

TEACHER REPORTED PREPAREDNESS: A STUDY OF ONE MIDWEST  
METROPOLITAN SCHOOL DISTRICT

A DISSERTATION IN  
Educational Leadership, Policy and Foundations  
and  
Curriculum and Instruction

Presented to the Faculty of the University  
of Missouri-Kansas City in partial fulfillment of  
the requirements for the degree

DOCTOR OF PHILOSOPHY

by

ALLISON MURPHY-POPE

B.S.E., University of Central Missouri, 1997  
M.S.E., University of Central Missouri, 2001  
Ed.Spec., University of Missouri-Kansas City, 2003

Kansas City, Missouri  
2013



TEACHER REPORTED PREPAREDNESS: A STUDY OF ONE MIDWEST  
METROPOLITAN SCHOOL DISTRICT

Allison Renee Murphy-Pope, Candidate for the Doctor of Philosophy Degree

University of Missouri-Kansas City, 2013

ABSTRACT

The ultimate purpose of school lies in the success and achievement of its students. Therefore, efforts must be made to continuously improve achievement for every student. What the teacher knows and can do in the classroom is the most powerful factor in increasing a student's achievement (Cunningham & Allington, 2003; Darling-Hammond, 2000; Jackson, 2009; Marzano, 2007). The purpose of this study was to examine the relationship between teacher certification route and teacher reported preparedness in one Midwest metropolitan school district and to determine whether differences exist between teacher samples based on their years of teaching experience. New and experienced teachers' self-identified professional preparation in the areas of: (a) classroom management or discipline situations, (b) use of a variety of instructional strategies, (c) knowledge of subject of matter, (d) usage of computers in classroom instruction, (e) assessment of students, and (f) selection and adaptation of curriculum and instruction materials. The major construct of the research pertaining to the study is teachers' perceptions of their own preparedness in public school classrooms in one Midwestern metropolitan school district.

This study examined two hypotheses related to teacher preparation. The first hypothesis, teacher experience has a positive effect on new teacher preparation. The second hypothesis, teacher certification type has a positive effect on teacher reported preparedness of experienced teachers.

In this study, the researcher utilized selected questions from the 2007-2008 Public School Teacher Questionnaire, developed by the National Center for Education Research for use in the Schools and Staffing Survey (SASS). Using a quantitative survey design methodology, 1,422 teachers in one Midwest metropolitan school district were invited to participate in this study by completing the online survey. Respondents were asked to rate their level of preparedness in six teaching areas. The study yielded a response rate of 272 teachers. Data analysis procedures included descriptive statistics and MANOVAs.

Study findings indicated that years of experience and teacher certification route have an effect on teacher perceived preparedness. Multiple statistical tests (crosstabulations, MANOVAs, and univariate follow-ups) showed interactions between teaching experience and certification route with three of the six teacher preparedness variables (knowledge of content, assessment of students, and selection and adaptation of curriculum and instructional materials). In all three areas alternatively certified, new teachers reported the least preparation in all three areas. Overall, new teachers reported less preparedness than experienced teachers regardless of their certification route. However, experienced teachers (traditional and alternatively certified) reported similar feelings of preparedness in two of the variables (knowledge of content and selection/adaptation of curriculum and instructional materials). Conclusively, experienced teachers regardless of certification route reported feeling more prepared in all three of the teacher preparedness variables.

## APPROVAL PAGE

The faculty listed below, appointed by the Dean of the School of Graduate Studies, have examined a dissertation titled “Teacher Reported Preparedness: A Study of One Midwest Metropolitan School District,” presented by Allison Renee Murphy-Pope, candidate for the Doctor of Philosophy degree, and certify that in their opinion it is worthy of acceptance.

### Supervisory Committee

Jennifer Friend, Ph. D., Committee Chair  
Division of Educational Leadership, Policy and Foundations

Donna Davis, Ph.D.  
Division of Educational Leadership, Policy and Foundations

Sue Thompson, Ph.D.  
Division of Educational Leadership, Policy and Foundations

Mal Linville, Ph.D.  
Division of Curriculum and Instructional Leadership

Louis Odom, Ph.D.  
Division of Curriculum and Instructional Leadership

## CONTENTS

ABSTRACT .....	iii
LIST OF ILLUSTRATIONS.....	ix
LIST OF TABLES.....	x
ACKNOWLEDGEMENTS.....	xi
Chapter	
1. INTRODUCTION .....	1
Statement of the Problem.....	3
Purpose of the Study.....	6
Rationale.....	7
Social Cognitive Theory and Teacher Efficacy.....	8
Significance of the Study.....	12
Definition of Terms .....	13
Research Questions.....	15
Delimitations of the Study .....	15
Limitations of the Study .....	16
Summary.....	17
Organization of Remainder of Chapters.....	18
2. REVIEW OF THE RELATED LITERATURE.....	19
History of Teacher Certification/Licensure and Policy Implementation.....	20

Local Influences on Teacher Preparation .....	20
State Influences on Teacher Preparation .....	24
National Influences on Teacher Preparation.....	30
Influence of No Child Left Behind on Teacher Preparation.....	37
Teacher Preparation Programs.....	41
Types of Teacher Certification .....	43
New Teacher Experiences in Missouri .....	48
Teacher Certification Implications .....	49
Teacher Quality and School Demographics .....	54
Summary.....	61
<b>3. RESEARCH METHODS AND PROCEDURES .....</b>	<b>63</b>
Significance of the Study.....	63
Schools and Staffing Survey (SASS) Overview.....	64
Research Questions.....	66
Hypotheses.....	66
Research Design .....	67
Site Selection .....	68
Participants .....	71
Instrument.....	72
Procedures.....	74
Data Analysis.....	76
Reliability and Validity.....	76
Summary.....	77

4. RESULTS .....	79
Research Design .....	81
Sample Description.....	82
Statistical Analysis.....	89
Hypotheses.....	94
Summary.....	101
5. DISCUSSION OF FINDINGS .....	103
Purpose of Study.....	106
Self-Efficacy.....	108
Findings .....	109
Research Question One.....	114
Research Question Two.....	117
Teacher Variables .....	121
Recommendations for School Districts .....	133
Recommendations for Teacher Preparation Programs .....	135
Limitations.....	140
Recommendations for Future Research.....	141
Summary.....	145

APPENDIX

A. 2007-2008 SASS Public Teacher Questionnaire Selected Questions .....	148
B. Permission to Use SASS Public Teacher Questionnaire .....	158
C. Teacher Reported Preparedness Survey.....	159
D. Consent to Participate in a Research Study .....	163

E. SPSS Output: Multivariate Tests.....	165
REFERENCES .....	172
VITA.....	201

## LIST OF ILLUSTRATIONS

Figure		Page
1.	Sample Population .....	83
2.	Position Classification .....	85
3.	Years of Experience .....	86
4.	Grade Level Taught .....	87
5.	Type of Teaching Certificate .....	88
6.	Certification Route .....	88
7.	Highly Qualified Teacher .....	89
8.	New Teacher Means .....	96
9.	Veteran Teacher Means .....	97
10.	Alternatively Certified Teacher Means .....	98
11.	Traditional Certification Means .....	99
12.	Classroom Management .....	110
13.	Instructional Strategy Usage .....	111
14.	Subject Matter Knowledge .....	112
15.	Classroom Computer Use .....	112
16.	Student Assessment .....	113
17.	Curriculum and Instructional Materials .....	114
18.	Computers in Classroom Instruction .....	116
19.	New Teacher by Certification Route .....	119
20.	Experienced Teacher by Certification Route .....	120

## LIST OF TABLES

Table		Page
1.	High School IEP, F/R, and Minority Percentages .....	69
2.	District and State Free-and-Reduced Lunch.....	69
3.	District and State Minority Student Percentages .....	70
4.	District and State Averages on ACT .....	70
5.	District Annual Yearly Progress.....	71
6.	Teacher Experience and Advanced Degrees .....	71
7.	Teacher Survey and Corresponding SASS Questions.....	73
8.	Response Data of Participating Teachers .....	84
9.	Teacher Demographics .....	92
10.	Subsample Population Used for Analysis.....	93
11.	Elementary Education (1-6) Certification Program Requirements .....	136

## ACKNOWLEDGEMENTS

There are several people that I owe thanks to during the dissertation process. Dr. Jennifer Friend's continued kindness, encouragement, and constructive criticism truly helped me survive this journey. She continues to be an example of a consummate professional with an innate ability to motivate others, as well as, model compassion. Thank you for the gentle nudges, too. A special thank you goes to my committee members for their help and time through the dissertation process. I had each of you as professors in the classroom and appreciate the knowledge you shared with me.

I dedicate this work to my sons, Brody and Preston, my husband, Rick, and my parents, David and Paula, who have stuck by me through this journey and the final accomplishment of an educational goal. While hard work and perseverance have made this opportunity possible, the love and support I have received from those who spend each day with me has helped make my dream a reality.

First, thank you God for getting me through this challenge. I would like to thank my parents, Paula and David Murphy, for inspiring me to work hard and be a lifelong learner. Never in my life have I seen parents who have more faith in their children than mine. While times on the farm were tough, you gave me the confidence, work ethic, and motivation to be a success. My sister (Dawna) and brother (Wesley) have been an integral part of my life and I am proud to say we all have advanced collegiate degrees and a strong set of family values. I am so glad to have returned to the family farm and to bring your grandbabies home.

Second, I would like to recognize a mentor who set the example of women achieving doctorates and advancements in careers. Thank you, Dr. Vicki Baker, for your friendship, mentorship, knowledge and expertise in education and thank you to Dr. Angela Miller, who

talked me into starting this program with her. Your knowledge of statistics and ability to teach all individuals became an invaluable asset to me in this process. Many thanks for the help in running statistical tests and the re-teaching of statistics.

Third, thank you Nancy and Bruce Knipfel for your constant encouragement and your willingness to take my children while I worked many late nights at both my job and course work. Nancy inspires me every day to be an effective school leader, be compassionate with students, and to appreciate all my moments of motherhood. Thank you for being a great example for my boys and me. I could not have done this without you or knowing that my boys were always in the greatest of hands.

Lastly, I would like to thank my husband. It has been quite a journey. We started a marriage together and jumped through major obstacles as I tried to finish this degree. My husband is a Gulf War veteran and was deployed during this dissertation process to Afghanistan for a year. New babies, career changes, and changes in locale couldn't stop us. Many thanks, honey. But my greatest accomplishments continue to be my children, Brody and Preston, for motivating me to set an example for you. I hope that one day you will challenge yourselves to do your very best without losing sight of putting God and your family first. I love you all and I will forever be grateful for the support, the tears, and the laughter.

# CHAPTER 1

## INTRODUCTION

Accountability for teacher quality in every school has become one of our nation's educational reform priorities. Researchers have demonstrated that teacher quality was the single most important factor influencing student achievement (Cunningham & Allington, 2003; Darling-Hammond, 2000; Darling-Hammond, Wise & Klein, 1995; Jackson, 2009; Marzano, 2007; Marzano, Pickering & Pollock, 2001). The No Child Left Behind Act of 2001 (NCLB) included provisions on teacher qualifications and student achievement. The law required that every public school's faculty consist of licensed or certified teachers in all core academic areas (i.e., English, language arts, civics and government, mathematics, science, economics, arts, history, and geography) by the end of the 2005-06 school year. The NCLB Act defined a "highly qualified" teacher as one who has earned a bachelor's degree, is fully licensed or certified by the state in the subjects they teach, and can demonstrate competency in the subjects they teach (No Child Left Behind Act, 2001). This mandate, requiring all classrooms be staffed with "highly qualified" teachers, created national concern and has had a direct impact on teacher quality definitions and the preparation of teachers.

While the concern is one of national importance, teacher preparation programs vary across the states, as do personal factors, environmental factors, and levels of teacher efficacy. As we look at the history of teacher preparation in the United States, we see that a national criterion or definition for "highly qualified" teachers has not existed in the past nor are there required national standards for teacher preparation programs or teacher licensure/certification. Organizations have developed national standards for teachers but teacher adherence to those standards is voluntary. Teachers may receive National Board

Certification, an advanced teaching credential, by completing an assessment program designed to recognize what teachers should know and be able to do (Darling-Hammond, 1999). Voluntary participation indicates that teachers choose to participate in obtaining this credential and the National Board Certification complements, but does not replace, a state's teacher license (National Board for Professional Teaching Standards, 2010). Although, national board certification is based upon a national set of teaching standards, its voluntary adherence prohibits those standards from being a required to define NCLB's "highly qualified," leaving individual states responsible for defining highly qualified.

State departments of education determine teacher licensure criteria, and teacher education programs components and certification requirements are not universal in the United States. The U.S. Constitution asserts that education is the responsibility of the state, and this mandate is observed in the establishment of financial support, teacher certification, and minimum standards of school accountability and teacher education institutions' accreditation (Association of Teacher Educators, 1988; Darling-Hammond, 2001) Individual states are responsible for the licensure or certification criteria for their teachers and thusly determine "highly qualified" at the state level. Various groups strive to improve the teaching profession, such as state departments of education, legislators, teacher unions, accrediting bodies, teacher education institutions and researchers, teachers, and teacher educators, and all have a voice and vested interest (Association of Teacher Educators, 1988; Darling-Hammond, 2003). Unfortunately, varying stakeholders and separation of the states has prevented certification or licensure reciprocity between all states due to the different criteria for licensing or certification of their teachers.

The Schools and Staffing Survey (SASS) is the largest survey collecting extensive data on American public and private schools. The SASS data is designed to allow comparison of public and private schools and staff and to permit the analysis of trend data. Before the SASS survey, the National Center for Education Statistics (NCES) conducted a number of separate surveys in the mid-1980s concerning schools and school personnel. In 1985, after reviewing their survey and data system, NCES identified gaps in content and design. Identifying areas of need resulted in a redesigned survey called the Schools and Staffing survey that specifically focused on teacher demand and shortage, teacher and administrator characteristics, schools programs, and general conditions in schools. The SASS has four core components: the School Questionnaire, the Teacher Questionnaire, the Principal Questionnaire, and the School District Questionnaire. Respondents are in public, private, and Bureau of Indian Education/tribal schools. Many of the same survey questions were used in each survey year, allowing researchers to investigate trends over time. The SASS years were 1987-1988, 1990-1991, 1993-1994, 1999-2000, 2003-2004, and 2007-2008 (National Center for Education Statistics, United States Department of Education, 2007). This researcher used selected questions from the 2007-2008 SASS Teacher Questionnaire in identifying teacher reported preparedness.

### **Statement of the Problem**

According to NCLB, all teachers must be “highly qualified” by the end of the 2005-2006 academic year. The teachers to be surveyed must adhere to Missouri standards for certification and licensure. Highly qualified in Missouri is defined as full state certification, a Bachelor’s degree, and demonstrated subject-matter competency in each academic subject in which the teacher teaches (Missouri Department of Elementary and Secondary Education

[MDESE], 2008). According to Missouri Department of Elementary and Secondary Education, no state achieved that goal by 2006, but 96.3% of all Missouri public schools had core academic areas taught by a highly qualified teacher. In the 2009 December Missouri Public School Accountability Report, Missouri students had 96.5% of their teachers held Regular Certificates, 1.4% had Temporary Authorization or Special Assignment Certificates, and 2.1% held Substitute, Expired or No Certificate (MDESE, 2010). Missouri classes not taught by “highly qualified” teachers in core academic areas totaled 11.3% with highest poverty schools suffering the most with 12.2% of elementary classes and 17.7% of secondary classes not taught by “highly qualified” teachers.

In the 2005-2006 school year, the school district to be surveyed had 99.7% of its teachers with Regular Certificates, 0.2% with Temporary or Special Assignment Certificates, and 0.1% of its teachers with Substitute, Expired or No Certificates. Currently, their numbers of “highly qualified” teachers has decreased to 96.5% of teachers with Regular Certificates, 1.4% with Temporary or Special Assignment Certificates, and 2.1% with Substitute, Expired or No Certificates (Missouri Department of Elementary and Secondary Education, 2010).

In addition to teacher certification mandates, NCLB states that by 2014 all students must score at the proficient level or face consequences. In the state of Missouri, schools that are unable to make AYP are in danger of being restructured, shut down, or taken over by the State of Missouri. Yearly benchmark assessments determine a school and school district’s annual yearly progress (AYP) overall and even break down students into subgroups (i.e., free and reduced lunch, minority, special education, and limited English proficiency subgroups) to identify student proficiency. Since schools and school districts are being held

accountable for student academic performance and employing “highly qualified” teachers there is a need to understand the variables that make a teacher “highly qualified” and explore the differences in schools that are making AYP and those that are not. For purposes of this study, the researcher focused on the “highly qualified” teacher.

The Finance Project and Public Education Network (2004) reported, “Teacher education, ability, and experience account for more variation in student achievement than all other factors” (p. 3). Knowing the subject matter, understanding how students learn, and practicing effective teaching methods translates into greater student achievement. Therefore, it is vitally important that teachers be well prepared when they begin teaching and that they continue to improve their knowledge and skills throughout their careers.

When hiring teachers, both new and experienced, districts have little guidance to help them determine which candidates will be effective in the classroom. After their hire, beginning teachers are faced with a number of unique challenges and learning experiences in their induction years of teaching. Given the variability in preparation, knowledge, skills, and experience a teacher brings into the classroom, their effectiveness in the classroom will vary. Since hiring decisions are made with relatively little information about the skills of the applicants, districts and schools must rely on their own professional development programs to improve the skills of all teachers. In Missouri, professional development programs are designed and administered by individual school districts and are intended to prepare teachers for the challenges of teaching, and to educate and prepare teachers on important aspects of teaching. These programs are meant to supply teachers with a base of knowledge and to increase their self-efficacy of handling situations that arise in the classroom. The ideas

behind professional development programs are in supporting both teacher and student learning outcomes (Finance Project, 2004).

The design of these professional development programs lies in the hands of individual school districts and in this Midwest metropolitan school district professional development programs are not currently designed to meet the individual needs of each teacher. Teachers vary greatly in terms of preparation, experience, and expertise; they also vary greatly in terms of their professional development needs.

### **Purpose of the Study**

This quantitative study examined teacher responses to selected questions from the Schools and Staffing Survey Teacher Questionnaire related to teacher reported preparedness. The purpose of this study was to determine whether teacher certification routes and years of experience show a relationship to teachers' perceptions of their own preparedness in the classroom. The research took place in a metropolitan school district in the Midwest, and the study included two experimental groups. The first experimental group was comprised of new teachers and the second experimental group was composed of experienced teachers.

This study examined two hypothesis related to teacher perceptions of their own preparation in the classroom in a public school district in the Midwest. The first hypothesis, level of teaching experience demonstrates a positive relationship with teachers' perceptions of preparedness in the classroom. The second hypothesis, type of teacher certification route has a positive relationship with teachers' perceptions of preparedness in the classroom. This study examined teacher perceptions of their own preparation in the classroom and their ability to impact outcomes. For purposes of this study, teacher reported preparedness represented teacher self-efficacy and teacher responses to six of the questions on the survey.

## **Rationale**

The rationale for this study was to identify a teacher's reported preparedness or self-efficacy in: (a) classroom management or discipline situations; (b) use of a variety of instructional strategies; (c) knowledge of subject matter; (d) usage of computers in classroom instruction; (e) assessment of students; and (f) selection and adaptation of curriculum and instruction materials. As teachers responded to the self-efficacy questions, teachers may have acted as, "informants and guides" to more effective policy design and implementation (McLaughlin, 1990, p. 15). Efficacy is the belief of an individual that they have the resources needed to face situations they encounter. Costa and Garmston (2002, 2007) described people with high efficacy as being optimistic, engaging in cause-and-effect thinking, and able to operationalize concepts and translate them into deliberate actions. Efficacy is the belief in "knowing I have the capacity to make a difference through my work, and being willing to take the responsibility to do so" (Costa & Garmston, 2007, p. 11). On the other hand, a teacher with low efficacy is described as displaying despair, hopelessness, blame, and often withdrawing from situations.

It is important to understand efficacy is related to specific situations and tasks. For example, a teacher may have felt high efficacy for teaching science and a low efficacy for teaching music, building a bookcase, or fixing their car. Efficacy of teachers may also be affected through professional development efforts of schools. Research supports the connection between a teacher's personal efficacy and students' learning. A positive correlation has been shown to exist between a teacher's high efficacy in their technical knowledge of teaching and student's progress in reading (Costa & Garmston, 2002). The

opposite was also found to be true; the higher the uncertainty (low efficacy) the less students learned.

Surveying teacher reported preparedness and self-efficacy in this school district may help guide pre-service activities and the professional development program, and may aid in the hiring and retention of quality teachers. Wong (2004) and Birkeland and Johnson (2002) asserted that new teachers needed to feel efficacious in their job in the classroom, or they would be at risk to leave the profession. Identifying and maintaining quality teachers is fundamental in improving student achievement. As Jackson (2009) wrote:

Just because we went to school for teaching doesn't mean that we come out of school as master teachers...In fact, most teachers will tell you that although their education courses and their student teaching gave them a good theoretical background, what they really learned about teaching, they learned on the job. (p. 1)

### **Social Cognitive Theory and Teacher Efficacy**

Much has been written about self-efficacy and the challenge of assessing self-efficacy (Pajares, 1997). Teacher self-efficacy was identified over 20 years ago as one of the teacher characteristics related to student outcomes such as achievement and motivation (Armor et al., 1976; Ashton & Webb, 1986; Ross, 1992). Several characteristics of successful teachers have been identified during the last century, including a command of the subject content knowledge, mastery of classroom management, planning and decision making skills, assessment strategies, and ability to organize and structure the learning environment. One factor known to be characteristic of successful teachers is that they have a high degree of self-efficacy for teaching (Dewey, 1904; Good & Brophy, 1995; Spencer, 2001). In other words, self-efficacy is how well one perceives her or she might do if to perform or engage in a specific task.

In addition, teachers' self-efficacy is also related to teachers' behaviors in the classroom. Self-efficacy affects the effort teachers invest in teaching, the goals they set, and their levels of aspiration (Berman, McLaughlin, Bass, Pauly & Zellman, 1977; Ghaith & Yaghi, 1997). Pajares (2001) noted that the environment in which teachers develop can determine their efficacy beliefs about teaching and that the developing teacher is embedded within several environmental systems. 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 and tend to exhibit greater levels of planning and organization (Berman et al. 1977; Ghaith & Yaghi, 1997; Pajares, 1996).

Teachers with a higher sense of efficacy exhibit greater enthusiasm for teaching, greater commitment to teaching, and are more likely to stay in teaching (Burley, Hall, Villeme & Brockmeier, 1991). For instance, teachers may leave the profession because they become burned out, and teacher burnout has been linked to teachers' perceived self-efficacy in classroom management (Emmer & Hickman, 1991). Gold (1996) suggested that an additional reason teachers do not remain in teaching is that they develop "a sense of inconsequentiality...this leaves teachers with a lack of personal accomplishment along with feeling little or no appreciation from others" (p. 558). There has been evidence that teachers who leave teaching have significantly lower scores on measures of teacher self-efficacy than teachers who remain in teaching (Glickman & Tamashiro, 1982).

Ashton (1985) and her colleagues (Ashton & Webb, 1986; Ashton, Webb & Doda, 1983), defined teaching efficacy as a teacher's personal beliefs about his or her own capabilities to positively affect student learning. Teacher self-efficacy has been associated with a number of positive teacher-related classroom functions and characteristics. Ashton

and Webb (1986) noted that highly efficacious teachers have been found to provide more positive classroom environments and provide more autonomous classrooms for student learning. In addition, research has also demonstrated links between teachers' self-efficacy and student achievement (Ashton & Webb, 1986). The evidence suggests that maintaining highly efficacious teachers is beneficial for the promotion of student academic achievement (Darling-Hammond, 2000; Jackson, 2009; Marzano, 2007), which, like teacher qualifications, is another large component of the 2001 No Child Left Behind Act.

