary education pre-service teachers?

Ho8. It is predicted that early childhood education pre-service teachers will show significantly higher perceived teacher self-efficacy related to creating a positive climate compared to elementary education pre-service teachers.

This hypothesis was supported, $t(86) = 3.01$, $p < .01$. Early childhood teachers evidenced higher perceived self-efficacy in this area. (See Table 2 for a more detailed description.)

CHAPTER 5

DISCUSSION

Bandura's (1977, 1986) theory of self-efficacy suggests that one's ability to execute an action with success is determined by one's belief in one's ability to do so. Self-efficacy beliefs determine how much effort one will expend on an activity, how long one will persevere when faced with an obstacle, how resilient one may be in the face of adversity, whether one's thought patterns are self-aiding or self-hindering, and the level of accomplishments realized (Pajares, 1996). This project studies the dimensions of perceived self-efficacy of teachers in the early childhood classroom setting. Teachers' perceptions of their own capabilities are important in classroom success (Armor et al., 1976).

Bandura (1997) stated that insidious doubts can easily overrule the best of skills. A teacher may feel very competent in one area of study and feel less able in other areas. If a teacher has been trained in K-8 education, he or she may not be properly trained in the development of early childhood or early childhood education. The Association of Teacher Educators and the National Association for the Education of Young Children recommend specialized early childhood certification standards for teaching children from birth to age 8. Teachers in the early childhood setting should be adequately knowledgeable about the specific developmental facets of young children and the implications for appropriate curriculum and instructions (NAEYC, 1993).

Another dynamic in this variable is the No Child Left Behind (NCLB) Act of 2001 – a renewed Elementary and Secondary Education Act (ESEA) - which requires teachers to be

"highly qualified" within the Act's requirements. A "highly qualified" teacher is defined by the NCLB as one whom:

- has obtained full state certification or has passed the state teacher licensing exam;
- holds a license to teach in the state; and
- has not had certification or licensure requirements waived on an emergency, temporary, or provisional basis (AFT, 2003, p3).

While these three tenets are essential, other requirements such as subject-matter knowledge vary from state to state.

In the state of Tennessee, standards for early childhood education (PreK-3 or PreK-4) pre-service teachers and elementary education (K-6, K-8) teacher candidates differ yet support teacher preparation programs that help to ensure teacher candidates meet standards within each program. Specific differences in licensure standards for the state of Tennessee for early childhood education and elementary education are within the content area. In early childhood education, Content Area Standards begin with Early Childhood Education-Standard 1: Child Development and Learning; Standard 2: Family and Community Relationships; Standard 3: Observation, Documentation, and Assessment; Standard 4: Professionalism; Standard 5: Teaching and Learning. These content areas are not included in the licensure standards for elementary education candidates. Other content areas for both programs are similar and include English/Language Arts, Reading, Writing, Mathematics, Physical Education, etc.

Understanding the differences in early childhood teacher preparation versus elementary education teacher preparation is essential for this study. Early childhood programs tend to rely on the constructivist philosophy when defining theories and practice. Constructivism defines learning as an interpretive, recursive, building process by active learners who interact with the

physical and social realm (Fosnot, 1996). Constructivists emphasize that this style of instruction can be interpreted through a variety of learning styles and approaches. Research has demonstrated that active engagement in learning could lead to increased retention, understanding, and use of knowledge (DeVries & Kohlberg, 1990). A positive of the constructivist philosophy is that when a student constructs his or her own solution to a problem, that solution becomes innate in the student's self (DeVries & Kohlberg, 1990).

In contrast, elementary educators tend to lean more on the traditional or "direct instruction" approach to education. The term "direct instruction" refers to a developed and scripted method of teaching that is constantly moving and should provide for numerous interactions between teacher and student. Brooks and Brooks (1999) described the traditional classroom as teacher directed with the teacher as the primary speaker in the room. In this atmosphere, students have little control over their own learning (Harasim, 1990). Although opposing viewpoints as to which is more effective of the learning and teaching philosophies, a teachers self-efficacy is relevant in both models (Bandura, 1997).