The theoretical foundation of self-efficacy may be found in social cognitive theory, developed by former American Psychological Association president and Stanford professor Albert Bandura (1977, 1997). The beliefs that are held by teachers impact their self-efficacy, their behaviors in an educational setting and their subjective perceptions (Ashton & Webb, 1986). Situations that are unique to educational settings, the indirect environmental factors outside of the school, and the interaction between the teachers and the students in the learning environment will also play a role in their sense of efficacy (Ashton & Webb, 1986). Bandura (1997) wrote, "Teachers' beliefs in their efficacy affect their general orientation toward the educational process as well as their specific instructional strategies" (p. 241). His theory assumed that people were capable of intentional courses of action, and that action operated in a process called triadic reciprocal causation. Reciprocal causation is a multi-directional model that suggests that our actions result in future behavior as a function of three interrelated forces: environmental influences, our behavior, and internal personal factors such as cognitive, affective, and biological processes. These three factors mutually impact teachers, determining what they come to believe about themselves, and affecting the

choices they make and actions they take. Teachers are products of the interaction between the external, the internal, and their current and past behavior. Bandura (1994) wrote:

The task of creating learning environments conducive to development of cognitive skills rests heavily on the talents and self-efficacy of teachers. Those who have a high sense of efficacy about their teaching capabilities can motivate their students and enhance their cognitive development. Teachers who have a low sense of instructional efficacy favor a custodial orientation that relies heavily on negative sanctions to get students to study. (p. 2)

According to Bandura's (1986) social cognitive theory, self-referent thought is mediated between knowledge and action, and through self-reflection teachers evaluate their own experiences and thought processes. Knowledge, skills, and prior attainments are often poor predictors of later attainments because the beliefs that teachers hold about their abilities and about the outcome of their efforts powerfully influences the ways in which they behave. This view is consistent with that of theorists who argue that the potent nature of beliefs makes them a filter through which new happenings are interpreted and the behavior following is mediated (Abelson, 1979; Dewey, 1933; Nisbett & Ross, 1980; Pajares, 1992).

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

efficacy beliefs are active contributors to personal attainment (Bandura, 1997). A person's perception of their self-efficacy affects the way they think, motivate themselves, feel, and behave. Once a person determines their self-efficacy in a situation, they act on that established belief without re-evaluating their abilities. "Self-efficacious thinking fosters effective use of skills" (Bandura, 1997, p. 105). It is the perceived efficacy that predicts the goals people will set for themselves and their successes. A person's belief also affects the effort a person puts into skill development (Bandura, 1997) and is a strong determinant in the accomplishments a person will attain (Soto & Goetz, 1998).

Self-efficacy describes when a person feels confident in their ability to handle a specific domain. The higher the self-efficacy, the more likely a person is to engage in behaviors related to that domain (Ormrod, 2004). In this study, teacher reported preparedness represents teacher's self efficacy of classroom management, knowledge of subject matter, technology in the classroom, assessment, and curriculum. By determining the level of self efficacy, or teacher reported preparedness, professional development can be specifically tailored to those practices most conducive to achieving high academic performance of students and increasing teacher beliefs of their own abilities, knowledge, and skills in instructional areas. Improving teacher quality through pre-service, induction, and professional development, will in turn impact student academic success meeting the accountability standards of NCLB.

### **Significance of the Study**

The educational significance of this study is to (a) advance the literature in the field of teacher preparation, (b) to provide guidance to educational leaders responsible for teacher professional growth, (c) to provide guidance in hiring and retention of teachers, (d) to

identify areas of improvement in district professional development plans and programs, (e) to identify the number of new and experienced teachers and their level of preparedness, and (f) to advance the existing body of knowledge in educational leadership regarding teacher reported preparedness. Information pertaining to teacher reported preparedness was obtained in this study from the survey detailing the samples' relationship between years of experience, type of certification, and teacher reported preparedness. Findings from this research may be of interest to university education programs, educational leaders and policymakers, superintendents, principals, teachers, and school community members as they make determinations regarding teacher preparation, traditional and alternative certifications methods, hiring and retention practices, teacher induction and support, and professional development. In addition, information is provided detailing the current status of this school district in employing a "highly qualified" teacher in every classroom as outlined in the 2001 No Child Left Behind Act (2001).

### **Definition of Terms**

**Certification.** A license or certificate awarded to teachers by the state of Missouri to teach in a public school. For the purpose of this study the term was based on question 4 on the Teacher Survey (Missouri Department of Elementary and Secondary Education, 2012).

**Experienced Teachers.** Experienced teachers are defined as teachers in their fifth year of teaching or beyond. For the purpose of this study the term was based on question 2 on the Teacher Survey and question 10a on the 2007-2008 SASS Public Teacher Questionnaire (National Center for Education Statistics, 2008).

**New Teachers.** New and beginning teachers are defined as teachers in their first, second, third, or fourth year of teaching. For the purpose of this study the term was based on

question 2 and question 10a on the 2007-2008 SASS Public Teacher Questionnaire (National Center for Education Statistics, 2008).

**Public School.** A public school is defined as an institution that provides educational services for at least one of grades 1-12 (or comparable ungraded levels), has one or more teachers to give instruction, is located in one or more buildings, receives public funds as primary support and is operated by an education or chartering agency. They include regular, special education, vocational/technical, alternative, and public charter schools (National Center for Education Statistics, 2008).

**Schools and Staffing Survey (SASS 2007-2008).** The Schools and Staffing Survey was created by the National Center for Education Statistics (NCES) and is the largest, most extensive survey of K-12 school districts, schools, teachers, and administrators in the U.S. today. It includes data from public, private, and Bureau of Indian Affairs school sectors. Therefore, the SASS provides a multitude of opportunities for analysis and reporting on elementary and secondary educational issues (National Center for Education Statistics, 2008).

**Teacher.** A teacher in this study refers to a teacher who agreed to participate in the survey and is defined as a full-time or part-time teacher who teaches any regularly scheduled classes in any of grades K-12. This includes administrators, librarians, and other professional or support staff who teaches regularly scheduled classes on a part-time basis (National Center for Education Statistics, 2008).

**Teacher reported preparedness.** Teacher reported preparedness was based on teacher responses to questions 7 and 8 on the Teacher Survey and questions 37a, 37b, 37c,

37d, and 37e of the SASS 2007-2008 Public Teacher Questionnaire (National Center for Education Statistics, 2008).

### **Research Questions**

The following research questions and null hypothesis were developed in order to guide the study.

1. Is there a statistically significant relationship between level of experience of teachers and teacher reported preparedness among the teacher sample?
2. Is there a statistically significant relationship between teacher certification type and teacher reported preparedness among the teacher sample?

**Null hypothesis one.** No statistically significant relationship exists between new teachers and teacher reported preparedness among teachers of the teacher sample.

**Null hypothesis two.** No statistically significant relationship exists between alternative teacher certification type and teacher reported preparedness among the teacher sample.

### **Delimitations of the Study**

This study was limited by examining only the research questions specified in this study and is bound by the School and Staffing Survey definitions and research design. Therefore, readers should be cautious about generalizing this study's findings to groups beyond the United States. Though other criteria could have been used from the School and Staffing Survey Teacher Questionnaire, the researcher chose to include only survey questions pertaining to teacher experience and teacher certification, as they relate to teacher reported preparedness. The study is limited to only teachers participating in the study and does not measure all of the valued outcomes that are held by parents, students, and schools

of teacher reported preparedness, such as degree level, content knowledge, and knowledge of instruction.

Results of the study are delimited to the following:

1. The data from this study are limited to one Missouri school district
2. The data for this study are only for the school year 2012-2013
3. This study is limited to only using selected questions from the SASS Public Teacher Questionnaire

### **Limitations of the Study**

This study was limited to data from the survey. Teacher data may be limited by the perceptions of the person reporting. Self-administered surveys can be effective in gathering information from large groups of individuals in a short time-frame (Fink, 2006). Results were limited by the degree to which all participants understand and answer the questions on the Teacher Survey honestly. In addition, another limitation may be if teachers respond based on socially accepted responses rather than actual reality.

Findings of this study are based upon teacher responses to the questions on the survey. Errors may arise when respondents' interpretation of questions differ from the definition the researcher intended. Data, which are self-reported, may result in unreliable and misinterpreted information in analysis (Labaw, 1981). Attitude of respondents may jeopardize the validity of the results or fail to give accurate readings of what is being measured. All of the data: the results, the tasks, and success were reported by the respondents and no independent verification of the information was provided.

Time demands for respondents in the samples may also be considered a limitation to the study. Questionnaires were sent to teachers in August of 2012, which is at the beginning

of a new school year, follows classroom setup and building workshops, and after a summer break. The fact that time demands and job responsibilities were high, may have influenced their ability to provide accurate responses.

### **Summary**

In the U.S., there is a rising concern about teacher preparation and the quality of the teaching force. The nation is facing a growing demand for highly qualified teachers. A number of new teachers will be needed for a variety of reasons, including aging of the current teaching force, class-size reduction initiatives, and teacher attrition (Feistritzer, 1999; Haberman, 1999; National Center for Education Statistics, 2001; Snyder & Hoffman, 1994). This means a great number of new teachers must be hired. No Child Left Behind of 2001 demands these new hires be “highly qualified.” According to the U.S. Department of Education the estimated teacher need is greater than the number of teachers being prepared to teach in traditional teacher education programs (National Center for Education Statistics, 2001).

As of December 1, 2002, the No Child Left Behind (NCLB) Act of 2001 set requirements for teachers to be “highly qualified” when they teach core academic subjects (No Child Left Behind Act, 2001). These academic core subjects are English, reading or language art; mathematics; science; foreign languages; civics and government; economics; arts; history; and geography. The federal NCLB Act of 2001 required that all teachers in core academic subjects be highly qualified by the end of the 2005-2006 school year. “Highly qualified” is defined by certification types but does not determine or evaluate a teacher’s self-efficacy or perceptions of their own preparedness. This study sought to improve the

understanding of teacher reported preparedness and guide the professional development of teachers.

### **Organization of Remaining Chapters**

The remaining chapters include a review of the literature, research methodologies for this proposed study, results, and discussion of findings. Specifically, chapter two contains a review of related literature as it pertains to teacher preparedness. Research methodology is presented in chapter three including the procedures used throughout the study, sample description (participants involved in the study), the instrument used in data collection, the procedures employed throughout the study, and a description of the data analysis process. Chapter four presents the results of the study, including research design, descriptive statistics, and statistical analysis. Lastly, a discussion of the findings and conclusions with teacher reported preparedness variables, and recommendations.

## CHAPTER 2

### REVIEW OF THE RELATED LITERATURE

Concerns about the quality of the nation's public education system have increased as a result of the No Child Left Behind Act of 2001 with increased attention to key elements of teacher effectiveness (Darling-Hammond, 2000; No Child Left Behind Act, 2001). Although NCLB defines a "highly qualified" teachers as one who is licensed or certified to teach in all core academic areas there is little consensus among researchers on what constitutes high-quality teachers, past research has emphasized two broad dimensions of teacher effectiveness: the level of knowledge and skills that teachers bring to the classroom, as measured by teacher preparation and qualifications; and classroom practices (Lewis et al., 1999).

The review of related literature selected as a foundation for this study of teacher reported preparedness includes the following topics (a) history of teacher certification/licensure and policy implementation, (b) local influence on teacher preparation, (c) state influence on teacher preparation, (d) national influence on teacher preparation, (e) No Child Left Behind Act's influence on teacher preparation, (f) teacher preparation programs, (g) types of certification, (h) new teacher experiences, (i) teacher certification implications, (j) studies and literature on teacher self-efficacy and student achievement, and (k) The School and Staffing Survey of 1999-2000 and 2003-2004. A summary will conclude this chapter. For the purposes of this study, teacher reported preparedness is a reflection of surveyed teachers' responses to items regarding teacher self-efficacy.

## **History of Teacher Certification/Licensure and Policy Implementation**

As we seek to understand the state of teacher preparation today, it is important that we explore the origins of teacher preparation in the United States as well as the conditions that continue to influence teacher preparation today. The review of related literature selected as a foundation for this study of teacher preparation includes the history of teacher preparation and legislative and policy implementations that have occurred in the areas of teacher certification or licensure. A brief description of the history of teacher preparation is based on the interpretation of various researchers and will be provided from the time of colonization to present day.

### **Local Influences on Teacher Preparation**

The first settlers of the United States initiated the formation of schools during the seventeenth century (Dexter, 1904). Colonial schools were established in a variety of educational settings, such as apprenticeships, petty or dame schools, academies, subscribers, private tutors (i.e., governess), and parochial schools (Cubberley, 1922; Dexter, 1904; Gwynne-Thomas, 1981; Phillips, 1911). During the seventeenth and eighteenth centuries, often termed the Pre-Industrial Period, the economy was “family-based,” which meant all members of the family were interdependent and contributed to household responsibilities. Teaching was not viewed as a viable vocation, but rather was considered merely temporary work to supplement a man’s income (Parelius & Parelius, 1987). This view of teaching as temporary work led to the lasting perception of teaching as an “episodic” occupation (Clifford, 1989), and has a negative impact on teacher quality.

Teachers in colonial times were predominantly male; women were considered deficient and uncommitted to work. According to Elsbree (1939) the main reason teachers

were male during the colonial period was because they were the most highly educated. In addition, society held the opinion that a woman's place was in the home and not the classroom. Other stated reasons by Elsbree (1939) included the beliefs that boys had to be kept under control by being beaten and that women could not perform all roles of the teacher's job, such as church sexton and gravedigger. Cubberley (1922) wrote, "The evolution of the elementary school teacher out of church sexton, bell-ringer, or gravedigger, or out of the artisan, cripple, or old dame" added to the poor quality of teachers found everywhere in the schools (p. 238). He went on to say that eighteenth century teachers were few in number, poor in quality, and occupied low positions in the social scale (Cubberley, 1922; Dexter, 1904). Fraser (2007) wrote that for the first several decades,

the reality was that if one wanted to be a teacher, missionary for Indians, tutor to fellow slave, or paid teacher in a common school or even a prestigious grammar school, the only real requirements for the job were a willingness to declare oneself fit to teach. (p. 25)

Prior to 1830, the average teacher in America was male, was only in the profession for a couple of years, and had only modest preparation. Although male-dominated teaching would shift, the male teachers in this time period were often educated ministers supplementing their income through teaching. Initially, ministers were educated in Europe and often had college degrees, but by the second and third generation, preparation and education levels of teachers had declined as new teachers or ministers were locally trained and lacked the formal advanced degrees obtained by their mentors (Beale, 1941).

While the Colonial Era saw the need to establish higher learning institutions, such as Harvard College in 1636, their main objective was to train ministers and professionals (Cubberley, 1922; Dexter, 1904; Fraser, 2007; Gwynne-Thomas, 1981) with little attention

paid to teacher preparation. This raised a level of concern with individual states, who employed isolated tactics to address the issue. Beale (1941) discussed Massachusetts' attempt to improve teacher quality in 1701 by requiring teachers to work full-time in schools. This act did away with ministers who couldn't devote full-time work to teaching, which ironically, may have kept the most well-educated teachers out of the classrooms. In a complete turnaround, in Virginia the 1714 Schism Act required all school teachers to be members of the Anglican Church (Gwynne-Thomas, 1981). These are just two examples of the early inconsistency and inequality among colonies regarding school structures, teacher certification, and teacher preparation which still plague us today.

Adding to the inconsistency, were legislative acts such as the family laws regarding education, passed as early as 1642, in the General Court of the Massachusetts Bay Colony. The court indicated it was the responsibility of the family and masters to ensure children had the ability to read and understand religion and capital laws (Johanningmeier & Richardson, 2008). The Act of 1647, known as "Old Deluder Satan Act," required towns of fifty or more households to teach children to read and write. Teacher wages were to be paid by parent, master, or general inhabitants. Once a town reached one hundred or more households, a grammar school was to be formed to prepare youth for the university. The Act of 1647 specified no provisions for teacher-training and made little reference to teacher qualifications other than teachers were expected to be discreet in their conversation and well-versed in tongues (Gwynne-Thomas, 1981).

During the Pre-industrial Era, women taught school during the summer, taught small children (primary school), and established "dame" schools in their homes. Petty schools for young, white males provided a formal education, while young women received an informal

education through dame schools, whose focus was on the fundamentals of literacy (Beale, 1941; Fraser, 2007). Beale (1941) claimed that with some exceptions, dame schools were incompetent because they were in an era when women were limited in the amount of education they could receive. Dame school teachers often knew little more than the students they were teaching, held the lowest standards, and were paid the lowest salary. In addition to petty and dame schools, private neighborhood schools were formed in the 1700s and consisted of the wives of planters teaching in an old field not being used for crops (Elsbree, 1939).

Obviously, teaching in this era rarely required specific qualifications, and overall, certification requirements were not rigid (Dexter, 1904); however, New England states had established more rigorous standards for teachers where teachers either taught in town schools or Latin grammar schools. The purpose of the Latin grammar school was to prepare students for college admission (Fraser, 2007). In contrast to the town schools, Latin grammar schools were considered prestigious, and their teachers had college degrees and were held in high regard in their community. New England's rigorous teacher standards were not as high for town school teachers. Town school teachers were not as well-educated and earned half as much as Latin grammar school teachers (Beale, 1941).

Since Latin grammar school teachers were often college graduates with professional career goals, for most graduates teaching was a temporary job until an opportunity in the chosen career presented itself. John Adams is one such teacher who took a position as a teacher before moving on to become a lawyer (Fraser, 2007). Teachers such as this did not have specialized preparation as no colonial colleges offered a specific course or program of study to prepare teachers. College graduates believed they already knew how to teach since

they had been students themselves and watched others engage in instruction. Almost any relatively well-educated citizen or college graduate was thought ready to teach (Fraser, 2007).

In short, teaching was often something young women did at home and young men did between the end of college and the beginning of what they saw as “real” careers, often as ministers or lawyers. Between 1636 and 1776, 40% of Harvard College graduates and 20% of Yale graduates taught at some point in their lives. After the American Revolution, Massachusetts created a new system of education and required school mistresses/masters to be certified by town officials, but their certification required little more than a teacher being of good moral character. Fraser (2007) wrote, “We know from autobiographies and other sources how important they were. But we know far too little about the teachers who taught in these informal but essential schools and certainly almost nothing about their preparation to teach” (p. 21). Thus, early nineteenth century teacher preparation began to change and slowly formal programs of preparation emerged along with the creation of common schools.

### **State Influences on Teacher Preparation**

Horace Mann led the movement in Massachusetts for a public school systems deemed the Common School in the middle of the nineteenth century. Common schools had formed as a public institution and as a social, political and cultural instrument (Cubberley, 1922; Johanningmeier & Richardson, 2008). Common schools were the first public schools and were meant to serve individuals of all social classes and religions. Mann’s reforms included the establishment of a single school system throughout the state instead of separate local system. He urged separate classrooms for students at different levels, a broader

curriculum, and extended school years. Children from the ages of six to sixteen were educated in the common school (Cubberley, 1922).

As the United States moved into an early industrial period during the late nineteenth and early twentieth century, the center of labor described by Beale (1941) moved out of the household and into a factory system. Society transformed from agriculture to an industrial-based system. This shift also created changes in the educational system as it grew to accommodate more students. The American Civil War, 1861-1865, removed men from homes, and women began teaching in mass. This change was hard on the educational system as women had been prohibited from higher education, and therefore, from obtaining the advanced credentials needed for teaching in secondary schools (Beale, 1941).

In 1865, as slavery came to an end, only five to ten percent of slaves were able to read and write. Previously, laws had made it illegal for slaves to read and write or for any Black person to learn or to teach (Fraser, 2007; Fultz, 1995; Jones, 2008), although some slaves had learned to read and write despite the laws by getting white children to teach them or attending “secret” schools (Fraser, 2007, p. 97). Prior to the Civil War, one such “secret” school had been run by Jane Deveaux for 30 years unnoticed in Savanna, Georgia. The approach of the Civil War did not interfere with this school as, “When Sherman’s army arrived, Deveaux simply expanded her efforts” (Fraser, 2007, p. 97). Black colleges and schools in the South increased in the aftermath of the Civil War, including Atlanta University, Fisk University, and Howard University (Fultz, 1995).

Labor markets were also changing, with businesses and factories growing and needing clerical and administrative help. Women were being employed, and a growth of mass public education created a shortage in trained teachers, which led to the development

of Normal Schools as teacher training institutions. Normal Schools were first discussed in the 1830s, with Boston being the first to city to open a Normal School. By 1870, Normal Schools were widespread at universities across the country with a course of study required for one to two years (Herbst, 1989). Normal Schools were also known as teacher colleges, with the sole purpose of training high school graduates to become teachers. Prior to this development, requirements for teachers were nonexistent to minimal. A teacher could teach at the age of 14 or 15 with no credentials (Clifford, 1978). Graduates of New York teacher preparation academies or Normal Schools made up one-fourth of New York's teachers in the middle of the nineteenth century. Other New York graduates entered the field of teaching without any specialized teacher training (Fraser, 2007).

Horace Mann of Massachusetts and Henry Barnard of Connecticut were at the forefront of Normal Schools and saw formal teacher preparation and basic standards in every classroom as essential elements in education. Mann and Barnard led a group of reformers to improve the education of youth by centralizing public school systems of the state with state boards of education; state mandates in curriculum and teaching; and bringing order to preparation of teachers. Normal Schools began in Massachusetts in 1839 with a curriculum for teachers requiring a high level of content knowledge, an understanding of "the art of teaching," and expertise in the government of school although knowledge about pedagogy was very limited at this time. It would not be until well after the Civil War before research in child development and psychology would make it possible to study pedagogy in greater depth (Fraser, 2007; Johanningmeier & Richardson, 2008). Some Normal School graduates were required to pass examinations on subject matter to teach and receive licensure.

Samuel Chapman Armstrong of Hampton Normal School and Booker T. Washington of Tuskegee Normal and Industrial Institute were forging their own model of teacher preparation for African-American teachers. The Chapman-Washington model focused on reshaping the lives of recently freed slaves by preparing a generation of African-American teachers for segregated common schools. During their two to three year course of study, students studied academic subjects, pedagogy, and prepared themselves to qualify for an elementary teaching certificate. In 1878, Army lieutenant Richard Henry Pratt expanded Armstrong's mission when he asked if he could bring American Indian military prisoners to Hampton Normal School to be inducted into traditional European values. Following the military implementation, Hampton continued to educate generations of American Indian students (Fraser, 2007).

Barnard was forced by state legislation to form "teacher institutes" in Connecticut; however, he wanted to form Mann's Normal School but was unable to secure state funding (Fraser, 2007). The fundamentals behind Barnard's teacher institutes were content knowledge and pedagogical skills. As teacher institutes popularity grew, the purpose shifted to the continuing education of teachers. The life span of the teacher institute disseminated in the 1930s with the Great Depression, but the fastest increase in teacher qualifications of any in our nation's history occurred between 1929 and 1939 (Fraser, 2007). Teacher colleges and universities had been preparing more teachers than were needed in the schools in the 1920s. In addition to Normal Schools, teacher institutes, and teacher colleges, high schools were the new invention in early to middle nineteenth century with the purpose of preparing students for college, work, and teaching. County Training Schools were also forming with the same purpose of white rural high schools: preparing African-American students for

college, work, and teaching (Fraser, 2007). Between 1910 and 1925, twenty-four states launched some kind of rural high school program for the preparation of rural teachers. Their focus was content of elementary schools (common school curriculum) and classroom management. Some of these states required field experiences for licensure while others did not (Fraser, 2007).

In the United States each state sets the standards for its teachers and is the authority for licensing teachers (Feistritzer & Haar, 2008). State licensing using examinations began in the late nineteenth century; however, this method of licensure declined as state departments of education changed licensing requirements in the early twentieth century (Darling-Hammond, 2001; Fraser, 2007). Since the 1920s, most states have licensed teachers primarily on the basis of their graduation from a state-approved teacher education program and not through examinations.

In 1933, Evenden conducted a study on the educational level of teachers and reported that approximately one out of every 20 elementary teachers in the United States in 1930-31 had no schooling beyond the high school level (Evenden, 1933). Rural schools encompassed the largest percentage of teachers falling under this lack of preparation, but cities had three or more percent of their teachers in this group. Teachers who had completed high school reported one year or less in college as their highest level of training and made up only one-fifth of the elementary teachers in the United States. This group and those with four years of high school or less make a total of more than a fourth of America's elementary teachers who in 1930-31 had not completed the minimum requirement of two years course of study beyond completion of a four-year high-school.

Evenden's (1933) study revealed that the majority of the undereducated teachers were teaching in rural areas, consolidated schools, and villages where the work of teaching is most difficult and the need for the highest type of teaching services is probably the greatest:

The selection of the most poorly qualified teachers in the rural and small village schools is an unfortunate continuation of one element in the vicious circle of inadequately prepared teachers, poor teaching, ineffective schools, low educational standards, resulting in the selection of inadequately prepared teachers and the beginning of another circle. (pp. 2692-93)

Thus, the continuation of narrowing educational opportunities for students in these areas continues from generation to generation. Nine states had 20% or more of their rural school teachers with four years of high-school or less that were teaching.

In the 1950s, state departments of education approved teacher education programs, and university faculty in the institution determined the curriculum. Over time, each state developed its own set of standards, which means there are hundreds of standards for teacher preparation, with some high and some low, some enforced and some not. To circumvent this differentiation of standards, the National Council for Accreditation of Teacher Education [NCATE] formed in 1954, replacing the American Association of Colleges for Teacher Education (AACTE), to accredit teacher education programs in higher education (Feistritzer & Haar, 2008; National Council for Accreditation of Teacher Education, 2011). Today, NCATE (2011) is responsible for the accreditation of teacher preparatory programs in 656 colleges of education and recognized by the U.S. Department of Education and the Council for Higher Education Accreditation as the professional accrediting body for teacher preparation. In Missouri, NCATE currently accredits 18 universities with teacher education programs (NCATE, 2011).

## **National Influences on Teacher Preparation**

When the Soviet Union launched *Sputnik* in 1957, many leaders were convinced it was time to reform our nation's schools. The federal government passed a multifaceted piece of legislation, the National Defense Education Act (NDEA) of 1958 (Johanningmeier & Richardson, 2008; National Defense Education Act, 1958). The NDEA established a number of programs providing assistance to state and local education agencies to strengthen instruction in science, and mathematics, modern foreign languages, and other critical services. This legislation was enacted quickly, in part because of the belief at the time that the nation's defense was in jeopardy following the launch of *Sputnik*, although some programs enacted through this legislation were already under consideration in Congress.

One such program was support for high school guidance and counseling to stimulate preparation of counselors who would then identify talented students and track them into science and mathematics careers (Advisory Commission on Intergovernmental Relations [ACIR], 1981; Earley & Schneider, 1996). Amendments to the NDEA in 1964 increased its funding and broadened the base of the original institute program by adding new subject areas such as English, history, geography, economics, civics, and special education (Jordan & Borkow, 1985). Short-term training was provided for teachers already in the system. Title XI of the act's 1964 amendments consolidated NDEA programs under the Division of Educational Personnel Training. A connection was created through this consolidation of programs between the NDEA discipline-based programs and teacher training, a move that helped the federal government respond to requests by NDEA institute teachers for information on teaching strategies (Earley & Schneider, 1996).

The Civil Rights Act of 1964 was a legislative landmark outlawing segregation in United States public schools and public places (Civil Rights Act, 1964). The Act served many purposes; in particular to teacher education was federal support for institutions of higher education and school districts to provide in-service programs for assisting teachers and instructional staff in dealing with issues arising from the desegregation of public schools (Feistritzer & Haar, 2008).

In 1965 Congress enacted the Teacher Corps program as Part B of the Title V of the Higher Education Act (1965). The purpose was not initially to promote a particular model of teaching, but to advance an employment policy as the nation was facing a shortage of educators. The legislation was to strengthen educational resources for colleges and universities and to provide financial assistance for students in higher education and postsecondary education. In addition to addressing educational resources and teacher shortage concerns, members of the Kennedy administration wanted to be sure jobs were available for returning Peace Corps volunteers and so the Teacher Corps program was created (Earley, 1994; Jordan & Borkow, 1985). Fraser (2007) quotes Donald M. Sharpe as saying, “The Teacher Corps was to do for the slums of America what the Peace Corps ideally did for the underdeveloped nations” (p. 216). It was assumed that former Peace Corps volunteers would have special empathy for disadvantaged students which provided incentives for returning Peace Corps volunteers to enter the Teacher Corps program and to work with children in areas with high concentrations of low-income families. Teacher Corps goal was to recruit liberal arts graduates or Peace Corps volunteers who would be placed as interns in schools while at the same time taking education classes to receive certification. The Teacher Corps program was to prepare teachers for roles that had not existed or through

a means of preparation that had not yet been attempted (Fraser, 2007). Teacher Corps interns completed courses to earn baccalaureate degree and to qualify for teaching credentials without a university-based education program which had previously been the core of where the nation's teachers were prepared. (Earley & Schneider, 1996; Fraser, 2007; National Teacher Development Initiative [NTDI], 1978). Teacher Corps was an alternative route to teaching, and by the 1970s, demographers reported a teacher surplus, which changed Teacher Corps' purpose to the funding of professional development for teachers working in high poverty areas (Jordan & Borkow, 1985).

Embedded in Teacher Corps, but not part of the law's initial design, was that colleges and universities receiving federal funds would revise their teacher preparation programs to incorporate more alternative certification methods. Much like NDEA, Teacher Corps was created as an instrument to address a policy issue other than teacher education, in this case employment imbalance or teacher shortage; however, unlike NDEA, Teacher Corps built a link between higher education and K-12 schools (Earley & Schneider, 1996).

Teacher Corps was a relatively modest program, funding a small percentage of school districts and higher education institutions. When it was assimilated into the Education Consolidation and Improvement Act of the Omnibus Budget Reconciliation Act of 1981 (1981), the model faded into policy history. Because Teacher Corps funded only about 9% of the institutions that prepared teachers and less than 1% of the local school districts, it operated almost as a demonstration of a pilot program. Earley and Schneider (1996) wrote:

Consequently, the policy and higher education communities did not become embroiled in matters of teacher education governance, such as 1) revising state program approval to correspond to guidelines for a federally supported teacher education program; 2) establishing mechanisms for states to award a common

teaching license based on federal standards; or 3) sifting authority to award teaching licenses from state to local education agencies. (p. 309)

The federal government made an attempt to address the struggle between support for what a teacher will teach and how to teach it through the Education Professions Development Act in 1967 [EPDA] (1967). The EPDA encompassed educator recruitment and a variety of training programs. At various times, EPDA included initiatives such as vocational education, Teacher Corps, training for higher education personnel, and fellowships for elementary and secondary level education overseen by a National Advisory Council (Earley & Schneider, 1996; Higher Education Amendments of 1992). A state grants program was included in EPDA for educator training conducted by local education agencies or higher education institutions.

At various times during the 20 years from the late 1950s to the late 1970s, the federal government directed resources to teacher recruitment, preparation, and professional development. For the most part, teacher education was not the focus of this attention, but rather a method to achieve other policy goals. Employment and economic policy were to be advanced, while Teacher Corps and vocational education programs were to stimulate science and mathematics course study. In legislation such as the Elementary and Secondary Education Act of 1965 (1965), and its subsequent amendments, minor provisions supported teacher preparation for those who would teach bilingual or Title I eligible children; however, educator recruitment, preparation, or professional development were not integral parts of this particular legislation (Earley & Schneider, 1996).

In 1983, the Department of Education published, *A Nation at Risk*, which expressed concern about the state of elementary and secondary education and urged action if the

United States had any hope of retaining its economic standing among other industrialized nations (National Commission on Excellence in Education [NCEE], 1983). The report stated the teaching profession should be strengthened by raising standards for training, entry, and professional growth. The quality of teacher candidates and teacher education programs was said to have contributed to risks threatening the superiority of the United States. The authors suggested hiring recent graduates, retired scientists, and other subject matter experts to address the nation's teacher shortage. No major federal initiatives or funding emerged to address the education problem described in *A Nation at Risk*; it was merely a report about the problems of American education (NCEE, 1983).

The idea of restructuring teacher education emerged in the wake of *A Nation at Risk* with *A Call for Change in Teacher Education* (National Commission for Excellence in Teacher Education [NCETE], 1985), *A Nation Prepared: Teachers for the 21st Century* (Carnegie Corporation, 1986), and *Tomorrow's Teachers* (Holmes Group, 1986) setting the agenda. These reports were different from their predecessors in that they moved from critique to proposed solutions. Another commonality was in the recognition that the quality of the teaching force was critical to education reform and that maintaining the teaching profession was essential.

The National Commission for Excellence in Teacher Education [NCETE] (1985) produced *A Call for Change in Teacher Education* and was organized around four themes. "1) Supply and demand for quality teachers; 2) programs for teacher education; 3) accountability for teacher education; 4) conditions necessary to support the highest quality of teachers" (p. 4). Teacher education and preparation were considered a priority and teachers were thought responsible to improve society:

Teacher education takes its direction from Jefferson's vision of a people who are free because they are schooled in the responsibilities and benefits of a democratic society. From the origin of the normal school in New England and the first university programs for teacher education more than a century ago, this interdependence of school and society has shaped the focus and content of training programs. Teacher educators have prepared succeeding generations of teachers to promote both the well-being of the individual and the betterment of society. (National Commission for Excellence in Teaching, 1985, p. 3)

For the remainder of the 1980s and well into the 1990s, scholarly journals and publications were filled with the recommendations listed in *A Nation Prepared: Teachers for the 21st Century* (Carnegie Corporation, 1986) and *Tomorrow's Teachers* (Holmes Group, 1986). The Carnegie's focus on teacher preparation included: (a) creation of a National Board for Professional Teaching Standards; creation of Lead Teachers, (b) requirement of a bachelor's degree in the arts and sciences, (c) development of graduate school curriculum based on systematic knowledge of teaching, and (d) use of nation's resources to prepare minorities for teaching careers. The Holmes Group (1986) report *Tomorrow's Teachers* shared characteristics with the Carnegie report on the establishment of high standards for teachers and teacher degree requirements, but went further in addressing the connections between schools of education and K-12 schools.

By 1986, the American Association of Colleges for Teacher Education [AACTE] acknowledged teacher shortages and expressed concern about the quality of teacher education. The AACTE became a catalyst for states to develop alternative routes to certification for teachers. While advocating for alternative certification, the AACTE recommended that alternative certification employ curriculum that provided the knowledge and skills needed by beginning teachers (American Association of Colleges for Teacher Education [AACTE], 1987; Feistritz & Haar, 2008).

National education goals were set by Congress in 1994 with the passing of Goals 2000: Educate America Act (1994). The Act provided resources to states and communities to ensure all students would reach their full potential based on the premise of outcomes-based education that students will reach higher levels of achievement when more is expected of them. The focus for teachers encompassed all of the nation's teachers having access to professional development opportunities to improve and acquire the knowledge and skills to prepare all students for the 21st century. This Act may be seen as the predecessor to No Child Left Behind's requirements which mandate measurable improvement in student achievement across all groups.

In 1996, the National Commission on Teaching and America's Future, led by Linda Darling-Hammond, released a report, *What Matters Most: Teaching for America's Future*, that made a series of dramatic recommendations, including a call for state and school districts to become serious about student and teacher standards and a call for restructuring of teacher preparation, recruitment, and professional development (Fraser, 2007; National Commission on Teaching and America's Future, 1996). Teacher professional preparation and teacher working conditions were identified as fundamental to improving elementary and secondary education for the 21st century (Darling-Hammond, 1997). A report by the National Center for Education Statistics (2003) revealed that many teachers were not adequately prepared for their teaching assignments even at initial licensure. Urban districts maintained significant numbers of teachers who were not licensed and working conditions were often poor and deteriorating causing the few licensed teachers to leave after a few years. In *What Matters Most: Teaching for America's Future* (National Commission on Teaching and America's Future, 1996), licensure was identified as one of the critical factors

necessary to develop effective teachers. Teacher subject-matter knowledge was also frequently cited as critical to student achievement (Andrews, Blackman & Mackey, 1980; Haney, Madaus & Kreitzer, 1987; Schalock, 1976; Soar, Medley & Coker, 1983). Darling-Hammond (2001) noted that as of 2001, only four states required all of their schools of education to be professionally accredited, and only about 600 of our nation's nearly 1,300 education programs had been certified as meeting the standard of the NCATE, the national accrediting body.

### **Influence of No Child Left Behind on Teacher Preparation**

On January 8, 2002, President George W. Bush signed the No Child Left Behind Act of 2001 (2001). One of the purposes of NCLB was to ensure every low-income and minority student performs at the basic achievement levels by 2014—instead of the two-thirds performing below level now—and a majority performing at the proficient level. This historic piece of educational legislation reauthorized and significantly expanded the Elementary and Secondary Act, first enacted in 1965. Brown (2002) noted, “The typical African-American, Latino, or low-income 12th grader reads at the same level as the typical white and non-poor 8th grader” (p. 3). Bush (2001) specifically noted that over two-thirds of low-income and minority fourth graders are unable to read at a basic level and that, “The federal government is partly at fault for tolerating these abysmal results” (p. 2). Bush stated that “the academic achievement gap between rich and poor, Anglo and minority is not only wide, but in some cases is growing wider still” (p. 4).

The NCLB Act builds on the standards-based framework for education that Congress enacted into *Goals 2000* and expands the Elementary and Secondary Education Act of 1994, first enacted in 1965. The NCLB is the most significant shift in federal education policy

since its predecessor, the original Elementary and Secondary Act of 1965. It endorsed the belief that all students can learn at high levels and the expectation that all students would be taught by highly qualified teachers, and established a goal of proficiency for all students in core content areas within 12 years, by 2014 (Brown, 2002). It allowed state and local educators and community members to reach a consensus on what students should know and be able to do.

Brown (2002) wrote that the NCLB Act required state testing in grades three through eight and defined more precisely the measure of “adequate yearly progress” for schools and districts. The NCLB Act also required, for the first time, that the federal government would no longer subsidize unqualified teachers and paraprofessionals. Brown (2002) noted that the, “No Child Left Behind Act put states, districts, and schools on notice to end the common practice of hiring and assigning the least qualified teachers and the weakest paraprofessionals to high poverty and minority schools” (p. 17). State plans were required to list affirmative steps to ensure that poor and minority students were “not taught at higher rates than other children by inexperienced, unqualified, or out-of-field teachers” outline the measures that would be used to evaluate and publicly report progress with those steps (Brown, 2002, p. 18).

The NCLB Act required that at the beginning of the 2002-2003 school year, all newly hired teachers in Title I schools must be highly qualified. Highly qualified teachers are defined as (a) earning at least a bachelor’s degree, (b) demonstrating content knowledge in each core subject area taught, and (c) having full certification with no waivers of requirements (U.S. Department of Education, 2003). By 2005, states were required to guarantee that in every school all teachers in core academic subjects were highly qualified.

States were required to report on the professional qualifications of teachers, the percentage of teachers on emergency or provisional credentials, and the percentage of classes not taught by highly qualified teachers, disaggregated by schools in the lowest and highest levels of poverty (Brown, 2002).

Rod Paige (2003), U.S. Secretary of Education, in his second annual report on teacher quality, wrote, “By recognizing the link between quality teaching and student achievement, NCLB has refocused the national dialogue on how teachers should be trained and certified as well as who should teach” (p. 3). Paige (2003) continued by stating that, “the law reflects research findings that teachers’ content knowledge is important” (p. 5). The law also reflected the concern that state certification requirements were not rigorous enough, but gave states the flexibility to reflect on current certification practices and revise their existing systems (Paige, 2003, p. 5).

The United States Department of Education conducted a special analysis of the 1993-94 Schools and Staffing Survey in 2002 using the NCLB definition of a highly qualified teacher. Researchers determined that 54% of the nation’s teachers were highly qualified. Specific content areas reflected 47% were highly qualified in Mathematics, 50% in English, and 55% in Science and Social Studies (U.S. Department of Education, 2003, p. 11).

Podgursky (2006) later reviewed administrative data from states and district report cards and reported that in 2003-04, California’s full teaching credentials in their teaching area made up 89.4% of their state teaching body and “only 5.2 percent were teaching with substandard credentials (emergency or waiver)” (p. 28). Podgursky (2006) wrote:

Still, virtually no school district is in full compliance with licensing laws. Missouri, for instance, tracks the percentage of courses taught by teachers with inappropriate licenses. During the 2002-03 school year, only two Missouri K-12 school districts had no courses taught by an inappropriately licensed teacher. The state average for teachers without proper credentials was 9.5 percent per district. (p. 28)

Thus, schools were not in full compliance with NCLB in staffing every classroom with a “highly qualified” teacher.

Inconsistencies among state and federal standards for teacher preparation, certification, and qualifications have existed throughout the history of education in the United States. While legislation and policy have been enacted to address the concern that teacher preparation is one of the greatest single factors impacting student achievement, much has yet to be done to ensure that schools are staffed with “highly qualified” teachers.

Teachers’ professional preparation, along with their working conditions, has been identified as fundamental to improving elementary and secondary education for the 21st Century (Darling-Hammond, 1997). Wright, Horn, and Sanders (1997) wrote,

The results of this study will document the most important factor affecting student learning is the teacher. The immediate and clear implication of this finding is that seemingly more can be done to improve education by improving the effectiveness of teachers than by any other single factor. (p. 63)

According to the federal government’s mandates of No Child Left Behind, schools will be well-equipped to improve student academic success with the implementation of “highly qualified” teachers in every classroom. Unfortunately, the mandates do not create a uniform teacher certification process or standard in the definition of “highly qualified.” Certification and licensure continue to be monitored and controlled at the state level.

## Teacher Preparation Programs

This study focuses on teacher preparation, certification, and licensure. According to Citron (1985), “The first step to excellence in teaching is to improve the qualifications of those who enter the profession” (p. 277). A review of selected states’ criteria for new teacher certification indicates a lack of uniformity in the preparation of teachers, and in the procedures to certify them (Darling-Hammond, 2000). Historically, there has been very little uniformity among teacher certification standards across states (Parramore, 1986, p. 10). Constitutional law gives states the right to develop their own teacher standards. Thus, there is no uniform standard for teacher certification nationwide. When states determine standards, the results may lead to diverse teacher preparation programs, and likewise inconsistent state licensing requirements.

The law of the land asserts that education is the responsibility of the state, and this is observed in the establishment of financial support, teacher certification, and minimum standards of school and teacher education institutions (Association of Teacher Educators, 1988; Darling-Hammond, 2001). Since state departments of education determine teacher licensure and teacher education programs, the resulting certification requirements are not universal in the United States. Hence, the end result of the many varied teacher education programs nationwide has been the production of qualified, marginally qualified, and unqualified teacher candidates.

In the 1980s, public scrutiny placed teacher preparation at the top of the educational reform ladder. Multiple reports followed *A Nation at Risk*, including many that addressed teacher education, such as *A Call for Change in Teacher Education* (National Commission for Excellence in Teacher Education, 1985); *A Nation Prepared: Teachers for the 21st*

*Century* (Carnegie Corporation, 1986); *A Place Called School* (Goodlad, 1984); and *Tomorrow's Teachers* (Holmes Group, 1986). These documents and others raised issues related to the recruitment, preparation, and professional development of teachers. In addition the reports indicated that the elementary and secondary public schools were not producing well-educated students. Multiple factors were examined to determine the cause of declining quality in public education identifying the issue of competency of those who teach (Cohen, 1989). Some reasons that differences exist among teacher training programs are the different philosophical preferences used in training and the lack of uniform standards for teacher certification.

As early as the 1950s, state departments of education approved teacher education programs, and university faculty in the institutions determined the curriculum. Over time, each state developed its own set of standards, which means there are hundreds of standards for teacher preparation, with some high and some low, some enforced and some not. To circumvent this differentiation of standards, the National Council for Accreditation of Teacher Education (NCATE) formed in 1952 to accredit higher education teacher preparatory programs (Feistritzer & Haar, 2008).

The general public believes that qualified teachers will produce literate students. However, the definition of a qualified teacher is not quite that simple. Differences in teacher preparation programs and a lack of uniform criteria for judging teacher competence impact the relationship between teachers and student literacy. Another factor affecting student academic success is related to teacher training. Content knowledge is learned by teacher candidates via university or college course offerings. Studies have found that 40 to 90 percent of the difference in student test scores can be attributed to teacher quality

(Darling-Hammond & Ball, 1997; Wenglinsky, 2000). Knowing the subject matter, understanding how students learn, and practicing effective teaching methods translated to increased student achievement (Jackson, 2009). Therefore, it is vitally important that teachers be well-prepared when they begin teaching and that they continue to improve their skills and knowledge of subject throughout their career.

### **Types of Teacher Certification**

Until the mid-1980s, certification was the process of issuing a state's validation on one's ability to teach in that particular state. Certification was

the education system's process for assuring that public school teachers possess minimum qualifications. . . Certification is a process by which the state evaluates the credentials of prospective teachers to ensure that they meet the professional standards set by the state education agency. (American Association of Colleges for Teacher Education [AACTE], 1987, p. 1)

Certification represents the quality of a teacher's competence in subject area, methodology, teaching strategies, and classroom management (Roth & Mastain, 1984). It is a legal process enacted by individual states. For the purpose of this study, the terms certification and licensure will be used interchangeably.

Since the early 1990s, every state has changed its criteria for certification or licensure (Roth, 1999). New programs and practices for teacher certification are being tested all over the nation. Some of these practices threaten the traditional university-based model. Most traditional teacher preparation programs require a four-year bachelor's degree including general education courses, subject area focus, professional education, field experiences, and student teaching. The degree programs integrate content knowledge, professional knowledge, and pedagogical knowledge. Requirements for state licensure after

completion of a bachelor's degree differ between states. Some states require passing an examination in addition to completion of a bachelor's degree.

Missouri teachers certified through traditional university-based educational programs must graduate from Missouri Standards for Teacher Education Programs [MoSTEP] universities. The Educator Preparation Section of MoSTEP reviews and evaluates programs for professional education certification at Missouri's colleges and universities for the State Board of Education to make decisions regarding approval of individual programs. Approved university educational programs must provide general education course of study along with content, professional, pedagogical and integrative courses of study. In addition, teacher education programs must include field experiences and student teaching. Although the amount of time is determined by the specific institution in which the teacher candidate is enrolled (Missouri Department of Elementary and Secondary Education, 2008).

During the teacher education programs, students seeking candidacy into professional education programs must pass the C-Base assessment. After passing the C-Base examination, teachers seeking certification must complete their degree program and successfully pass the Praxis II Content Knowledge [Educational Testing Service] examination corresponding with the subject area being sought for certification. If no specialty area or content knowledge exists (i.e., elementary certification, early childhood), certification applicants must take the Praxis II Principles of Learning and Teaching Test corresponding to the grade range of certification to be taught. Once a current Missouri professional certificate of license is received, individuals may acquire certification in additional areas by successfully completing the Praxis II test for the subject area in which

additional certification is sought (Missouri Department of Elementary and Secondary Education [MDESE], 2008).

Licensure is common practice in a multitude of professional fields including teaching. Unfortunately, Podgursky (2006) describes the multitude of certification requirements in teaching that are not found in other professional fields in the state of Missouri.

But consider teacher licensing laws in Missouri. Like most other states, Missouri issues a single license to practice medicine, law, dentistry, accounting, nursing, and veterinary medicine. However, in the area of K-12 education, its Department of Elementary and Secondary Education currently issues 260 different certificates and endorsements (171 vocational, 89 nonvocational). This is only part of the story. There are levels of certification (permanent or provisional) for all of these and a host of grandfathered codes. The result of this is 781 valid certification codes in the master teacher-certification file. And there is nothing unique about Missouri. (Podgursky, 2006, para. 8)

In contrast to traditional certification programs, alternative certification routes encompass a variety of processes for non-education college graduates including (a) completion or combination of coursework and teaching, (b) graduate degree programs resulting in teacher certification, (c) non-graduate degree, certification only coursework, (d) Teach for America programs, and (e) outcomes assessment programs.