The investigator examined the degree of perceived teacher self-efficacy in early childhood pre-service teachers and elementary education pre-service teachers. While the overall perceived teacher self-efficacy did not show a clear distinction between these two groups, three subscale results did demonstrate significantly higher perceived teacher efficacy levels among early childhood pre-service teachers. The first difference involved a teacher's perceived self-efficacy to influence decision- making, which is a tenet of the constructivist philosophy. Secondly, early childhood pre-service teachers evidenced higher perceived self-efficacy in enlisting parental involvement in the child's education. Early childhood education offers a course in parental involvement while elementary education (CUAI) does not offer a related

course. An essential aspect of constructivist education is establishing a "sociomoral atmosphere" in which mutual respect between students, teachers, and parents is consistently practiced (DeVries & Zan, 1994). This atmosphere consists of the entire network of interpersonal relations in a child's ecosystem, which involves the classroom, home, friends, and related relationships (DeVries & Edmiaston, 1998). The direct instruction perspective suggests the young child is viewed as dependent on adult's instruction in the curriculum knowledge and skills required for a good start for later academic achievement (Katz, 1996). The last subscale in which early childhood education pre-service teachers scored higher in perceived teacher self-efficacy was in creating a positive school climate. Early childhood education also offers specialized classes that incorporate and encourage positive discipline and building a caring classroom community. Pre-service teachers who exhibit a low sense of perceived efficacy prefer the guardian type model that conveys a pessimistic outlook of students' motivation and resorts to extraneous inducements and negative punishments to push students to study (Woolfolk & Hoy, 1990). Low levels of self-efficacy within teachers often results in feelings of doubt in regard to their abilities in classroom management and tend to also become anxious and stressed by students' misbehavior and classroom disharmony (Melby, 1995).

Recommendations and Limitations

Limitations involve the possibility that pre-service teachers may indeed exhibit an unrealistic view in regard to their ability to become effective teachers (Weinstein, 1988). The limitations also involve the inability to gauge how much preparation pre-service teachers actually received in specific content areas. The lack of reliability and validity information on the

Bandura Teacher Self-Efficacy Scale (Appendix A) may also impact the overall results. The BTS-ES was also limiting in regard to some questions, which were not as pertinent to the specific research questions for this particular study. The study confirmed the measurement of perceived teacher efficacy is complex and current instrumentation inferior. A more customized survey/questionnaire may be more appropriate and needed for future studies. Additionally, a more extensive look at instructors' syllabi and observations of the various education classes would enhance future studies by further delineating differences in teacher preparation between early childhood and elementary education programs.

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APPENDIX

Bandura Teacher Self-Efficacy Scale

This questionnaire is designed to help us gain a better understanding of the kinds of things that create difficulties for teachers in their school activities. Please indicate your opinions about each of the statements below by circling the appropriate number. Your answers will be kept strictly confidential and will not be identified by name.

Efficacy to Influence Decision Making

How much can you influence the decisions that are made in the school?

1	2	3	4	5	6	7	8	9
Nothing		Very Little		Some Influence		Quite a Bit		A Great Deal

How much can you express your views freely on important school matters?

1	2	3	4	5	6	7	8	9
Nothing		Very Little		Some Influence		Quite a Bit		A Great Deal

Efficacy to Influence School Resources

How much can you do to get the instructional materials and equipment you need?

1	2	3	4	5	6	7	8	9
Nothing		Very Little		Some Influence		Quite a Bit		A Great Deal

Instructional Self-Efficacy

How much can you do to influence the class sizes in your school?

1	2	3	4	5	6	7	8	9
Nothing		Very Little		Some Influence		Quite a Bit		A Great Deal

How much can you do to get through to the most difficult students?

1	2	3	4	5	6	7	8	9
Nothing		Very Little		Some Influence		Quite a Bit		A Great Deal

How much can you do to promote learning when there is a lack of support from the home?

1	2	3	4	5	6	7	8	9
Nothing		Very Little		Some Influence		Quite a Bit		A Great Deal

How much can you do to keep students on task on difficult assignments?

1	2	3	4	5	6	7	8	9
Nothing		Very Little		Some Influence		Quite a Bit		A Great Deal

How much can you do to increase students' memory of what they have been taught in previous lessons?