Alternative routes to certification provide districts opportunities to hire talented individuals with subject-matter knowledge who may not have studied education in college. School districts provide “these teachers on-the job training, mentoring, and support leading to certification” (Feistritz & Haar, 2008, p. 2). Historically to present day, alternative certification routes have been needed because of market demands, teacher shortages and quality, or career choice change. “In 2006, all 50 states and the District of Columbia provided such alternative routes to teacher certification” (Feistritz & Haar, 2008, p. 3). In

2006, of the states providing alternative routes to certification, many states had created multiple routes to alternative teacher certification reaching a total of 125 different alternative routes (Feistritzer & Haar, 2008). Data from the National Center for Education Information (NEIT) in 2006 as reported by Feistritzer and Haar (2008), observed a growth from 1991 to 2006 in the number of new alternate routes designed for post-baccalaureate, nontraditional teacher candidates with many coming from careers other than teaching. Missouri reported two routes to alternative certification and no states recorded emergency certifications as alternative certification routes (Feistritzer & Haar, 2008).

Individuals who complete state-approved alternative teacher certification programs at one of the 16 Missouri colleges or universities designated by Missouri Department of Elementary of Secondary Education and who meet certain qualifications may earn a Missouri certificate or license to teach. Alternative certification routes are designed for non-traditional students seeking Missouri teacher certification and program requirements are specific to the institution providing the course of study. For example, the University of Missouri-Kansas City's alternative teacher certification (ATC) program is for middle and secondary Math teacher candidates with a bachelor's degree in content field and a contract with a Missouri school district. The ATC candidate receives a one-year temporary authorization certificate to teach while completing 24 credit hours of teacher preparation course work. After completion of the 24 credit hours, ATC students certificate changes to a provisional teaching certificate when candidates with bachelor's degrees are within 18 hours of completing their teacher preparation programs. ATC students continue teaching and upon completion of the 36 credit hours receive a master's degree in Curriculum and Instruction. Upon completion of the program coursework, candidates must also successfully complete

the Praxis II to receive professional certification (University of Missouri-Kansas City School of Education, 2008).

The University of Central Missouri has an alternate pathway program for alternative certification for content-specific undergraduates interested in teaching. The program requires 24 credit hours in pedagogical instruction and an internship (student-teaching) component resulting in master's degree. In addition, teacher candidates must successfully complete the Praxis II in their content area to receive Missouri's professional teaching certificate (University of Central Missouri Department of Education [UCM], 2008) and complete a Missouri Background Check (Missouri Department of Elementary and Secondary Education, 2008).

Teach for America is another alternative pathway founded in 1990 by an undergraduate student named Kopp (Teach for America, 2011). The program recruits students from elite colleges to teach for two years in low-income schools throughout the United States. The philosophy behind the program is to make an impact on the college students so that they become lifelong leaders in pursuing educational equality. Unfortunately, participants do not have to be certified teachers, but may participate if certified. Only an intensive five-week summer institute is required to prepare them for their new jobs (Teach for America, 2011). Once participants are teaching, participants must continue to take classes during the two years they are contracted to teach and then have the opportunity to become certified at the end of the program.

On May 1, 2008, Missouri Governor Matt Blunt signed Senate Bill 1066, authorizing another form of alternative certification to come into effect August 28, 2008. Individuals who hold a certificate from the American Board for Certification of Teacher Excellence

[ABCTE] are eligible for a regular Missouri teaching certificate in English, Biology, Chemistry, General Science, Mathematics, Physics, and U.S./World History. Candidates for the ABCTE certificate must hold a bachelor's degree and meet ABCTE requirements, which include passing an \$850 exam. In addition, all Missouri certifications require candidates to pass a background check (Missouri Department of Elementary and Secondary Education, 2008).

### **New Teacher Experiences in Missouri**

Missouri teacher candidates pursuing certification through traditional-based education programs must participate in field experiences and student teaching in a school district (UCM, 2008). Field experiences or clinical experiences encompass teacher observations in Missouri public schools. At the University of Central Missouri these field experiences begin as early as the sophomore year in college and include 30 hours of public classroom observation (UCM, 2008). Although all Missouri teacher preparation programs require field experiences, the numbers of hours of observations are specific to the institution providing the course of study (UCM, 2008).

In addition to field experiences, teacher candidates are required to successfully complete a student teaching experience. Student teaching is a college-supervised instructional experience for students who are not yet certified to teach. In Missouri, the student teaching experience lasts about the length of a semester and gives the prospective teacher an opportunity to teach under the supervision of a certified teacher. The prospective teacher is monitored by both the district's cooperating teacher and a university supervisor. Student teachers initially shadow the cooperating teacher and eventually gain more responsibilities in teaching the class. The cooperating teacher and college supervisor are to

monitor the student teacher's progress throughout the experience to ensure that it is satisfactory.

Once the teacher candidate is certified to teach and employed by a school district, continued professional development and support are required by DESE to maintain, renew, and advance teacher certification. Missouri requires all first year teachers to be assigned a mentor who assists the new teacher in getting the classroom organized and becoming familiar with school procedures. The mentor guides the new teacher in understanding how teaching standards apply to the working classroom and provides instructional support as a non-evaluator (Missouri Department of Elementary and Secondary Education, 2008).

In addition to a mentor, Missouri new teachers are required to submit professional development hours to renew certification. Professionally certified teachers in their first four years of teaching must complete 30 hours of professional development which may include district-provided professional development, graduate hours, or achievement of advanced degrees. Career education certificate holders, formerly vocational education, must complete 90 hours of professional development in the first four years of teaching. Continued professional development keeps Missouri teachers current with best practices in teaching (Missouri Department of Elementary and Secondary Education, 2008).

### **Teacher Certification Implications**

Traditionally, state certification has helped to ensure at least a minimal standard of teaching competence. Certification typically requires teachers to complete a set of college level courses in pedagogy or in the subject to be taught and require passing of one or more standardized tests (Goldhaber & Anthony, 2003). Although, programs such as Teach for America's alternative method of teacher training and a tighter teacher labor market, many

states are permitting schools to employ non-traditionally certified teachers and potentially impacting student achievement. Researchers have found that certified teachers consistently produce significantly stronger increases in student achievement than do uncertified teachers and alternatively certified teachers are generally less effective than certified teachers (Darling-Hammond, Holtzman, Gatlin, Heilig, 2005).

Darling-Hammond (2000) used data from the 1993-94 Schools and Staffing Survey and multiple administrations (1990, 1992, and 1996) of the National Assessment of Educational Progress (NAEP) to examine the effect certification status had on student achievement at the state level. The study examined public schools' fourth grade mathematics scores and reading scores from the NAEP of 44 states. The researcher examined the relationship between the NAEP score and the percentage of well-qualified teachers in the state to determine whether they had a positive and significant relationship with state average student achievement scores. Well-qualified teachers were defined as having state certification and a major in their teaching field.

Miller, McKenna, and McKenna (1998) examined an alternative certification training program created by faculty at a southeastern university. Three years after the alternative certification program had been established; alternatively certified teachers were matched up with traditionally certified teachers. The match required that both teach the same subject and the same grade in the same school. The researchers found no significant difference in the students' total mathematics or total reading scores on the Iowa Test of Basic Skills that were attributed to the methods of their teachers' training. The researchers suggested that alternatively certified teachers were performing as well as traditionally certified teachers.

Laczko-Kerr and Berliner (2002, 2003) conducted a study comparing traditionally and nontraditionally certified teachers. Five inner-city, largely minority population districts participated in the research. Teachers from each group, certified and non-traditionally certified, were matched according to grade level taught, highest degree attained, and year of test administration. The authors reported that the students of under-certified teachers, those with emergency, temporary, or probationary certification, including Teach for America teachers, performed significantly poorer, 20 % lower, than students of certified teachers in reading, language arts, and mathematics.

Using data from the National Educational Longitudinal Study of 1988, Goldhaber and Brewer (2000) examined how students of teachers with probationary certification, emergency certification, private school certification, or no certification in their subject area compared to students of teachers who had earned standard certification in their subject area. The study examined 12th grade standardized test scores in mathematics and science for individual students in a sample of 3,786 mathematic and 2,523 science students taught by 2,098 mathematics and 1,371 science teachers in a nationwide sample of public high schools. Researchers controlled for individual and family backgrounds, school variables, teacher variables, and class variables. The researchers concluded that, in mathematics, students with an uncertified teacher or a teacher with a private school certification scored 1.3 points lower than those taught by a teacher with a standard, probationary, or emergency certificate. On the other hand, the researchers found no evidence that teachers with a standard certificate in the subject outperform those teachers with an emergency certificate (Goldhaber & Brewer, 2000).

As Linda Darling-Hammond (2000) noted, “the degree of pedagogical skill may interact with subject matter knowledge to booster or reduce teacher performance” (p. 6). In a related study of 200 teachers, Ferguson and Womack (1993) found that the number of courses teachers took in instructional techniques accounted for four times the variance in teacher performance than did subject-matter knowledge. Ferguson and Ladd (1996) also reviewed student achievement and stated that teacher qualifications alone account for 40% of the variance in student achievement.

Teacher longevity and certification are often cited as factors that have an impact on student achievement. For example, researchers conducted a study of high-versus-low achieving schools in New York City with demographically similar students and concluded that years of experience and levels of certification accounted for 90% of the variation in student achievement at the school level (Armour-Thomas, 1989).

Teacher licensing was addressed in a report entitled *What matters most: Teaching for America's Future* (National Commission on Teaching and America's Future, 1996), where licensure was identified as one of the critical factors necessary to develop effective teachers. Teacher subject-matter knowledge is also frequently cited as critical to student achievement (Andrews, Blackman & Mackey, 1980; Goldhaber & Anthony, 2003; Haney, Madaus & Kreitzer, 1987; Jackson, 2009; Schalock, 1976; Soar, Medley & Coker, 1983). The research reviewed was consistent in indicating that high school math and science teachers with a major in their field of instruction have higher achieving students than teachers who are teaching out-of-field (e.g., Goldhaber & Brewer, 2000; Monk, 1994; Monk & King, 1994; Rowan, Chiang & Miller, 1997). These effects became stronger in advanced math and

science courses in which the teacher's content knowledge was presumably more critical (Monk, 1994).

New York's Division of Assessment and Accountability (2000) reported on the impact of teacher certification on reading and mathematics performance in elementary and middle schools in New York City. The researchers used a multiple regression analysis to study the relationships between student demographics and achievement; and the extent to which teacher background and experience are related to student achievement. Student demographics (i.e., free and reduced lunch, ELL, and special education) explained 67.2% of the variance in reading in elementary schools and 68.3% in middle schools. In mathematics, student characteristics explained 62.4% of variance in elementary schools and 64.5% in middle schools. Thus, approximately two-thirds of the variance in the percentage of students meeting academic standards was explained by student demographics (New York Division of Assessment and Accountability, 2000).

An increase in a school's percentage of certified teachers was associated with an increase of 3.7 percentage points in students achieving standards on state and city reading tests and as much as 4.8 percentage points in mathematics. There was a corresponding decrease in students' performance with non-certified teachers. After researchers controlled for student demographics, certification rates explained 4.4 % of variation in students reading scores and 5.4 % of variation in mathematics scores for students at the elementary level. The percentages of certified teachers were positively related to the percentage of students showing high achievement in reading and mathematics. For middle schools, an additional 1.6% of variation was explained in reading, and an additional 2% in mathematics (New York Division of Assessment and Accountability, 2000).

Goldhaber and Brewer (1998) analyzed data from over 18,000 10th graders who participated in the National Educational Longitudinal Study of 1988. After adjusting for students' achievement scores in 8th grade, teacher certification in 10th grade was not significantly related to test scores in 10th grade. In another study, using experimental logic rather than correlational, Miller, McKenna, and McKenna (1998) matched 41 alternatively trained teachers with 41 traditionally trained teachers in the same school. The researchers found no significant differences in student achievement across the classrooms of the two groups of teachers (Miller, McKenna & McKenna, 1998).

Teacher certification routes and qualifications vary between states which could account for the discrepancies between researchers findings on the impact teacher certification type has on student achievement. As reviewed in the literature, alternative certification has been shown to have both a negative effect on student achievement scores and in some cases no impact on student success at all. Variance in student achievement data may be attributed to the actual preparation a teacher receives rather than the type of teaching certificate issued. Therefore, further research is necessary to identify the variables a teacher needs to be effective in increasing student achievement.

### **Teacher Quality and School Demographics**

*The Condition of Education 2003*, using the 1999-2000 SASS questionnaires reported on the gender, years of experience, and ethnicity of public and private school teachers. Approximately 16 % of public school teachers were beginning teachers in 1999-2000 (National Center for Education Statistics 2003, p. 59). Public and private schools beginning teachers were evenly distributed by gender, but not by race. "Compared with White teachers, a greater proportion of Black and Hispanic teachers in public schools were

beginning teachers as were a greater proportion of Asian/Pacific Islander” (National Center for Education Statistics, 2003, p. 59). Schools with the largest minority population and those with the greatest limited-English proficient students were more likely to employ beginning teachers than schools with the lowest percentage (NCES, 2003). Claycomb (2000) explained, “teachers who stay in classrooms longer than five years teach students to higher achievement levels than those with less than three years of experience” (p. 20). We can infer that schools with the largest minority populations have higher percentages of beginning teachers, resulting in students who perform at lower achievement levels.

Before the mid 1980s, studies of effective schooling tended to look at school-level factors only assuming that the school has a unitary and consistent impact on student achievement (Marzano, 2003). Good and Brophy (1986) warned of the consequence of this perspective:

Studies of large samples of schools yield important profiles of more and less successful schools, but these are group averages that may or may not describe how a single effective teacher actually behaves in a particular effective school. Persons who use research to guide practice sometimes expect all teachers’ behavior to reflect the group average. Such simplistic thinking is apt to lead the literature to be too broadly and inappropriately applied. (p. 588)

In the 1966 study, *Equality of Educational Opportunity*, researchers suggested that differences in teachers did not matter in student achievement (Coleman et al., 1966). They employed 60,000 teachers in grade six and over 3,000 schools. Their basic finding was that almost all of the variability in how students achieved was attributed to their socioeconomic background rather than to the schools they attended. Coleman et al. (1966) concluded that the differences between schools in average achievement were largely related to differences in the socioeconomic backgrounds of the students enrolled. In addition, they found that

when these differences were held constant, differences in facilities, curriculum, and teacher quality among schools accounted for only a small fraction of the difference in student achievement. Mayer and Jencks (1989) agreed that schools have only small effects on student learning or the probability of students attending college, once individual student background was held constant.

Scheerens and Bosker (1997) reported 20% of the differences in student achievement were related to the schools children attend, another 20% was associated with individual classrooms and teachers, and the remaining 60% was linked with differences among children in each classroom, including the effects of their prior achievement and their socioeconomic background. The researchers argued that teachers were important, but did not explain why they were important. The researchers measured the students at one point in time and did not control for student experiences with previous teachers.

Researchers have explored student achievement in urban, suburban, and rural schools. Urban schools have often been portrayed in the literature as crumbling and crowded facilities that were not staffed well, and that were employed with overworked teachers lacking the basic skills of teaching (Carnegie Foundation for the Advancement of Teaching, 1988; Louis & Miles, 1990). Jonathan Kozol (1991), in his book *Savage Inequalities*, pointed out problems with run-down facilities, unmotivated teachers, and low expectations in inner city schools based on his own observations.

School location wasn't the only factor in student achievement exploration, as researchers explored urban schools. Information was generated regarding the achievement of students residing at the poverty line and receiving government assistance through free or reduced lunch. Coincidentally, urban schools were more likely to have low income students

than suburban or rural schools. The U.S. Department of Education's National Center for Education Statistics (1994) listed 44% of urban public school students as eligible for free or reduced priced school lunch, compared with 23% of suburban students and 30% of rural students (National Center for Education Statistics, 1994).

Lippman, Burns, and McArthur (1996), utilizing the 1987-1988 School and Staffing Survey data from the National Center for Education Statistics argued, "High poverty schools in every location have higher enrollments of minorities than low poverty schools, but urban high poverty schools are more likely to enroll minority students than high poverty schools in suburban and rural areas" (p. 10). The authors concluded that among urban schools, 69% of the students in high poverty schools belonged to a racial or ethnic minority, compared with 26% in the low poverty schools; among suburban schools, 56% of the students in high poverty schools belonged to a minority group compared with 10% in low poverty schools; in rural schools, and 35% of students that were in high poverty schools belonged to a minority group compared with 9% in the low poverty school.

Lippman, Burns, and McArthur (1996) also noted that urban public schools were larger, on average, than suburban or rural schools at every level. According to their study, the average size of an urban elementary school was 528 students, whereas that of a suburban school was 492 students, followed by 354 students in a rural school. At the middle or junior high school level, urban schools were listed as averaging 735 students, 662 students in suburban schools, and 463 in the rural schools. The authors stated at the secondary or high school level, the average size of an urban high school was more than twice that of rural schools, with 1,313 students compared with 577 students, and was slightly larger than

suburban school, which had an average of 1,197 students (National Center for Education Statistics, 2002b).

Loveless (2001) discussed the composition and performance of rural schools compared to urban and suburban schools. His research indicated that although rural schools were the lowest funded schools in the nation, rural students, as a whole, performed better than average. Despite the fact that Loveless concluded rural schools led the nation in producing high school graduates, 94.6%, rural schools trailed urban and suburban schools in college admittance, 54.3%. Loveless found that students in rural schools preferred not to leave their communities.

The National Center for Education Statistics (2009) presented information on ethnicity, school location, and poverty levels that impacted student achievement. Texas student results disaggregated by poverty, language, racial/ethnic status, and three grade/age levels, showed that some states with large proportions of low-income and minority students had made faster gains in student achievement than others. Brown (2002) wrote, “In 1998, 8th grade African-American students in Texas wrote as well as or better than White students in seven states” (p. 7). Flanagan and Gissmer (2001) pointed out the role of federal resources in closing the achievement gap of minority and disadvantaged students. The Southeast Center for Teaching Quality (2002), similar to Flanagan and Gissmer, documented, “Teacher’s knowledge and skills are the strongest determinants of whether a child achieves in school” (p. 7).

The most disadvantaged students in our low-income, high minority schools, those who need and deserve the most talented teachers, are more likely to be taught by unqualified, unprepared, and inexperienced teachers. These teachers are also more likely to leave teaching or move to a school whose students are easier to teach,

causing a constant, revolving door of novices serving our most challenging students. (Flanagan & Gissmer, 2001, p. 2)

Wise and Levine (2002) wrote, “Currently, low performing urban schools are experiencing the brunt of the teacher shortage. These schools are forced to hire unprepared and inexperienced ‘teachers,’ some of whom are the product of ‘quickie’ alternative certification programs” (p. 2). The authors continued, “The results are predictable. Low-performing children remain low-performing. Sixty percent of the teachers are gone within three years” (p. 2). Wise and Levine (2002) explained that the lowest-performing schools were often assigned the least experienced and least prepared new hires whereas low performing schools were in the greatest need of experiences and quality teachers. The authors concluded that districts continued to hire unprepared and inexperienced teachers to replace the teachers that left.

Claycomb (2000) determined urban schools were compelled to hire individuals with emergency teaching certificates, to allow non-certified individuals to work as teachers, or to place licensed teachers in classes for which they were not qualified. The National Center for Educational Statistics (2000) stated, “Students in urban, high-poverty schools have only a 50% likelihood of being taught math and science by a qualified teacher in that field” (p. 3). Claycomb (2000) pointed out that urban schools often reported chronic teacher shortages—particularly in the fields of science, math, special education, and bilingual education.

Levin and Quinn (2003) perceived:

Given the strong and proven connection between high quality teachers and student achievement, when urban districts make the changes necessary to hire, rather than to lose, their best teacher candidates, we believe they will be making one of the wisest investments they can toward improving outcomes of children. (p. 8)

Urban district hiring practices and their effect on applicant attrition and teacher quality was examined by researchers, Levin and Quinn. Levin and Quinn (2003) analyzed data from four urban districts with 62% to 85% of non-whites in their student bodies and two-thirds to three-quarters of students that qualified for free or reduced price lunch. Levin and Quinn (2003) stipulated, “It is widely recognized that no factor under school control affects student achievement more than the quality of the teacher in the classroom” (Executive summary). Levin and Quinn also recognized that on the average, low-income and minority children had lower-quality teachers who were likely to be uncertified, had scored poorly on college and licensure exams, and were teaching outside of their fields.

Wright, Horn, and Sanders (1997) wrote:

The results of this study will document the most important factor affecting student learning is the teacher. The immediate and clear implication of this finding is that seemingly more can be done to improved education by improving the effectiveness of teachers than by any other single factor. (p. 63)

Past and present research identifies student and school demographic factors as impacting student achievement. The achievement gap of students increases based on poverty, ethnicity, and even locale. For example, urban students are twice as likely as suburban students to live in poverty and be taught by under qualified, inexperienced, or ineffective teachers. In addition, schools with higher poverty populations tend to have higher minority populations. The No Child Left Behind legislation attempts to bridge those achievement gaps by requiring highly qualified teachers in every classroom and holding schools accountable for the achievement scores for all students.

## Summary

The literature review focused on key areas relating to teacher certification. First, a historical perspective of teacher licensure and certification policies, including, local, state, and national influences was offered. Second, teacher preparation programs, certifications types, and new teacher experiences were noted with information regarding Missouri's state licensure requirements. Third, implications for teacher certification, as well as, teacher quality and school demographic factors impacting student achievement and employment of qualified teachers was discussed. Each of these concepts plays a key role in understanding the purpose for prepared and effective teachers and the impact concerns of student achievement have had on legislation in our country.

Well-prepared and effective teachers maintain multiple characteristics that in turn impact student achievement. According to the federal government's mandates of the 2001 No Child Left Behind Act (2001), theoretically, schools will be well-equipped to improve student academic success with the implementation of "highly qualified" teachers in every classroom. Unfortunately, the mandates do not create a uniform teacher certification process or standard in the definition of "highly qualified." Certification and licensure continue to be monitored and controlled at the state level, a process which prevents uniformity.

Between NCLB and the turmoil over standards, achievement and accountability, the stakes are high for students and educators. In a letter to James Madison in 1787, Thomas Jefferson wrote, "Above all things I hope the education of the common people will be attended to; convinced that on their good sense we may rely with the most security for the preservation of a due degree of liberty" (1787, ¶9). When we think about this comment and our mission, we need to come to grips with the simple reality that it's the teachers that

matter the most. They determine each child's wins and losses, establish expectations and standards within each class and grade level, and ultimately influence the success of the educational process.

## CHAPTER 3

### RESEARCH METHODS AND PROCEDURES

This chapter contains a description of the design and methodology that the researcher utilized for the teacher reported preparedness data collection and analysis. Included are the following sections: (a) significance of the study, (b) an overview of information on the Schools and Staffing Survey, (c) research questions, (d) sample description, (e) description of the instruments with special interest placed on constructs relevant to answering research questions, (f) data analysis, and (g) a chapter summary. Detailed information pertaining to the creation of the survey, collection, and follow-up of the SASS universal data file is also included in this chapter.

#### **Significance of the Study**

The educational significance of this study is to: (a) advance the literature in the field of teacher preparation, (b) provide guidance to educational leaders responsible for teacher professional development and growth, (c) provide guidance in the hiring and retention of teachers, (d) identify areas of improvement in district professional development plans and programs, and (e) advance the existing body of knowledge in educational leadership regarding teacher reported preparedness. Information pertaining to teacher reported preparedness was obtained in this study from the teacher questionnaire.

In particular, the extent to which teaching experience and certification types affect teacher reported preparedness was examined. Findings from addressing the research hypotheses may be of interest to university education programs, educational leaders and policymakers, superintendents, principals, teachers, and school community members as they make determinations regarding teacher preparation, traditional and alternative certifications

methods and criteria, hiring and retention practices, teacher induction and support, and professional development. In addition, information was provided detailing the current status of this school district in employing a “highly qualified” teacher in every classroom as mandated in the 2001 No Child Left Behind Act.

### **Schools and Staffing Survey (SASS) Overview**

In 1985, the National Center for Education Statistics with the RAND Corporation redesigned the previous school surveys to create a unified set of surveys that allow comparisons between public and private schools, including linkages of teachers, administrators, schools, and school district data. This integrated set of surveys is called the Schools and Staffing Survey and were initiated in the mid-1980s to collect data on student populations, teacher and administrator characteristics, and schools (National Center for Education Statistics, 1996). The Schools and Staffing Survey has been used to collect extensive data on American public and private elementary and secondary schools. Teachers, principals, schools, school districts and library media centers were components of the SASS survey system and asked to complete individual questionnaires. The survey data provides information on characteristics and qualifications of teachers and principals, teacher hiring practices, professional development, class sizes and many other conditions in schools. SASS data was designed to allow national, state, and local comparisons of public and private schools and staff and to permit the analysis of trend data. In addition, SASS data was state-representative for the public sector and affiliation-representative for the private sector.

The SASS consisted of five components: (a) the Teacher Demand and Shortage Survey, (b) the School Principal Survey, (c) the School Survey, (d) the School Teacher Survey (public and private), and (e) the Teacher Follow-up Survey conducted a year after

the first four surveys. The first cycles of the SASS were conducted during the 1987-1988, 1990-1991, 1993-1994, 1999-2000, 2003-2004, and 2007-2008 school years. Following every survey, the NCES reviewed the SASS content to expand, retain, or delete topics covered in the previous survey administration, maintaining the survey's capability for trend analysis and for addition of new topics to address new concerns. Public charter schools, their teachers and principals were added to the SASS administration of surveys in 1999-2000 (National Center for Education Statistics, 1996).

The SASS questionnaires measured the same five major policy issues: (a) teacher shortage and demand, (b) characteristics of elementary and secondary teachers, (c) teacher workplace conditions, (d) characteristics of school principals, and (e) school programs and policies. New issues covered in the 1999-2000 and subsequent questionnaires included school and district performance reports; standards for home schooled students, charter schools, migrant students; and availability and use of computers and the Internet. The 1999-2000 SASS discontinued the student records survey and library media specialist survey, but retained the library media center survey (National Center for Education Statistics, 1996).

Specifically, the Public School Teacher Questionnaire collected, "data from teachers about their education, training, teaching assignment, certification, workload, and perceptions and attitudes about teaching National Center for Education Statistics, U.S. Department of Education 2007, p. 2). In Rounds One and Two, SASS data provided a basis for addressing five major policy issues (Hudson & Darling-Hammond, 1987). The Round Four SASS addressed issues pertaining to teacher qualifications and career paths, and placed more emphasis on teacher professional development (National Center for Education Statistics, 2007).

Sample schools in the School Survey were asked to provide a list of teachers that were employed at the beginning of the survey year. Between one and twenty teachers were sampled from the list, which yielded an overall sample size in excess of 65,000 teachers at each round (National Center for Education Statistics, 2002a). As a result, the SASS is largest, most extensive survey of K-12 school districts, schools, teachers, and administrators in the United States today.

For the purposes of this study, the researcher utilized selected questions from the Public School Teacher Questionnaire, developed by the National Center for Education Research for use in the Schools and Staffing Survey. The instrument was administered to teachers in one Midwest metropolitan school district.

### **Research Questions**

The following research questions were addressed in this study.

1. Is there a statistically significant relationship between level of experience of teachers and teacher reported preparedness among the teacher sample?
2. Is there a statistically significant relationship between teacher certification type of teachers and teacher reported preparedness among the teacher sample?

### **Hypotheses**

**Null hypothesis one.** No statistically significant relationship exists between new teachers and teacher reported preparedness among teachers of the teacher sample.

**Research hypothesis one.** A statistically significant relationship exists between new teachers and teacher reported preparedness among teachers of the teacher sample.

**Null hypothesis two.** No statistically significant relationship exists between alternative teacher certification type and teacher reported preparedness among the teacher sample.

**Research hypothesis two.** A statistically significant relationship exists between alternative teacher certification type and teacher reported preparedness among the teacher sample.

### **Research Design**

The design of the SASS was guided by the National Center for Education Statistics (NCES) on behalf of the U.S. Department of Education in order to collect extensive data on American public and private elementary and secondary schools (National Center for Education Statistics, 2004). Questions for the survey instrument used in this study were derived from the 2007-2008 SASS Public School Teacher Questionnaire cited in Appendix A. Permission to use questions from the SASS was granted by NCES and is located in Appendix B. This researcher utilized a design that is exploratory in nature and a non-experimental survey design to empirically identify if a statistically significant relationship exists between certification route (traditional or alternative), level of teaching experience, and teachers' beliefs of their own preparation in (a) classroom management and disciplinary situations, (b) the use of a variety of instructional methods, (c) teaching of subject matter, (d) use of computers in classroom instruction, (e) assessment of students, and (f) selection and adaptation of curriculum and instructional material (National Center for Education Statistics, 2008).

This empirical study was conducted in a school district located in the Midwestern United States. Participation of all teachers was requested and was voluntarily self-reported.

All certified teachers in the school district who are teaching in a classroom setting were invited to complete an online survey related to teacher preparedness. Fink (2006) describes surveys as, “information collection methods used to describe, compare, or explain individual and societal knowledge, feelings, values, preferences, and behavior” (p. 1). The use of a survey instrument indicates a non-experimental design (Mertler & Vannatta, 2002) and this study is an empirical study because it seeks to gain an in-depth understanding of teacher perceptions, and it is delimited by the school district to be surveyed (Merriam, 1998). Therefore, the study is considered a non-experimental, quantitative empirical research design.

### **Site Selection**

The selected research site is a school district covering 82 square miles with a population of 85,202 registered voters. The school district is fully accredited by the state of Missouri and has been awarded the state’s prestigious “Distinction in Performance” award for high achievement. The district’s enrollment (grades K-12) is 18,921 students. The school district encompasses a total of twenty-one elementary schools, five middle schools, and four high schools. The school system spends about \$9,508 per pupil, with the average student-teacher ratio at 19:1. Students eligible for free or reduced-lunch have been on the incline reaching as high as 55 percent in one of the four high schools. The districts’ minority population is 34.1 percent which is larger than the state average of 25.3 percent (MDESE, 2011).

Almost 63 percent of graduates go on to higher education, and the district drop-out rate is below the state average at 2.9 percent. The school district has a unique school population represented in its specialized high school programming. The district offers three

diploma options at three of the four high schools plus an additional option of an International Baccalaureate Diploma at one high school and an ELL newcomer program. The following three tables detail high school subgroup information and compare the district to state percentages in special education, free-and-reduced lunch counts, and ethnicity. Specifically, Table 1 represents the number of high school special education students, minority students and free-and-reduced lunch student percentages in this school district.

Table 1

*High School IEP, F/R, and Minority Percentages*

	F/R Lunch %	IEP %	ELL %	Minority %
High School A	55.2	8.1	9.0	48.0
High School B	43.9	8.5	2.9	30.0
High School C	19.8	6.3	1.7	21.0
High School D	51.2	9.3	1.6	36.0

Table 2 demonstrates the district’s free-and reduced lunch percentages in comparison to the state percentages. The percentages are similar for the past three years and showing growth from 2009 to 2011. Table 3 compares this school district minority population to the state of Missouri. Together Missouri and the school district surveyed have shown slight increases in their minority populations and overall the school district slightly surpasses the state percentages for minority students.

Table 2

*District and State Free-and-Reduced Lunch*

Free-and-Reduced Lunch	2009	2010	2011
State Percentage	43.7	46.9	47.8
School District Percentage	40.9	42.5	46.0

Table 3

*District and State Minority Student Percentages*

State Percentage	2009	2010	2011
Asian	1.9	2.0	1.8
Black	17.8	17.8	17.1
Hispanic	3.8	4.0	4.5
Indian	0.4	0.5	0.5
White	76.1	75.8	74.7
School District Percentage	2009	2010	2011
Asian	4.7	5.0	3.8
Black	13.4	13.9	11.9
Hispanic	10.3	10.1	12.5
Indian	1.1	1.3	1.0
White	70.5	69.7	65.9

Students in this district score at or slightly below state averages on the nationally standardized ACT exam as displayed in Table 4 and did not meet NCLB’s mandate in Communication Arts and Mathematics illustrated in Table 5.

Table 4

*District and State Averages on ACT*

ACT Results	2009	2010	2011
School District	21.6	21.3	21.4
State	21.6	21.6	21.6

Additional data in Table 5 shows the school district is meeting the state required attendance percentages but is inconsistent in meeting state graduation rates between the school years of 2008 and 2011.

Table 5

*District Annual Yearly Progress*

School District	2008	2009	2010	2011
Communication Arts Status	Not Met	Not Met	Not Met	Not Met
Mathematics Status	Not Met	Not Met	Not Met	Not Met
Attendance Rate	Met	Met	Met	Met
Graduation Rate	Not Met	Met	Met	Not Met

**Participants**

The study’s population sample invited to participate consisted of 1,422 teachers within the school district during the 2012-2013 school year. All teachers were currently teaching in a classroom, grades K-12, and were invited to participate in the teacher reported preparedness survey. Teaching experience in the district is comparable to the state average with the percent of staff with advanced degrees being significantly higher in the participating school district than the state shown in Table 6.

Table 6

*Teacher Experience and Advanced Degrees*

Average Years of Teaching Experience	2009	2010	2011
State	12.2	12.5	12.5
School District	12.4	12.7	12.8
Percent Staff with Advanced Degrees	2009	2010	2011
State	53.5	56.0	57.7
School District	70.7	71.4	71.6

All teachers in this school district have a district provided laptop, email address, and Internet access at district facilities with the expectation technology is used daily in classroom instruction. New teacher hires are trained to utilize district technology and are

urged to communicate electronically with staff, students, and parents through email, Blackboard (an electronic curriculum management system), and through the district web-based student record system. In addition, all district and state surveys are done electronically and are frequently specific to the web-based programming of SurveyMonkey.

Teacher Survey response rates are predicted to be around 30 percent. Kittelson (1997) stated that “one can expect between a 25 and 30% response rate from an e-mail survey when no follow-up takes place. Follow-up reminders will approximately double the response rate for e-mail surveys” (p. 196). Although, too many reminders can have the opposite effect and decrease the response rate (Kittelson, 1997). Aoki and Elasmr (2000) argued,

Though there are still limitations to overcome if the Web is used for general population survey, the Web will present advantages over traditional modes of data collection if it is used for specific populations that are known to be Internet savvy. (p. 3)

### **Instrument**

The study utilized the Teacher Survey to answer the two research hypothesis. To answer the questions of teacher reported preparedness of new and experienced teachers based on certification type, the survey instrument was divided into the informed consent and the Teacher Survey. The Teacher Survey was comprised of selected questions from the 2007-2008 SASS Public School Teacher Questionnaire. Appendix B includes selected questions from the SASS Teacher Questionnaire and also specifies that information on their website is public domain and may be reproduced, linked to, or replicated. In addition to the public permission, the researcher contacted NCES by phone and email to ask specifically for permission to replicate selected questions from the 2007-2008 SASS Public Teacher

Questionnaire. I was directed to the webpage displayed in Appendix B to document permission for use of survey questions. Selected questions from the SASS questionnaire to be utilized for the Teacher Survey are detailed in Table 7.

Table 7

*Teacher Survey and Corresponding SASS Questions*

Teacher Survey	2007-08 SASS Public Teacher Questionnaire
1	67
2	68 and 69
3	68 and 69
4	1
5	10a
6	35a
7	33a
8	31
9	35 a
10	37 a-f
11	37 a-f

Survey questions 1-9 (independent variables) on the Teacher Survey collected demographic information pertaining to gender, race, experience (new vs. experienced), certification type, and teacher licensure pathway (alternative vs. traditional). Each question matched the wording in the SASS survey except for question seven. Question seven addressed the Missouri teaching certificate held and utilized the specific terminology listed on the Missouri Department of Elementary and Secondary Education website (MDESE, 2012). Questions 10 and 11 a-f (dependent variables) on the Teacher Survey correspond with question 37 a-f on the SASS Survey collected information specific to teacher reported preparedness.

These precise questions were derived from the SASS Public School Teacher Questionnaire because of their specificity to the research questions to be measured in the study. The SASS survey measures multiple constructs and this researcher only selected defined questions pertaining to the teacher reported preparedness construct to be measured. Selecting only specific questions from the SASS survey to utilize in this study does not impact the reliability and validity originally established by the SASS survey. By utilizing the exact questions from the SASS survey, this researcher is tied to the reliability and validity of the SASS survey. The reliability and validity of the SASS survey instrument was conducted through extensive pretesting, consistency edits, and test-retest methods.

The instrument (see Appendix A) contained 11 items with nine multiple choice questions and two questions using a 4-point Likert scale with no midpoint (neutral) from one (not at all prepared) to four (very well prepared). Completing and submitting the instrument took approximately 10-15 minutes. Data gathered using Survey Monkey was exported to an Excel file.

### **Procedures**

Prior to the initiation of the study, the researcher completed the University of Missouri-Kansas City Institutional Review Board (IRB) application to obtain approval for the research study and the use of human subjects. The researcher was required to take and pass an online test for IRB approval and to confirm the understanding of IRB rules and processes in the CITI Program with a completion report number of 5467741. In addition to the IRB process, the researcher followed the school district's policy for obtaining approval for research within the district. Research was only initiated after IRB approval had been received.

Certified teachers currently teaching in the classroom were identified through the school district's Human Resources Department and the Professional Development Department and were released to the researcher. An initial email message was sent to all certified teachers in the district and contained a brief description of the study and informed consent form (see Appendix D), and provided a link to the web-based teacher survey. A follow-up email was sent two-weeks after the initial invitation to gain more respondents before the closing deadline as a final invitation to participate in the survey.

The electronic or web-based survey was created using Survey Monkey Survey Builder. Teachers from the population were sent an introductory email invitation to

participate in the study, informed of their rights, assured confidentiality, and invited to participate in the study by clicking on the link to the survey through any computer with an Internet connection. The survey was made available to the respondents for a three-week period in August and September of 2012. Once the survey closed, the data was analyzed for descriptive statistics using the Survey Monkey analysis features.

Surveys were self-administered and the researcher was not present as individual participants completed the surveys. The first page of the survey consisted of the informed consent and closely mirrored the recommendation formulated by Fink (2006). The form included the purpose of the survey, the voluntary nature of the survey, procedures to follow, statement of confidentiality, and the identification of the researcher. Clicking on the survey link and completing the survey indicated voluntary participation. Survey Monkey automatically records the respondent time stamp to indicate consent of respondents. The informed consent time stamp was held by an individual known to the researcher for a period of at least three years from the completion of the research.

Completion of the informed consent portion of the survey was recognized by clicking on the survey link and completion of an eleven question Teacher Survey (see Appendix D). The demographic portion of the survey included the independent variables of certification routes (alternative vs. traditional) and years of experiences (new vs. experienced) that was used to separate survey participants into predetermined groups to answer the research hypotheses. Additional demographic data was collected to identify the number of respondents classified as “Highly Qualified.”

### **Data Analysis**

The statistical program, Statistical package for the Social Sciences-PC (SPSS-PO) version 21 was used to conduct the statistical analyses necessary to address the two research hypotheses for this study. Variables were downloaded from the Excel file provided by Survey Monkey into an SPSS data file and analyzed. The researcher used MANOVAs, parametric statistical tests, that allow for testing of more than one dependent variable (teacher reported preparedness) in the same analysis and identifies if changes in the independent variable (alternative vs. traditional certification) have a significant effect on the dependent variables (Fraenkel & Wallen, 2003). MANOVAs were also conducted in this study to determine if experienced teachers have a more positive perception of their efficacy of preparedness than that of new teachers. MANOVAs allow researchers to test interaction effects between one or more independent variables (certification route and years of experience) on two or more dependent (teacher reported preparedness variables) and are an advantage over simple t-tests in testing more complex hypotheses. Levels of statistical significance were .05 for all comparisons and the analysis also included a check for effect sizes to examine practical significance (Cohen, 1988; Field, 2005).

### **Reliability and Validity**

The web-based survey's standardized format applied to this study is reliable in consistency of presentation, as all survey participants were administered identical surveys; this results in consistent information from the survey participants (Fink, 2006; Gravetter & Wallnau, 2004; Patton, 1997). Heppner and Heppner (2004) emphasize survey research is generally strong on reliability and weak on validity. The validity of this study may have been threatened by selection bias due to support of or resistance to certification routes or types. By having teachers voluntarily complete the survey, what nonparticipants do not say

could prove as interesting or valuable as an analysis of responses of those teachers who did respond. Furthermore, self-reported data represent perceptions but may not always reflect reality from another's perspective (Fink, 2006).

The criteria used to maintain validity of the data produced by this study is "consistency with usage" (Patton, 1997, p. 252). Thus, valid measurements of the concepts investigated by this study must be consistent with past works applying similar concepts (Patton, 1997). To meet the validity criteria for this study, survey items were replicated from a previous study (Feistritzer, 2005; Nardi, 2003) and reviewed by members of the dissertation committee. Fink (2006) observes, "a valid survey is always a reliable one, but a reliable one is not always valid" (p. 38).

### **Summary**

This chapter included a description of the research design and methodology that was utilized in this study examining teacher reported preparedness of new and experienced teachers using the results from the Teacher Survey. Included in the chapter were nine areas specific to the methodology and procedures for this study: (a) significance of the study, (b) SASS overview, (c) research questions and hypotheses, (d) research design, (e) participants, (f) instrument, (g) procedures, (h) data analysis, and (e) chapter summary.

The results of data collection and analysis of data will be discussed in chapter four. In chapter five, a summary of the study will include the findings, the implications for practice, and discussion recommendations for future research will be shared. The appendices include SASS Public School Teacher Questionnaire (see Appendix A), NCES permission to use survey instrument (see Appendix B), Teacher Reported Preparedness Survey (see Appendix C) and informed consent and invitation to participate (see Appendix D).



## CHAPTER 4

### RESULTS

In the quest to increase student achievement, school districts are in search of skilled and highly qualified teachers to meet the needs of their students. In that search, districts find teachers at varying levels of preparation, areas of certification, and years of experience. Skilled teachers are defined by variables in this study surveying teacher's perceptions of effective classroom management, employing a variety of instructional strategies, knowing their subject matter or content, utilizing computers in the classroom, effectively assessing students, and adept in selecting and adapting curriculum and instructional materials. The No Child Left Behind Act defined "highly qualified" as teachers with a bachelor's degree, full state certification, and demonstrated subject-matter competency (No Child Left Behind Act, 2001).

Furthermore, researchers have found that a single teacher can have the greatest academic impact on a student's success (Cunningham & Arlington, 2003; Darling-Hammond, 2000; Jackson, 2009; Marzano & Heflebower, 2012; Marzano et al., 2001). The magnitude of a teacher's impact signifies the importance of identifying successful teacher preparation programs, mentoring programs for beginning teachers, and professional development programs to continuously improve and advance teacher talents in the classroom (Bullard & Felder, 2003; Hanes & Mitchell, 1985; Strong, 2011; Strong, Fletcher & Villar, 2004).

The purpose of this study was to determine whether teacher certification routes and years of experience show a statistically significant relationship to teachers' perceptions of their own preparation in six areas. Teachers were asked to respond to an electronic survey

created from selected questions of the Schools and Staffing Survey Teacher Questionnaire related to teacher preparation. The six areas of preparation surveyed were (a) classroom management, (b) use of a variety of instructional strategies, (c) knowledge of content, (d) classroom usage of technology (e) assessment of students, and (f) selection and adaptation of curriculum and instructional materials. The following research questions were addressed in this study:

1. Is there a statistically significant relationship between years of experience of teachers and teacher reported preparedness among the teacher sample?
2. Is there a statistically significant relationship between teacher certification type and teacher reported preparedness among the teacher sample?

This chapter describes the findings from an analysis of the 345 respondents to the Teacher Preparedness Survey administered in August of 2012, with three main areas of emphasis. First a review of the research design will be offered. Second, the study participants will be described. Third, and most important, the results of SPSS crosstabulations and factorial MANOVA statistical tests conducted on the sample data will be delivered. Through these three sets of information the results of the research hypotheses were discovered. The first research hypothesis postulates a statistically significant relationship exists between new teachers and teacher preparedness variables. The second research hypothesis postulates a statistically significant relationship exists between alternative certification and teacher preparedness variables. The summary concludes this chapter.

## **Research Design**

The population of this study consisted of 1,422 certified teachers of the selected Midwestern, suburban school district in the 2012-2013 school year. The researcher was restricted to the timeline of the participating school district dissemination of web-based survey information. On August 17, 2012, an email invitation was sent to certified teachers from the district's Human Resources office inviting participation in a study by clicking on the web link provided. Participants that clicked on the link were presented with the informed consent detailing the purpose of the study and providing an opportunity to participate. Teachers then clicked the button PROCEED TO SURVEY to participate or DO NOT PARTICIPATE button if they chose to decline participation.

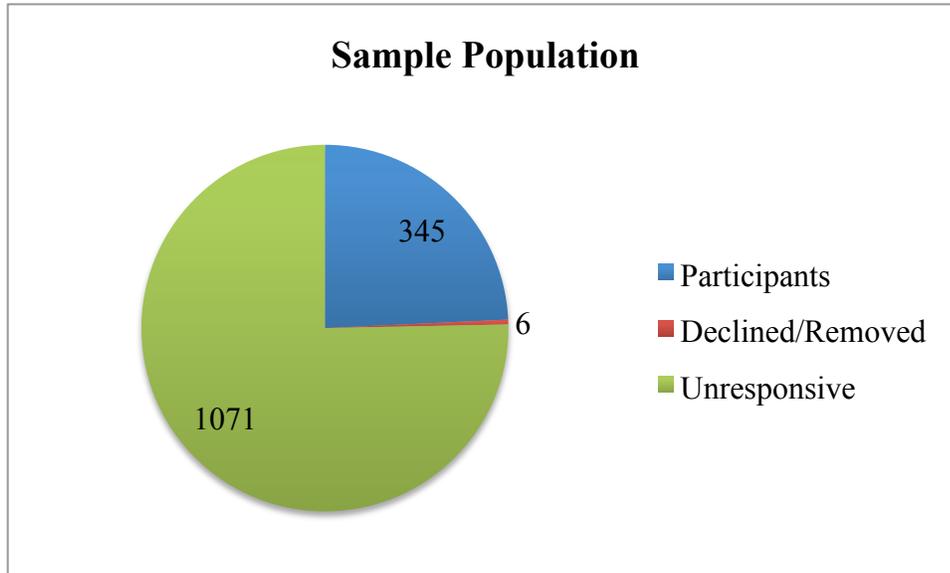
The survey consisted of six demographic questions and twelve four-point likert questions taken from the Schools and Staffing Teacher Questionnaire displayed in Appendix E. The SASS surveys began in the 1980s and were a national survey used to collect data on student populations, teacher and administrator characteristics, and schools. The SASS questionnaires are sponsored by the National Center for Education Statistics and were designed to provide descriptive data on the nations schools, condition of education, and allow national, state, and local comparisons. This study utilized selected questions from the Schools and Staffing Survey. Specifically, the final twelve likert-questions ask teachers to self-report their perceptions of preparation in six specific areas:

- handling a range of classroom management or discipline situations (classroom management);
- using a variety of instructional methods (instructional strategies);
- teaching your subject matter (knowledge of content);

- using computers in classroom instruction (computer-based instruction);
- assessing students (student assessment); and
- selecting and adapting curriculum and instructional materials (selection of curriculum).