1	2	3	4	5	6	7	8	9
Nothing		Very Little		Some Influence		Quite a Bit		A Great Deal

How much can you do to motivate students who show low interest in schoolwork?

1	2	3	4	5	6	7	8	9
Nothing		Very Little		Some Influence		Quite a Bit		A Great Deal

How much can you do to get students to work together?

1	2	3	4	5	6	7	8	9
Nothing		Very Little		Some Influence		Quite a Bit		A Great Deal

How much can you do to overcome the influence of adverse community conditions on students' learning?

1	2	3	4	5	6	7	8	9
Nothing		Very Little		Some Influence		Quite a Bit		A Great Deal

How much can you do to get children to do their homework?

1	2	3	4	5	6	7	8	9
Nothing		Very Little		Some Influence		Quite a Bit		A Great Deal

Disciplinary Self-Efficacy

How much can you do to get children to follow classroom rules?

1	2	3	4	5	6	7	8	9
Nothing		Very Little		Some Influence		Quite a Bit		A Great Deal

How much can you do to control disruptive behavior in the classroom?

1	2	3	4	5	6	7	8	9
Nothing		Very Little		Some Influence		Quite a Bit		A Great Deal

How much can you do to prevent problem behavior on the school grounds?

1	2	3	4	5	6	7	8	9
Nothing		Very Little		Some Influence		Quite a Bit		A Great Deal

How much can you do to prevent problem behavior on the school grounds?

1	2	3	4	5	6	7	8	9
Nothing		Very Little		Some Influence		Quite a Bit		A Great Deal

Efficacy to Enlist Parental Involvement

How much can you do to get parents to become involved in school activities?

1	2	3	4	5	6	7	8	9
Nothing		Very Little		Some Influence		Quite a Bit		A Great Deal

How much can you assist parents in helping their children do well in school?

1	2	3	4	5	6	7	8	9
Nothing		Very Little		Some Influence		Quite a Bit		A Great Deal

How much can you do to make parents feel comfortable coming to school?

1	2	3	4	5	6	7	8	9
Nothing		Very Little		Some Influence		Quite a Bit		A Great Deal

Efficacy to Enlist Community Involvement

How much can you do to get community groups involved in working with the schools?

1	2	3	4	5	6	7	8	9
Nothing		Very Little		Some Influence		Quite a Bit		A Great Deal

How much can you do to get churches involved in working with the school?

1	2	3	4	5	6	7	8	9
Nothing		Very Little		Some Influence		Quite a Bit		A Great Deal

How much can you do to get businesses involved in working with the school?

1	2	3	4	5	6	7	8	9
Nothing		Very Little		Some Influence		Quite a Bit		A Great Deal

How much can you do to get local colleges and universities involved in working with the school?

1	2	3	4	5	6	7	8	9
Nothing		Very Little		Some Influence		Quite a Bit		A Great Deal

Efficacy to Create a Positive School Climate

How much can you do to make the school a safe place?

1	2	3	4	5	6	7	8	9
Nothing		Very Little		Some Influence		Quite a Bit		A Great Deal

How much can you do to make students enjoy coming to school?

1	2	3	4	5	6	7	8	9
Nothing		Very Little		Some Influence		Quite a Bit		A Great Deal

How much can you do to get students to trust teachers?

1	2	3	4	5	6	7	8	9
Nothing		Very Little		Some Influence		Quite a Bit		A Great Deal

How much can you help other teachers with their teaching skills?

1	2	3	4	5	6	7	8	9
Nothing		Very Little		Some Influence		Quite a Bit		A Great Deal

How much can you do to enhance collaboration between teachers and the administration to make the school run effectively?

1	2	3	4	5	6	7	8	9
Nothing		Very Little		Some Influence		Quite a Bit		A Great Deal

How much can you do to reduce school dropout?

1	2	3	4	5	6	7	8	9
Nothing		Very Little		Some Influence		Quite a Bit		A Great Deal

How much can you do to reduce school absenteeism?

1	2	3	4	5	6	7	8	9
Nothing		Very Little		Some Influence		Quite a Bit		A Great Deal

How much can you do to get students to believe they can do well in schoolwork?

1	2	3	4	5	6	7	8	9
Nothing		Very Little		Some Influence		Quite a Bit		A Great Deal

VITA

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