### **Sample Description**

The initial request for participants yielded 272 respondents with a 19% response rate. There was a time factor in this study, as teachers were not on contract the Friday the email invitation went out and school began the following week. Due to the small response rate, a follow-up email reminder was sent on September 4, 2012, from the participating school district to collect additional respondents. The second invitation identified 76 new teachers as visiting the survey link and reading the informed consent. The follow-up produced a response rate of 7% completing the survey. Final participant numbers consisted of 348 certified teachers from the selected school district excluding the two declining participation. In reviewing the data, three respondents had incomplete questionnaires resulting in a final sample population of 345 participants at 24.3% response rate as detailed in Figure 1.



*Figure 1.* Sample population in the Teacher Preparedness study. This figure illustrates the number of participants and exclusions in the survey sample.

The sample was shy of the goal of 30% with its 24.3 % response rate. Kittelson (1997) predicted web-based response rates at 30% with no follow-up but follow-up reminders approximately double the response rate. In this study, we did not meet Kittelson’s prediction. However, Thomas Archer (2008) wrote, “Although it would be desirable to apply findings in any survey effort to the entire potential respondent pool, having responses from 40% or less of the potential respondents is still a great deal of information” (p. 4).

Demographic information on certificated teachers were collected and reported in the following tables and figures. Information gathered included classification of position, years of experience, grade level taught, type of teaching certificate, certification route, and Highly Qualified Teacher information. In running descriptive statistics in SPSS, frequency reports indicate only 338 valid cases to analyze in the sample. Table 8 demonstrates the valid cases and missing data of the demographic variables.

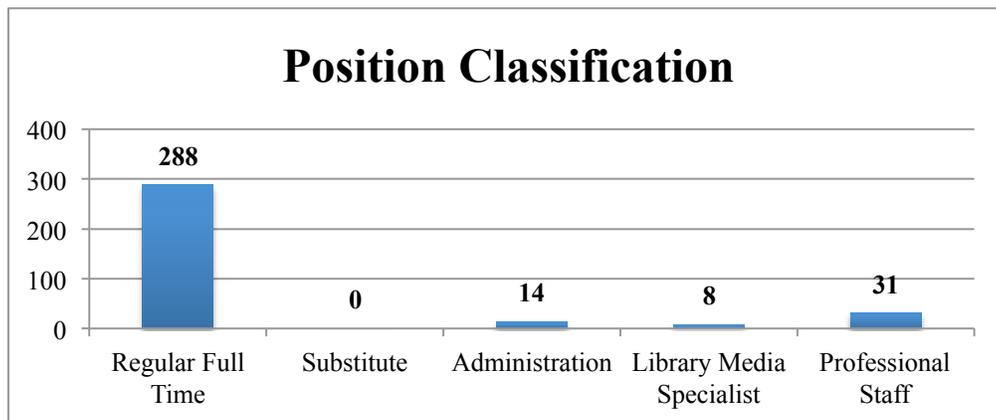
Table 8

*Response Data of Participating Teachers*

	Classify Position	Years Experience	Grade Level	Missouri License	Alternative Certification	HQT
N (Valid Responses)	341	340	340	338	338	338
N (Missing Responses)	4	5	5	7	7	7

The consent to participate was listed as the first question, followed by number two’s demographic question, Classification of Position. Participants were asked, “How do you classify your position at THIS school district, that is, the activity at which you spend most of your time during the school year?” Choices for selection were: (1) Regular full-time teacher, regular part-time teacher, or itinerant teacher, (2) Long-term substitute, (3) Short-term substitute, (4) Administrator (e.g., principal, director, superintendent), (5) Library media specialist, and (6) Other professional staff (e.g., counselor, curriculum coordinator) detailed in Figure 2.

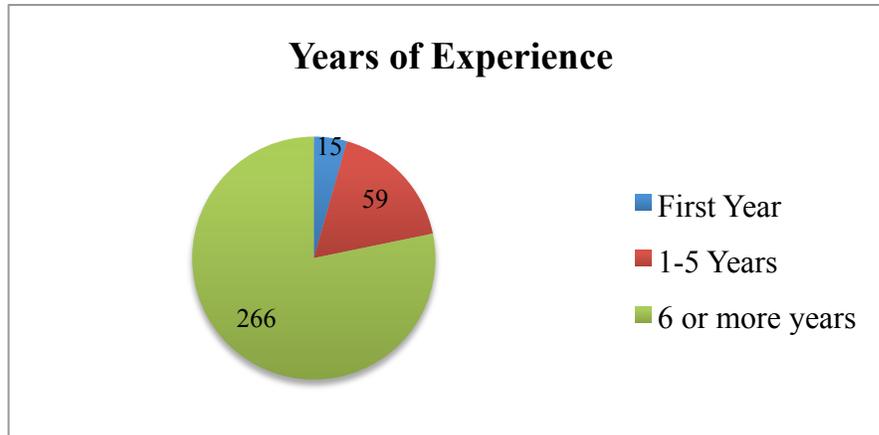
The results of descriptive statistics in Figure 2 indicated the majority of participants were regular teachers (n=288) at 84.5% and were coded as 1 in the dataset. No long-term or short-term substitutes participated in the survey, and therefore, no data were coded as a 2 or 3 and are not listed in the frequency table. In this school district, administrators, instructional coaches, library media specialists, and counselors are required to teach students in the classroom setting on a part-time basis. They were asked to self-report because part of their job responsibilities included teaching students. Fourteen administrators participated making up 4.1% (code=4), followed by 8 library media specialists (code=5) at 2.3 percent. The



*Figure 2.* Position classification. This figure illustrates participant responses to position classification, a demographic variable, in the study.

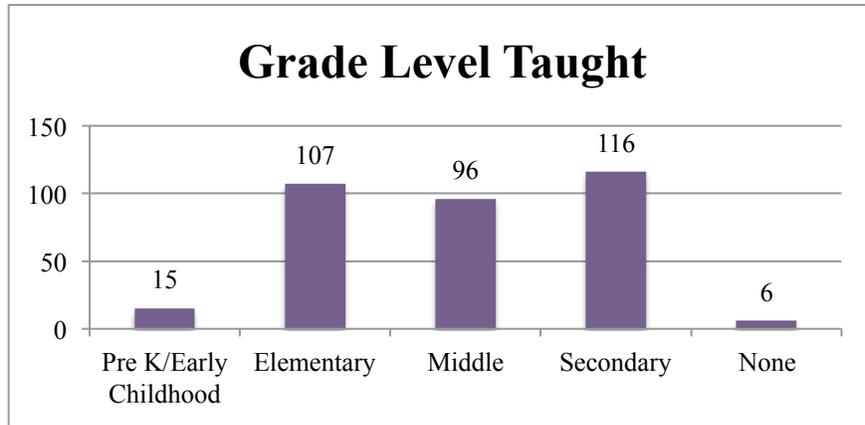
second largest group of participants was other professional staff (code=6) with 31 participants reaching 9.1 percent. Other professional staff encompasses positions requiring current or prior classroom teaching experience, such as, school counselors, curriculum coordinators, and instructional coaches or specialists.

A second demographic was captured with the third question, “How many years have you worked as an elementary or secondary teacher in public schools?” Participants chose from entering first year, five years or less, or more than five years. First year teachers (n=15) made up 4.4% of sample. New teachers (n=59) with 1-5 years of experience made up 17.4% of the sample. Experienced teachers (n=266) with more than 5 years of experience at 78.2% contained the largest number of respondents as shown in Figure 3.



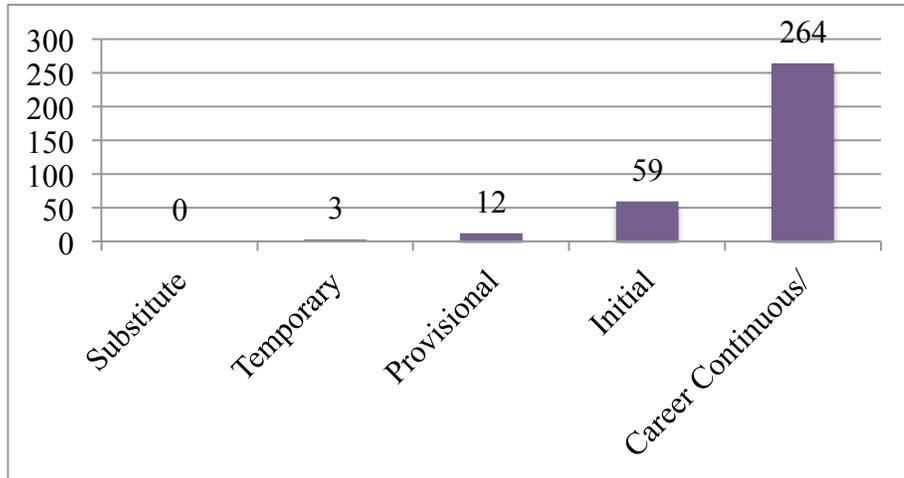
*Figure 3.* Years of experience. This figure illustrates the study participant years of experience (demographic variable).

Grade level taught was the demographic captured with the fourth question, “In which grade levels are ALL of the students you currently teach?” Of the five choices, Pre-K and Early Childhood was selected by 4.4% (n=15) of the sample. Elementary teachers made up 31.5% (n=107), followed by, middle level at 28.2% (n=96) of the respondents. Secondary teachers were the largest group at 34.1% (n=116) and those reporting no affiliation with a grade level were 1.8% (n=6) making it the smallest of the sample in Figure 4. Five participants didn’t choose a grade level and remained in the dataset as they teach students at multiple grade levels. By choosing no grade level the participant may hold teaching positions at multiple grade levels could include traveling music, art, physical education, and special education teachers or serve multiple buildings as an instructional coach.



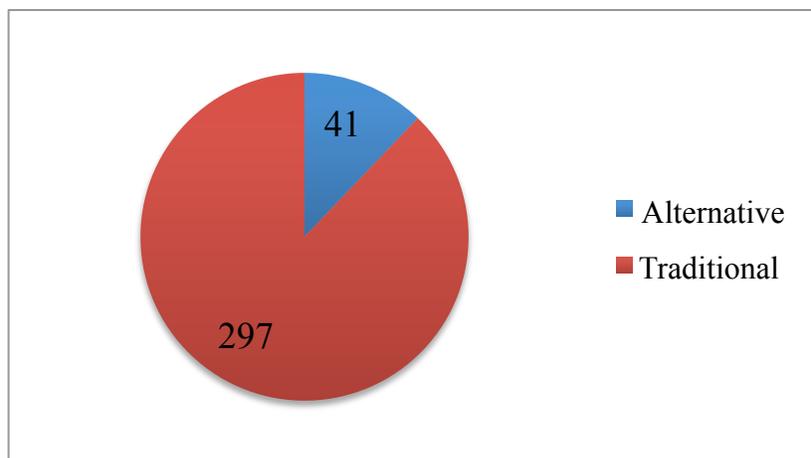
*Figure 4.* Grade level taught. This figure shows the number of study participants by the demographic variable, grade level taught.

Question five addressed type of teaching certificate or license, “Which of the following describes the teaching certificate you currently hold in Missouri?” The selection of choices for this question were modified by the researcher to label choices specific to vocabulary used by Missouri’s Department of Elementary and Secondary Education and are displayed on every teacher’s certificate of licensure. The substitute certificate choice yielded zero responses, which directly reflects the lack of responses to that position classification in question one. The smallest categories were Initial (n= 59), Provisional (n=12), and Temporary (n=3). Initial licensure resulted in 17.5% (n=59) of the responses. The largest number of respondents occurred in the Career Continuous or Lifetime certificate at 78.1% (n=264) of the sample represented in Figure 5.



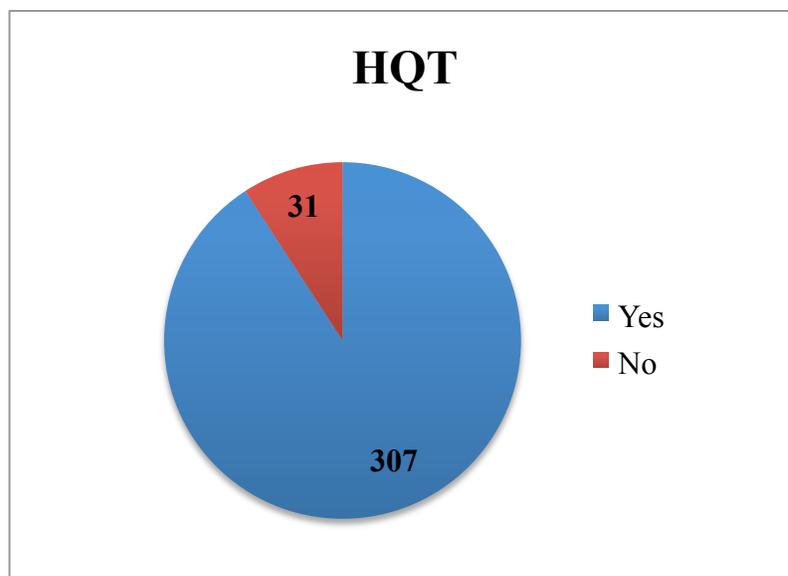
*Figure 5.* Type of teaching certificate. This figure represents study participants by type of teaching certificate or license.

Question 6 focused on type of certification route for teachers with the question, “Did you enter teaching through an alternative certification program?” The response was a forced yes or no with 12.1% (n=41) responding yes in receiving certification through an alternative route. Traditional certification route yielded an 87.9% (n=297) responses. The larger response rate for traditional certification was an expected outcome as displayed in Figure 6.



*Figure 6.* Certification route. This figure represents the two types of certification route of study participants.

The final demographic captured in question 7 was No Child Left Behind's Highly Qualified Teacher requirement for schools. Responses were yes or no to the question, "This school year, are you a Highly Qualified Teacher (HQT) according to Missouri's requirements?" The largest number of respondents at 90.8% (n=307) answered "yes" to the question. Those answering "no" encompassed 9.2% (n=31) of the responses. This number shown in Figure 7 differed from the district's report of all teachers were considered Highly Qualified in the 2012-2013 school year.



*Figure 7.* Highly Qualified Teacher. This figure shows the number of study participants reporting Highly Qualified credentials in the school district surveyed.

### **Statistical Analysis**

The data collected were analyzed using a factorial multivariate analysis of variance (MANOVA). Analysis of variance (ANOVA) tests are utilized when the independent variables have two or more categorical variables or dependent variable (i.e., certification type, grade level, and years of experience) and compare the means between three or more

groups of independent variables (i.e., classroom management, usage of variety of instructional strategies, knowledge of content, classroom usage of technology, assessment of students, and selection of curriculum and instruction materials). Multivariate analysis of variance (MANOVA) expands the MANOVA and tests the significance of group differences between two or more related dependent variables, six teacher preparedness variables (DVs), and the multiple categorical (IV) variables, type of certification route (alternative or traditional), grade level (elementary/middle and high school) and years of experience (new and experienced). The six dependent variables are classroom management, usage of variety of instructional strategies, knowledge of content, classroom usage of technology, assessment of students, and selection of curriculum and instruction materials.

Both main effects and interactions were analyzed to determine the presence (or non-presence) of differences between subgroups on the preparedness items on the survey. When an independent variable has an influence on a dependent variable a main effect occurs. For example, in this study one main effect occurred between years of experience and teacher preparedness variables, the mean ratings of teacher preparedness variables were dissimilar based on years of experience, new and experienced. New teachers mean scores were lower than experienced teachers, indicating they felt less prepared in the six-teacher skill areas surveyed. Thus, graphing mean scores can indicate differences between subgroups (new and experienced).

In addition, an interaction occurs when the effects of two independent variables are independent of each other. Univariate analysis of variance (ANOVA) follow-ups were conducted to look at dependent variables (classroom management, curriculum knowledge, instructional strategies practiced, technology usage in classroom, and assessment design)

that were significant with the categories that were significant in the multivariate (MANOVA) tests individually rather than as a whole to determine which one is MOST important in making a difference. Specifically, in this study teacher preparedness in knowledge of content showed the biggest difference in mean scores based on years of experience only without examining certification route.

Prior to performing factorial MANOVA, SPSS cross tabulations were used to look for possible combinations and how they compare. Cross tabulations are also known as contingency tables and help look at whether the value of one variable is associated with, or contingent upon, that of another. The tables reported the number of cases in each of the cells of this design. The cell (*ns*) in several of the demographic (categorical) variables were not balanced as seen in Table 1, which means there would be insufficient data to obtain a clearly interpretable outcome if a MANOVA were performed. According to Tabachnick and Fidell (2001, p. 329), 20 or more observations in each cell will ensure that MANOVA can be used but 10 can be sufficient. Therefore, years of experience, first year teachers ( $n=10$ ) were combined into one group with teachers with five years or less ( $n=42$ ) and termed new teachers ( $n=52$ ). In types of licensure, only initial ( $n=50$ ) and career continuous or lifetime ( $n=214$ ) were kept. Grade level demographics held the same problems with the Pre-K or Early Childhood groups ( $n=15$ ) and no grade level ( $n=6$ ) were eliminated from the group. In classification of position, all groups were dropped except regular full time or itinerant teachers ( $n=288$ ). Within this new subsample of the data, the ratio of alternative certification ( $n=33$ ) to traditional certification ( $n=231$ ) is still not perfect but much better after eliminating some of the categories of other variables shown in Table 9.

Table 9

*Teacher Demographics*

Classification	Grade Level		Licensure				
	N	Percent	N	Percent	N		
<b>Regular</b>	<b>287</b>	84.2%	Pre-K/Early Child	10	2.9%	<b>Initial</b>	<b>61</b>
Administrator	11	4.1%	<b>Elementary</b>	<b>104</b>	30.6%	<b>Career/Lifetime</b>	<b>262</b>
Library	8	2.3%	<b>Middle</b>	<b>107</b>	31.5%	Provisional	12
Other professional	32	9.4%	<b>Secondary</b>	<b>114</b>	33.5%	Temporary	3
			None	5	1.5%		
Total	338		Total	340		Total	338

Years of Experience	Certification Type		Highly Qualified				
	N	Percent	N	Percent	N		
*First Year	15	4.4%	<b>Traditional</b>	<b>297</b>	87.9%	HQT	305
<b>*5 years or less</b>	<b>58</b>	17.1%	<b>Alternative</b>	<b>41</b>	12.1%	Not HQT	30
<b>More than 5</b>	<b>266</b>	78.5%					
Total	340			338			338

\*Combined to balance cell sizes

**BOLD** – Part of the subsample

Cross-tabulation of alternative certification with experience groups is outlined in Table 10 and is reflective of the subsample population used for analysis. In trying to determine if type of certification route, grade level taught, or years of experience influence teacher preparedness, the 2 x 2 x 2 (certification x grade x experience) factorial MANOVA was performed on the six teacher reported preparedness (DV) variables of the current year. The IV's were certification route, grade level, and years of experience. Type I sum of squares can be used to correct for the unequal *ns* in the cells, however the results of Type I and Type III did not differ. Therefore, the most commonly reported Type III sums of squares was used to report the findings since the results did not differ.

Table 10

*Subsample Population Used for Analysis*

	Less than 5 years	More than 5 years	Total
Alternative Certification	19	14	33
Traditional Certification	42	189	231
Total	52	212	264

Initial screening of data indicated that the data were in violation of the assumptions of Box's M test as it relates to unequal cell size even though corrections were made to cell sizes by combining responses in years of experience and grade levels. Looking at all of the dependent variables for normality across groups showed less variance with a slight negative skew in some of the dependent variables for the more experienced teacher group. One solution to this violation would be to use Pillai's Trace as the multivariate test statistic as it is recognized to be more robust to violations of homogeneity but the results of the multivariate tests did not differ between Pillai's trace and Wilk's Lambda (the more

commonly reported test statistic). The SPSS output detailing these tests is located in Appendix D. In general the results should be interpreted with caution because of the inequality in cell sizes; however, in the significant results there is adequate power and most results are less than  $p < .02$  not bordering the  $p < .05$  cutoff.

### **Hypotheses**

The first hypothesis explored the relationship between teacher level of experience and teacher reported preparedness variables. Data analysis of this study investigated the presence (or non-presence) of differences and/or interactions between years of teaching experience (new vs. veteran) and Teacher Preparedness variables. One main effect, years of experience, was statistically significant, with Wilk's Lambda ( $\Lambda$ )=.929, approximate  $F=(6, 251)3.194$ ,  $p=.005$ ; this also corresponded to a small effect size ( $\eta^2=.071$ ). This suggests that there was a difference in the mean ratings of preparedness based on years of experience. The null hypothesis, no statistically significant relationship exists between new teachers and teacher reported preparedness variables, was rejected. Follow-up univariate analyses indicated that only one of the dependent variables, knowledge of content, indicated a statistically significant relationship with years of experience,  $F=3.947$ ,  $p=.048$  and a small effect size of  $\eta^2=.015$ .

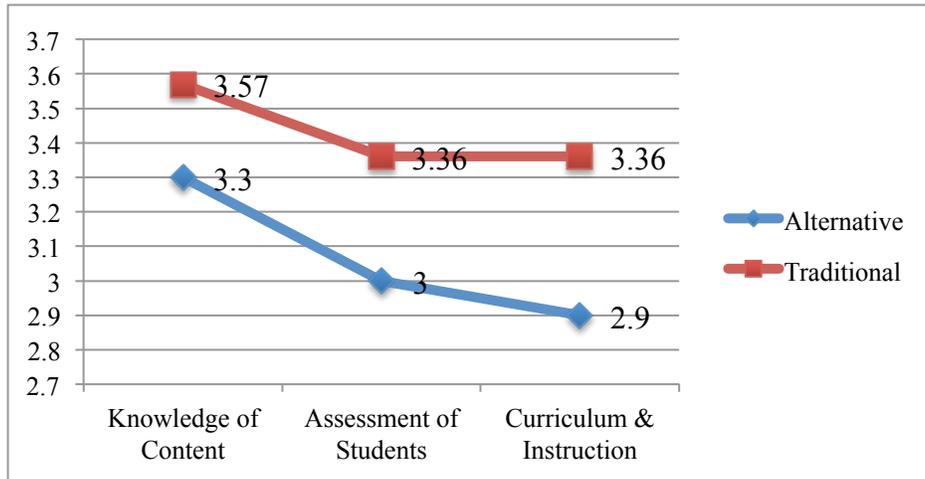
The second hypothesis explored the relationship between teacher certification type and teacher reported preparedness variables. Data analysis of this study investigated the presence (or non-presence) of differences and/or interactions between type of teacher certification route (alternative vs. traditional) and Teacher Preparedness variables. The main effect for type of certification was not statistically significant with Wilk's Lambda  $\Lambda=.965$ ,

approximate  $F = (6, 251)1.524$ ,  $p = .171$ . Although, one two-way interaction of experience and certification route was significant with Wilk's Lambda  $\Lambda = .943$ , approximate  $F = (6, 251)2.518$ ,  $p = .022$  with  $.057$  effect size. The null hypothesis was rejected. These results suggest that there is a relationship between teachers' years of experience and certification route in reporting preparedness with all six dependent variables when examined together when there were no differences observed when analyzed separately. No other interactions were significant.

As the interaction was statistically significant, follow-up analyses were required. Univariate ANOVAs were conducted on each teacher preparedness (DV) variable to determine which variables were influenced by the combination of certification route and years of experience. The significant effect occurred between certification route and years of experiences with three of the preparedness variables, knowledge of content, selection of curriculum and instruction materials, and assessment of students. Dependent variable, knowledge of content, was statistically significant,  $F = 5.519$ ,  $p = .021$  with  $.021$  effect size. Assessment of students variable's statistical significance was  $F = 8.366$ ,  $p = .004$  with a small effect size of  $.032$ . The curriculum and instruction variable's statistical significance was  $F = 9.689$ ,  $p = .002$  with effect size of  $.036$ .

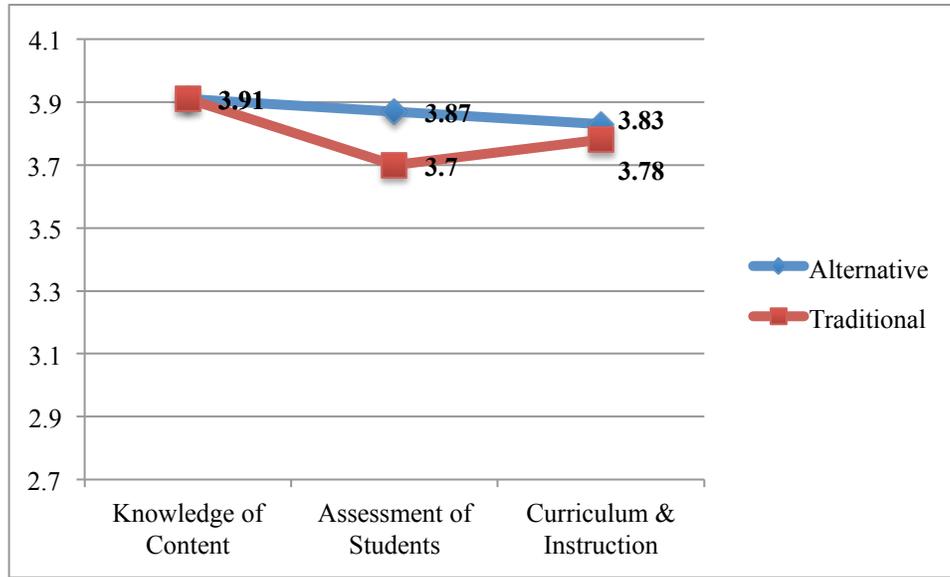
Plots were examined to interpret the significant interactions on these dependent variables and located in Appendix D. As can be seen in Figures 8, 9, 10, and 11, alternatively certified teachers with less than six years of teaching reported being less prepared in knowledge of content, knowledge of curriculum, and assessment of students as compared to those teacher with traditional certifications and those alternatively certified teachers with

more than 5 years experience. Usage of a variety of instructional strategies, DV Instruction, was marginally significant but at .08 it doesn't meet the  $p < .05$  threshold of statistically significant.



*Figure 8.* New teacher means. This figure illustrates the means for Teacher Preparedness variables of new teachers.

Teacher Preparedness variables knowledge of content, assessment of students, and selection of curriculum and instruction materials of experienced teachers (more than five years) by certification route means are detailed in Figure 2. Knowledge of content of traditional and alternative certification route means were the same ( $M=3.91$ ) indicating the same reported preparation. In this figure, assessment of students showed more of a difference in means with traditionally ( $M=3.7$ ) certified teachers reporting slightly less preparation than alternatively ( $M=3.87$ ) certified teachers. A small difference in means between traditional ( $M=3.78$ ) and alternative ( $3.83$ ) certification route teachers was in the Teacher Preparedness variable, selection of curriculum and instruction materials.



*Figure 9.* Veteran teacher means. This figure demonstrates the means for Teacher Preparedness variables of experienced teachers.

In looking at only alternatively certified teachers, Figure 10 outlines the differences of means with the three statistically significant Teacher Preparedness variables. In all three dependent variables, means of experienced teachers were higher. In knowledge of content, experienced teachers ( $M=3.91$ ) reported being more prepared than less experienced teachers ( $M=3.30$ ). In Teacher Preparedness variable, assessment of students, experienced ( $M=3.87$ ) teachers reported being more prepared than less experienced ( $M=3.00$ ) teachers. Selection of curriculum and instruction materials indicated experienced ( $M=3.78$ ) teachers reported being more prepared than less experienced ( $M=2.91$ ) teachers (see Figure 10).

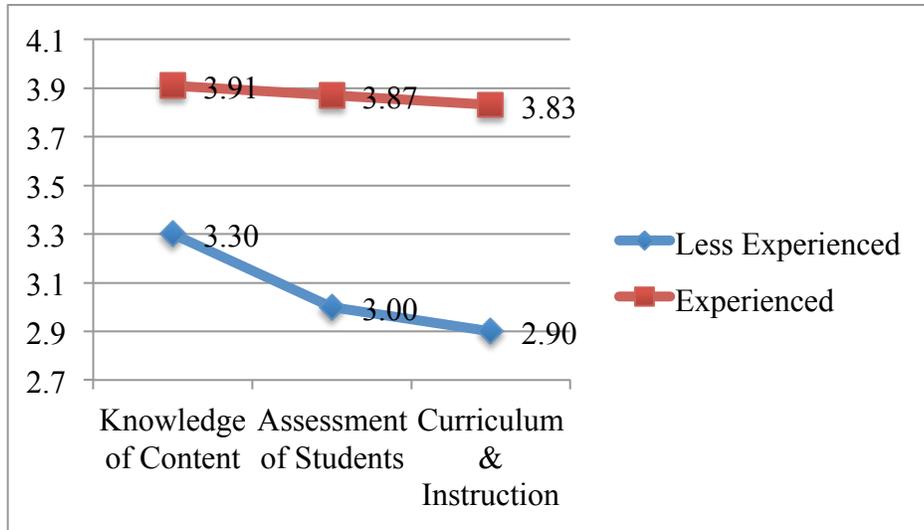


Figure 10. Alternatively certified teacher means. This figures shows the means for Teacher Preparedness variables of alternatively certified teachers.

Traditional certification route teachers reported preparedness means in the three statistically significant Teacher Preparedness variables, knowledge of content, assessment of students, and selection of curriculum and instruction materials are outlined in Figure 11. In knowledge of content, experienced teachers (M=3.91) reported being more prepared than less experienced (M=3.57). In addition, assessment of students, experienced teachers (M=3.7) reported being more prepared than less experienced teachers (M=3.36). In the last variable, selection of curriculum and instructional material, experienced teachers (M=3.78) reported being more prepared than less experienced teachers (M=3.36). The mean for less experienced teachers was the same with reported preparedness variables, assessment of students and selection of curriculum and instruction materials.

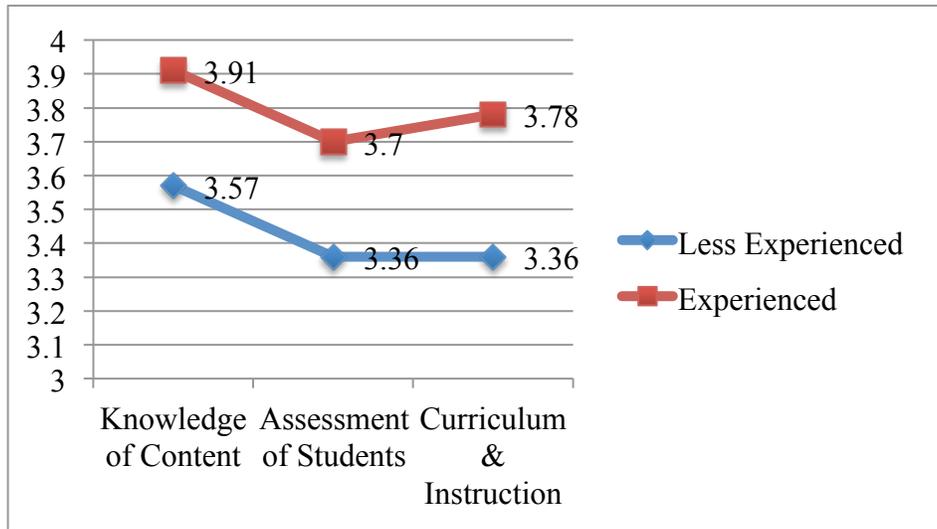


Figure 11. Traditional certification means. This figure represents the means for Teacher Preparedness variables of teachers of traditionally certified teachers.

Factorial MANOVA were used to test the two research hypotheses outlined in chapter three. First, cross tabulations revealed that the sample’s demographic variables had unbalanced cell sizes, which would be insufficient data to obtain a clearly interpretable outcome of a MANOVA. To correct these uneven cell sizes, demographic variables were combined or eliminated to create a new subsample. Demographic variables impacted were years of experience, type of licensure, grade level, and classification of position. The subsample was analyzed using a factorial multivariate analysis of variance (MANOVA) to test the significance of group differences and or interactions between two or more groups. The results of the statistical tests conducted for each research question revealed information regarding interactions between years of experience, certification route, and Teacher Preparedness variables.

Analysis of variance procedures conducted to answer research question one’s investigation of differences and/or interactions between years of experience and Teacher

Preparedness variables revealed only one effect. This suggests that there was a difference in the mean ratings of preparedness based on years of experience. The null hypothesis was rejected. Follow-up univariate analyses showed only one of the dependent variables, knowledge of content, as statistically significant with years of experience. No statistically significant effect was found between grade level and type of licensure demographic variables with Teacher Preparedness variables.

Analysis of variance procedures conducted to answer research question two's investigation of differences and/or interactions between teacher certification route (alternative vs. traditional) and Teacher Preparedness variables revealed no statistically significant effect. Although, one two-way interaction produced a statistically significant effect, years of experience and certification route with the six Teacher Preparedness variables. The null hypothesis was rejected. Follow-up univariate ANOVAs were conducted on each teacher preparedness (DV) variables to determine which variables were influenced by the combination of certification route and years of experience. These tests revealed three statistically significant preparedness variables (a) knowledge of content, (b) selection of curriculum and instruction materials, and (c) assessment of students.

Traditionally certified, new teachers reported being more prepared in knowledge of content, selection of curriculum and instructional materials, and assessment of students. The biggest difference occurred in the selection and adaptation of curriculum and instructional materials. Although, experienced teachers reported similar levels of preparation in these three areas with a slight difference in assessment of students. Alternatively certified, experienced teachers reported being slightly more prepared in the assessment of students. In

all three variables, experienced teachers reported being more prepared than new teachers regardless of type of certification.

### **Summary**

Federal legislation in the No Child Left Behind Act (NCLB, 2001) highly publicized teacher quality and the required qualifications of teachers. The intent of the mandate of a highly qualified teacher in every classroom was to improve student achievement but was incomplete and allows individual states to define licensure requirements. The autonomy states have in certifying or licensing teachers does not address effectiveness in the classroom. Characteristics that make an effective teacher differ dependent on the researcher. In this study, the researcher defined those characteristics with six variables on classroom management, use of instructional strategies, knowledge of content, use of computers in the classroom, assessment of students, and selecting and adapting curriculum and instructional materials. These six variables were derived from the Schools and Staffing Survey's Teacher Questionnaire.

This research supports the findings that years of experience and certification route have an effect on teacher perceptions of their own preparation. Multiple statistical tests (crosstabulations, multivariate analysis of variance, and univariate follow-ups) showed interactions between teaching experience and certification route with only three of the six teacher preparedness variables (knowledge of content, assessment of students, and selection/adaptation of curriculum and instructional materials). In all three areas the group reporting the least preparation in all three areas were alternatively certified, new teachers. In general, new teachers reported less preparedness than experienced teachers regardless of certification route. One unique attribute presented was alternatively certified, experienced

teachers reported feelings of more preparedness in the assessment of students than traditionally certified, experienced teachers. In contrast, the other two (knowledge of content and selection and adaptation of curriculum and instructional materials) variables indicated experienced teachers (traditional and alternatively certified) reported similar feelings of preparedness. In this study, years of teaching experience influence a teacher's feelings of preparedness. Thus, experienced teachers reported feeling more prepared in all three variables.

While the preponderance of evidence indicates that new teachers feel less prepared, further research is necessary to determine if this is the case in all school districts in Missouri or the nation. In addition, this study did not connect teachers' feelings of preparedness with student achievement. Research tells us that the teacher has the most impact on the academic success of a student (Darling-Hammond, 2000; Marzano, 2010; Wong & Wong, 2009). The specific characteristics of an effective teacher continue to differ among the research but the three variables resulting in interactions in this study are consistent with the writings of Darling-Hammond (2000), Marzano (2010), Marshall (2009), and Stronge (2007).

## CHAPTER 5

### DISCUSSION OF FINDINGS

This chapter begins with a discussion of the qualities and characteristics of an effective teacher. Next, the purpose of the study is shared and the theoretical framework of self-efficacy is explained. A discussion of findings follows along with a description of this study's teacher variables. Recommendations for school districts and teacher preparation programs are suggested, and limitations are discussed. Lastly, recommendations for future study are proposed and a chapter summary is provided.

Recent research has shown that the quality of instruction is the most important factor in increasing student achievement (Hattie, 2003; Marshall, 2009; Marzano, 2009; Prince, 2002; Viadero, 2005). Good teaching helps all students and can narrow the achievement gap by improving learning outcomes for struggling or low-performing students. Hiring practices utilizing criteria to identify desirable characteristics are one way to fill schools with effective teachers. School vacancies may not occur frequently, therefore districts must employ strategies for supporting and improving current teachers in the classrooms through professional development. The six dependent variables in this study can contribute to the quality of instruction under the right conditions in the classroom, thus increasing teacher effectiveness and raising student achievement.

Are highly qualified teachers really high-quality teachers? Does hiring and retaining qualified teachers lead to improvements in student achievement? Despite general agreement about the importance of high-quality teachers there is no consensus about what specific qualities and characteristics make a good teacher. The No Child Left Behind Act of 2001 articulates a quality teacher as one who has a bachelor's degree, state teaching certification,

and demonstrated subject matter competence (No Child Left Behind Act, 2001). Missouri specifically requires a bachelor's degree, specific collegiate coursework in education, and set scores on subject or grade-level Praxis exams (MDESE, 2012).

A number of researchers have argued that teacher quality is a strong predictor of student achievement. In her analysis of student achievement across states, Darling-Hammond (2000, 2012) reports that, "measures of teacher preparation and certification are by far the strongest correlates of student achievement in reading and mathematics, both before and after controlling for student poverty and language status" (p. 11). She contends that measures of teacher quality are more strongly related to student achievement than reduced class size and teacher salaries.

In contrast to Darling-Hammond's approach that associated teacher quality with specific qualifications, Hanushek, Kain and Rivkin (1998) identify teacher quality in terms of student performance and achievement. Hanushek (1992) estimates that the difference between having a quality teacher and a poor teacher can exceed one grade-level equivalent in student achievement progress. Likewise, Marzano (2011), Sanders and Rivers (1996), and Wong and Wong (2009) argue that the single most important factor affecting student achievement is teachers. Further, they reason that lower performing students are most likely to benefit from effective teachers. Using an alternative approach to student achievement and licensure, Robert Walker (2008) looked at teacher attributes to identify quality teachers. Over fifteen years, Walker (2008) asked his undergraduate and graduate students to describe the qualities of teachers who had been the most effective in helping them learn. The characteristics mentioned in his study were a mix of teaching (preparation and a variety of teaching methods) and person traits (friendliness, humor, and compassion). In essence,

quality teachers are critical in improving student achievement and gaining an understanding of what makes an effective teacher.

Defining the characteristics of quality teachers is a complex task with some researchers defining effectiveness based on student achievement (Darling-Hammond, 2012; Rivkin, Hanushek & Kain, 1998, 2005). Teacher performance evaluation systems may define them with high ratings on classroom observations. Still others may rely on opinions of other teachers, students, parents, or administrators. Cruickshank and Haefele (2001) described effective teachers as ideal, analytical, dutiful, competent, expert, reflective, satisfying, diversity-responsive, and respected. Wong and Wong (2009) stated three characteristics of an effective teacher as one who “has positive expectations for student success, is an extremely good classroom manager, and knows how to design lessons for student mastery” (p. 10).

Stronge (2007) stated, “Qualities of effective teachers include characteristics of the teacher as an individual; teacher preparation; classroom management; and the way a teacher plans, teaches, and monitors student progress” (p. xi). The University of Missouri-Columbia developed a teacher evaluation system identifying nine indicators of an effective teacher. The nine indicators include content knowledge, student growth and development, curriculum implementation, critical thinking instruction, positive classroom, effective communicator, analyzes and uses assessment data, develops professional skills, and professional collaboration (Network for Teacher Effectiveness, 2013). Stanford University lists characteristics of effective teachers as organization and clarity, analytical/synthetic approach, dynamism and enthusiasm, instructor-group interaction, and instructor-individual interaction (Stanford University, 2013).

The Kentucky Department of Education (2013) identifies their state's five characteristics of quality teachers as learning climate, assessment and reflection, instructional rigor and student engagement, instructional relevance, and knowledge of content. Colker (2008) identified twelve characteristics of effective early childhood teachers. Those twelve include passion, perseverance, risk-taking, pragmatism, patience, flexibility, respect, creativity, authenticity, love of learning, high energy and a sense of humor. However, none of Colker's characteristics encompass instruction, assessment, or content knowledge.

Again, defining the characteristics of effective teachers is a difficult task with a variety of character traits, job skills, or knowledge and training identified. In this study, teacher preparedness variables were designated by the National Center for Education Statistics. Questions selected from the SASS Teacher Questionnaire's emphasize the skills of classroom management, a repertoire of instructional strategies, content knowledge, computer use in classrooms, assessment of students, and selecting and adapting curriculum and instructional materials (National Center for Education Statistics, 2013).

### **Purpose of Study**

The purpose of this study was to determine if years of experience and type of certification route influence teachers' feelings of preparedness in six teaching areas. Exploring teachers' sense of efficacy regarding teaching practices in specific areas is relevant to the professional development and hiring practices of the research site, as well as, valuable to teacher education programs and other school districts. In order to accomplish this purpose, survey data were collected, via the Teacher Preparedness Survey, and the data were statistically analyzed to determine the presence (or non-presence) of differences and/or

interactions between teacher certification (alternative vs. traditional) and years of experience (new vs. veteran) with teacher preparedness variables. The outcomes of this study add to the research on teacher preparedness, professional development, and teacher self-efficacy.

The results of this study support the U.S. Department of Education's (Wilson, Floden & Ferrini-Mundy, 2001) report recommending improved teacher preparation programs and creating supportive working environments for teachers. Other researchers have made similar recommendations for improving teacher preparation, professional development, and work conditions, thusly, influencing student achievement (Darling-Hammond, 1996; Darling-Hammond, 2003; Marshall, 2009; National Commission on Teaching and America's Future, 2002, 2003; Ordoernsky, 1990). In April of 2013, the Missouri Department of Elementary and Secondary Education required all principals of new teachers to complete a survey designed to gather information about teacher preparation for all first-year Missouri teachers (MDESE, 2012). All six of the teacher preparedness variables in this study were surveyed on a Likert scale, along with nine additional variables. Input was sought from administrators specific to teacher education programs, validating this study's focus to impact teacher preparation programs and district professional development.

The six areas surveyed in this were originally identified in The Schools and Staffing Survey developed by the National Center for Education Research. Questions were selected from the SASS Teacher Questionnaire and employed in this study's Teacher Preparedness Survey. A non-experimental survey design was utilized that was exploratory in nature to empirically identify if a statistically significant relationship exists between certification route (alternative vs. traditional), years of experience (new vs. experienced), and teacher preparedness.

The research site for this study was a school district located in the Midwestern United States. Participation of all 1,422 teachers employed in the school district was solicited with an email invitation on August 17, 2012, and a follow-up email on September 4, 2012, that included a link to the online survey. The invitation yielded 345 respondents who voluntarily self-reported their levels of preparedness in six identified areas.

### **Self-Efficacy**

Participants in this study were asked to self-report their preparedness in six areas of teaching. Self-reported preparation is based on Bandura's theoretical approach of self-efficacy, the beliefs a person holds about his/her ability to successfully carry out a specific task that requires a detailed knowledge and understanding (Bandura, 1997). Particularly, Bandura asserts that individuals with high self-efficacy beliefs are more resilient and more persistent in their efforts. By contrast, individuals with low self-efficacy beliefs are more likely to become stressed and abandon challenging tasks faster than individuals with high self-efficacy beliefs (Bandura, 1997). Consequently, self-efficacy beliefs can be viewed as powerful predictors of behavior that may determine choices of action and level of effort in the classroom setting. Bandura (1997) claimed:

Teachers' perceived efficacy rests on much more than the ability to transmit subject matter. Their effectiveness is also partly determined by their efficacy in maintaining an orderly classroom conducive to learning, enlisting resources and parental involvement in children's academic activities, and counteracting social influences that subvert students' commitments to academic pursuits. (p. 243)

Continued research on self-efficacy of teachers revealed that efficacy is domain and context specific. A teacher may feel highly efficacious with one specific area of the job while they have low efficacy in another area (Tschannen-Moran, Hoy & Hoy, 1998). For example, a teacher may feel well prepared in classroom management but not at all prepared

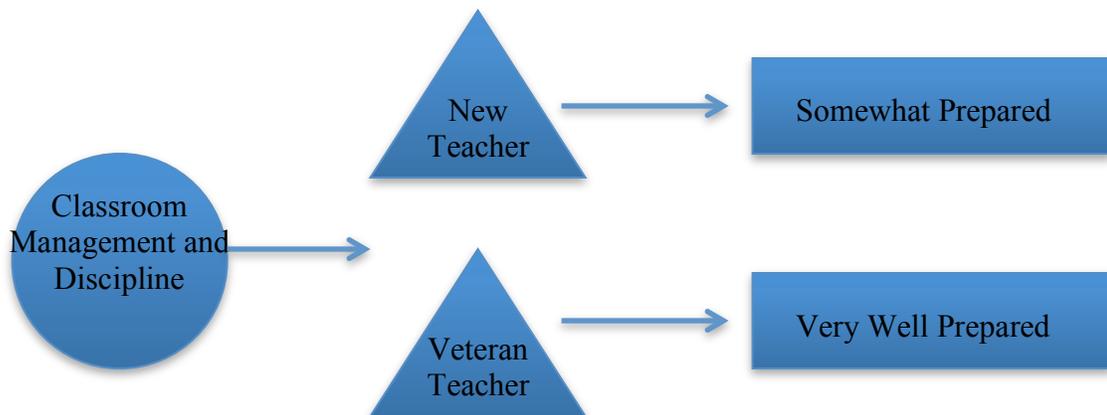
for using computers in the classroom. In this study the domains and contexts of self-efficacy are the Teacher Preparedness variables.

### **Findings**

Survey participants were asked a series of demographic questions specific to years of experience and certification route, as well as, teacher preparedness questions. In the teacher preparedness questions, respondents were asked, “In your current year of teaching, how well prepared were you to,” followed by the six teacher preparedness variables. Respondents were given the following choices to choose from:

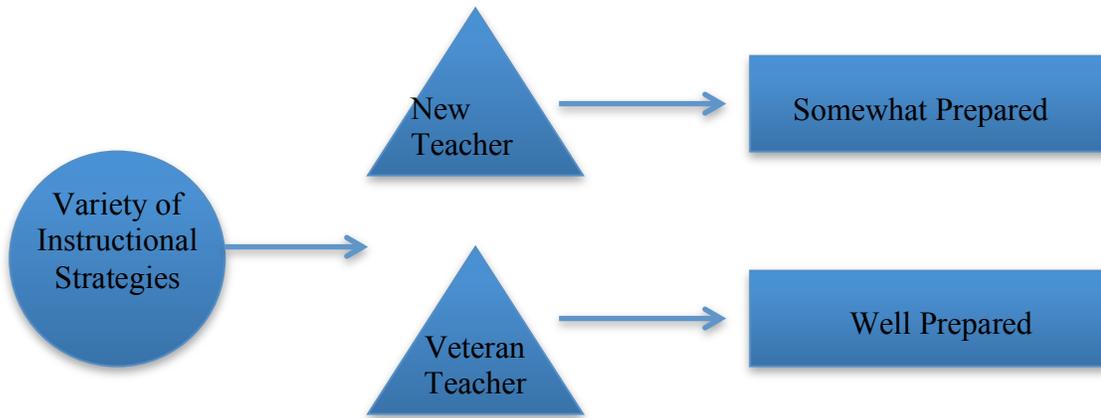
- Not at all prepared,
- Somewhat prepared,
- Well prepared, and
- Very well prepared

The first set of survey questions, pertaining to Teacher Preparedness, asked teachers to self-report how prepared they were to handle classroom management or discipline situations. Teacher perceptions of their levels of preparation in their first year of teaching were lower than in their current year of teaching. Over half of the respondents (56.6%) reported they were only *somewhat prepared*, where as, in their current year of teaching most teachers indicated they were *very well prepared* (68.2%) to handle classroom management situations. Hence, teachers indicated their level of preparation in dealing with classroom management situations increased with their years of experience as seen in Figure 12.



*Figure 12.* Classroom management by year of experience. This figure represents teacher perceptions of their ability to handle classroom management situations based on years of experience.

The second set of survey questions asked how well prepared teachers were in using a variety of instructional methods. Again, in the first year of teaching, almost half (48.9%) of the teachers indicated they were somewhat prepared as compared to 69.1% reporting they were very well prepared in their current year of teaching. Thus, teachers perceive an increase in ability to utilize a variety of instructional methods in the classroom with years of experience. Figure 13 illustrates teacher responses to using a variety of instructional strategies.



*Figure 13.* Instructional strategy usage. This figure denotes teacher perceptions of their preparedness in using a variety of instructional strategies in the classroom based on experience.

Perceptions of preparedness in teaching their subject matter was the third question with first year teachers indicating higher levels of preparation than in any other Teacher Preparedness variable. The majority of responses were in the *well prepared* (42.4%) and *very well prepared* (29.1%) of first year teachers. Consequently, experienced teachers indicated their levels of preparation as *well prepared* (15.6%) and *very well prepared* (77.3%) in Figure 14. In essence, all teachers indicated higher levels in knowledge of their content, regardless, of experience.

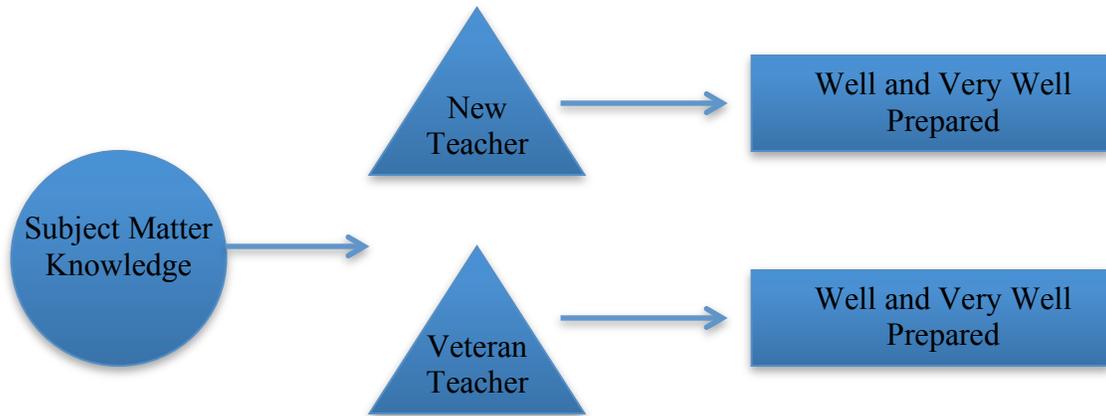


Figure 14. Subject matter knowledge. This figure displays teacher perceptions of their preparation in knowledge of subject matter based on experience.

First year teachers, displayed in Figure 15, indicated use of computers in classroom instruction as their weakest talent with 35.8% reporting *not at all prepared* and followed closely by *somewhat prepared* (33.3%) in the fourth set of survey questions. This area had the fewest number of experienced teachers reporting *very well prepared* (45.6%). Overall, new and veteran teachers did not feel prepared to use computers in classroom instruction.

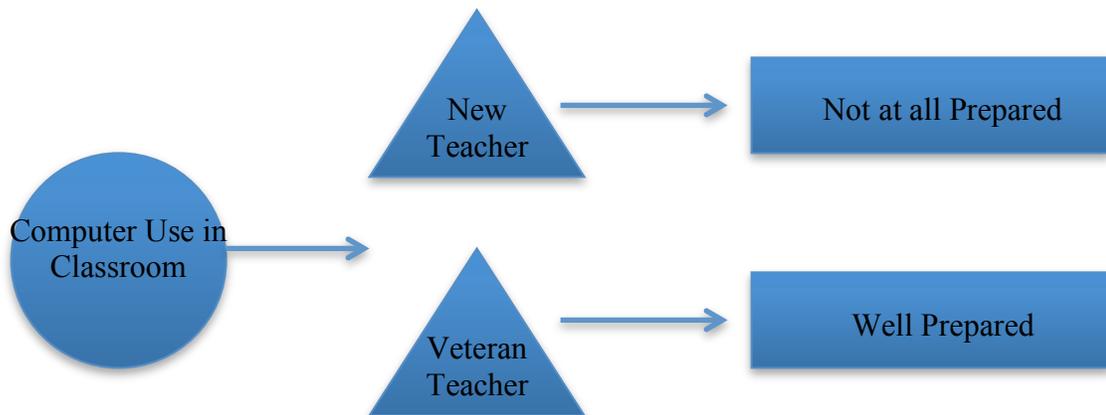
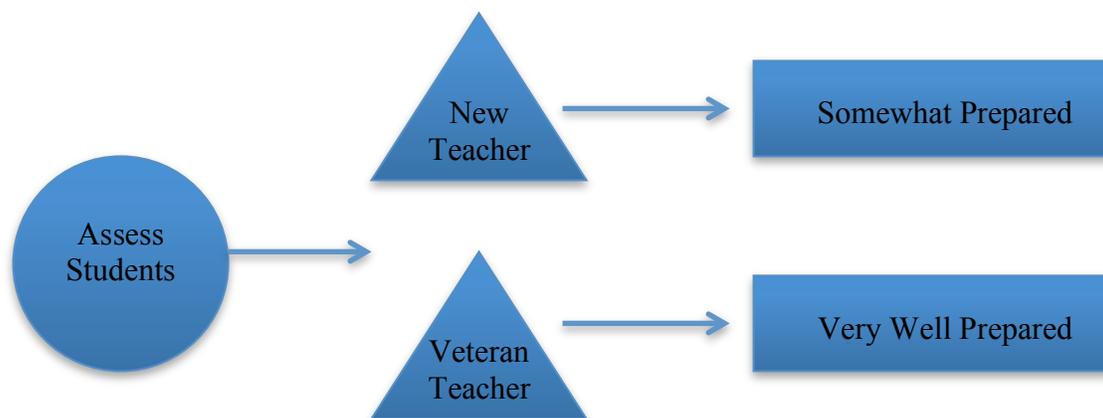


Figure 15. Classroom computer use. This figure shows teacher perceptions of their preparedness in using computer in classroom instructions based on years of experience.

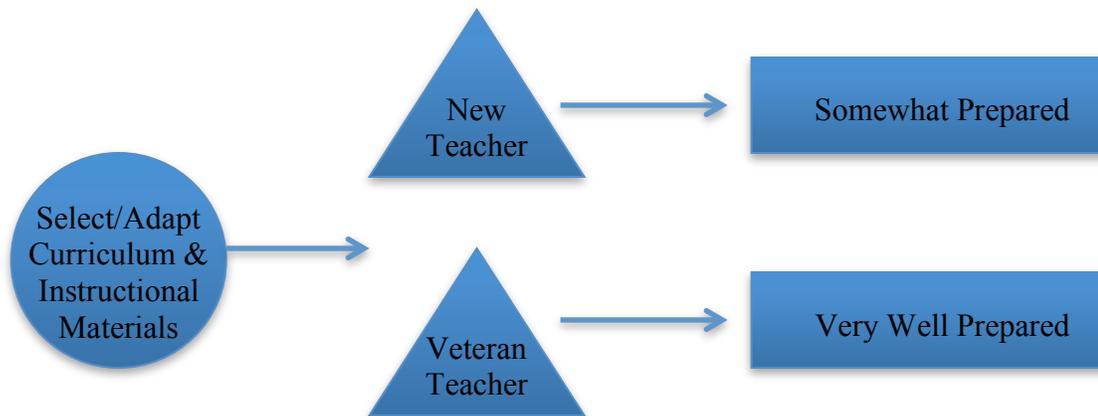
In the fifth set of questions, how well prepared were you to assess students, teachers had similar responses to the first two questions surveyed. Almost half (47.7%) of the first year teachers indicated they were only *somewhat prepared* to assess students while experienced teachers indicated they were *very well prepared* (63.5%). Figure 16 presents teachers perceived their level of preparedness in assessing students to increase after the first



year of teaching.

*Figure 16.* Student assessment. This figure illustrates teacher perceptions of their preparedness in assessing students by years of experience.

The final set of questions related to selecting and adapting curriculum and instructional materials yielded similar results as previous questions. First year teachers indicated they were somewhat prepared (45.3%) with this process. Although, experienced teachers indicated very well prepared (68.2%) at selecting and adapting curriculum and instructional materials. Teachers reported that after their first year of teaching their perceived levels of preparedness in this area increased as demonstrated in Figure 17.



*Figure 17.* Curriculum and instructional materials. This figure denotes teacher perceptions of their preparedness in selecting and adapting curriculum and instructional material by years of experience.

In the raw data reports, teachers tended to report increased levels of preparation in all six areas after the first year of teaching. The use of computers in classroom instruction was the weakest area of both experienced and first year teachers. Teachers self-reported their strongest levels of preparation in teaching their subject matter, regardless of years of experience.

### **Research Question One**

Is there a statistically significant relationship between years of experience of teachers and teacher reported preparedness among the teacher sample?

H<sub>0</sub>1. A statistically significant relationship exists between new teachers and teacher reported preparedness among teachers of the teacher sample.

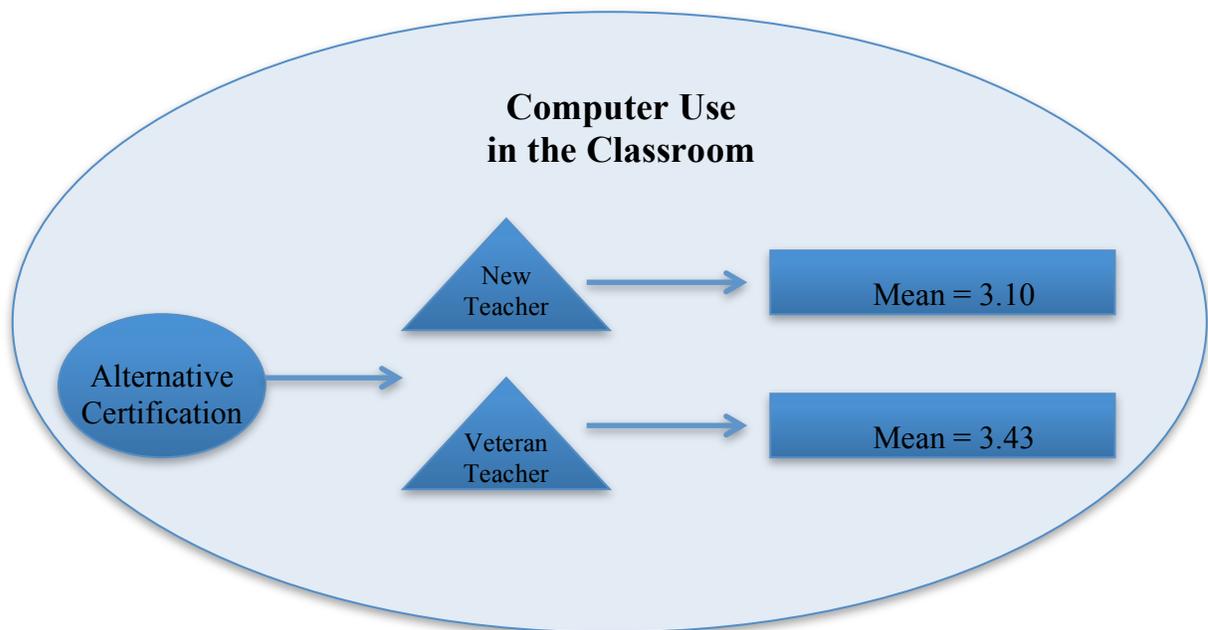
A factorial MANOVA was performed to investigate the presence (or non-presence) of differences and/or interactions between years of experience and the six Teacher

Preparedness variables listed below:

- handle a range of classroom management or discipline situations (classroom management);

- use a variety of instructional methods (instructional strategies);
- teaching your subject matter (knowledge of content);
- use computers in classroom instruction (computer-based instruction);
- assess students (student assessment); and
- select and adapt curriculum and instructional materials (selection of curriculum).

One main effect, years of experience, was statistically significant, with Wilk's Lambda=.929, approximate  $F=(6.251)3.194$ ,  $p=.005$ . This suggests that there was a difference in the mean ratings of preparedness based on years of experience. Follow-up univariate analyses indicated that only one of the dependent variables, use of computers in classroom instruction, indicated a statistically significant relationship with years of experience. Alternative certification route, veteran teachers with more than five years of experience reported feelings of being more prepared ( $M=3.43$ ) than new teachers ( $M=3.10$ ) with alternative certification in using computers in the classroom. New, traditionally certified teachers ( $M=3.40$ ) reported being slightly more prepared than veteran traditionally certified teachers ( $M=3.32$ ). In addition, new alternatively certified teachers reported being less prepared ( $M=3.10$ ) than new teachers ( $M=3.40$ ) traditionally certified in using computers in classroom instruction. Overall, alternatively certified new teachers reported being less prepared at using computers in classroom instruction than any other group.



*Figure 18.* Computers in classroom instruction. This figure shares the mean scores of alternatively certified teachers on using computers in classroom instruction.

Do new teachers report being less prepared in six of the surveyed teaching areas than experienced teachers? Three teaching skill areas emerged in data analysis as having an interaction with teaching experience (a) knowledge of content, (b) selection and adaptation of curriculum and instructional materials, and (c) assessment of students. New teacher mean scores reflected new teachers opinions of their own preparation as lower than that of experienced teachers. In all three teaching skill areas experienced teacher means were 3.7 and above and new teacher means were 3.5 and below as seen in Figures 8 through 11. Survey choices in each teaching area with three indicating *well prepared* and four indicating *well prepared*. The answer is yes, new teachers report being less prepared than experienced teachers in three of the six teaching skill areas surveyed in this study.

## Research Question Two

Is there a statistically significant relationship between teacher certification type and teacher reported preparedness among the teacher sample?

H<sub>0</sub>2. A statistically significant relationship exists between alternative teacher certification type and teacher reported preparedness among teachers of the teacher sample.

A factorial MANOVA was performed to investigate the presence (or non-presence) of differences and/or interactions between years of experience and the six Teacher Preparedness variables identified below:

- handle a range of classroom management or discipline situations (classroom management);
- use a variety of instructional methods (instructional strategies);
- teaching your subject matter (knowledge of content);
- use computers in classroom instruction (computer-based instruction);
- assess students (student assessment); and
- select and adapt curriculum and instructional materials (selection of curriculum).

The main effect for type of certification was not statically significant with Wilk's Lambda=.965, approximate  $F(6,251)=1.524$ ,  $p=.171$ . Although, one two-way interaction of experience and certification route was significant with Wilk's LAMBDA=.943, approximate  $F(6,251)=2.518$ ,  $p=.022$  with a medium (.057) effect size. These results suggested that there is a relationship between years of experience and certification route in teachers' reporting preparedness with all six dependent variables when examined together. Whereas, when

analyzed separately there were no differences observed (type of certification and six Teacher Preparedness variables).

Univariate ANOVAs were conducted for follow-up analyses on each teacher preparedness variable to determine which variables were influenced by the combination of certification route and years of experience. Significant effects occurred between certification route and years of experiences with three of the preparedness variables (a) knowledge of content, (b) selection of curriculum, and (c) assessment of students. Plots located in Appendix D were examined to interpret the significant interactions on these dependent variables.

New, alternatively certified teachers ( $M=3.3$ ) reported being less prepared in teaching their subject matter (knowledge of content) than new, traditionally certified teachers ( $M=3.57$ ). The gap between alternatively certified, new teachers ( $M=3.0$ ) and traditionally certified, new teachers ( $M=3.36$ ) remained with alternatively certified teachers reporting less preparedness in the assessment of students. A larger gap between the two groups grew in the ability to select and adapt curriculum and instructional materials. New, alternatively certified teachers were again reporting less preparation ( $M=2.9$ ) than new, traditionally certified teachers ( $M=3.36$ ) in the selection curriculum and instructional materials. Overall new, alternatively certified teachers shown in Figure 19 reported being less prepared than new, traditionally certified teachers in all three Teacher Preparedness areas.

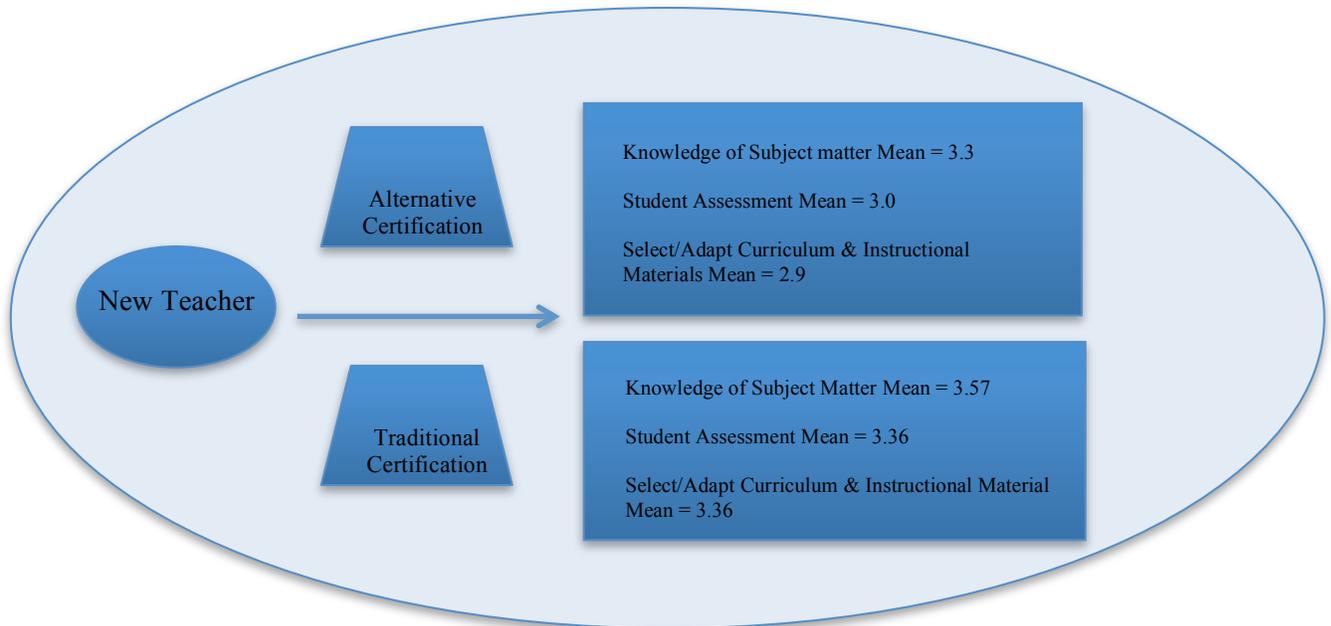


Figure 19. New teacher by certification route. This figure represents teacher reported preparedness of new teachers in three categories based on certification route.

Experienced teachers (veteran) with more than five years of teaching experience has slight differences in reporting preparedness based on type of certification. The gap was much smaller than new teachers based on type of certification. Specifically, veteran teachers (M=3.91) with alternative certification and veterans (M=3.91) with traditional certification reported the same level of preparedness in teaching their subject matter. The biggest difference in this group of experienced teachers was in the assessment of students. Alternatively certified, veteran (M= 3.87) teachers reported feeling more prepared than traditionally certified, veteran (M=3.7) teachers in the assessment of students. The gap closed in the third preparedness variable with experienced teachers. Alternative certified teachers (M=3.83) reported being a slightly more prepared than traditionally (M=3.78) certified teachers in the selection and adaptation of curriculum and instructional materials.

Figure 20 illustrates the mean scores of experienced teachers with three teacher preparedness variables.

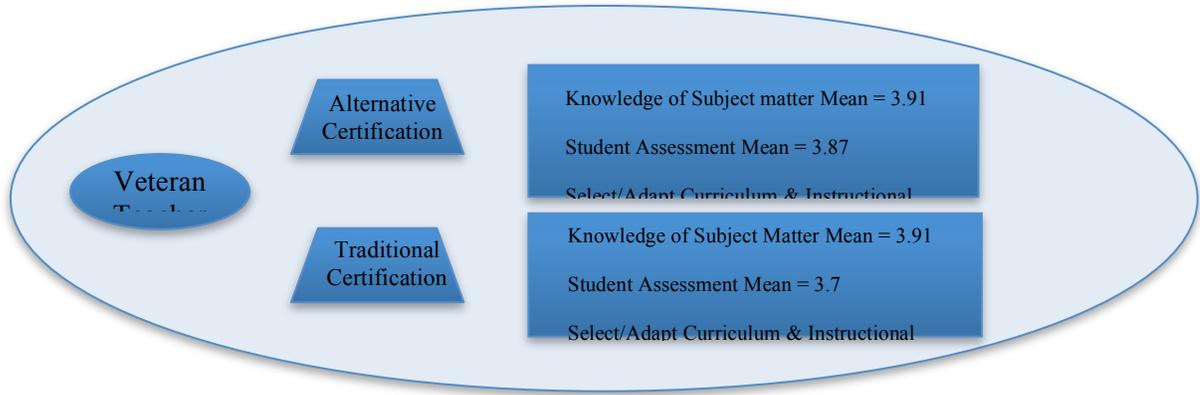


Figure 20. Experienced teacher by certification route. This figure denotes teacher perceptions of experienced teachers with three statistically significant variables based on certification route.

The analyses also revealed differences in feelings of preparedness of alternatively certified teachers based on years of experience (new vs. veteran). New teachers (M=3.30) reported being less prepared than veteran teachers (M=3.91) in teaching their subject matter (knowledge of content). The gap grew between new teachers (M=3.00) and veteran teachers (M=3.87) in feeling prepared in the assessment of students. The largest difference between new teachers (M=2.90) and veteran teachers (M=3.83) occurred with new teachers feeling less prepared in adapting and selecting curriculum and instructional materials. As expected, new alternatively certified teachers reported being less prepared in all three areas than veteran teachers that were also alternatively certified.

Traditionally certified teachers showed similar patterns based on years of experience (new vs. veteran) in connection to the same three Teacher Preparedness variables, knowledge of content, assessment of students, and selection of curriculum and instructional

materials. New teachers (M=3.57) reported being less prepared than veteran teachers (M=3.91) in teaching their subject matter. A similar difference occurred between new teachers (M=3.36) and veteran teachers (M=3.7) with new teachers reporting less prepared in the assessment of students. In the selection and adaptation of curriculum and instructional materials, new teachers (M=3.36) reported being less prepared than veteran teachers (M=3.78). There were no other significant interactions.

Do alternatively certified teachers report being less prepared in six of the surveyed teaching areas than traditionally certified teachers? Three teaching skill areas emerged in data analysis as having an interaction with teacher certification route (a) knowledge of content, (b) selection and adaptation of curriculum and instructional materials, and (c) assessment of students. Alternatively certified teacher mean scores reflected opinions of their own preparation as lower than that of traditionally certified teachers. Alternatively certified teachers reported being *somewhat prepared* (M = 2.9) to *well prepared* (M = 3.7) while traditionally certified teacher means indicated self-reporting as *well prepared* (M = 3.57) and near to *very well prepared* (M=3.91). The answer is yes, alternatively certified teachers report being less prepared than traditionally certified teachers in three of the six teaching skill areas surveyed in this study.

### **Teacher Variables**

Teacher quality remains at the forefront of educational reform as we focus on improving student achievement. Wong and Wong (2007) wrote, “Research consistently shows that of all the factors schools can control, the effective teacher has the greatest impact on student achievement” (p. 11). The reason for this study was to detect differences or interactions between a teacher’s type of certification route and years of experience with

teacher preparation variables. Specifically, the study was an analysis of a teacher's certification route, years of experience, and Bandura's (1997) defined teacher self-efficacy to examine the way in which these factors relate to teacher reported preparedness.

Interactions in this study included knowledge of subject matter or content, assessment of students, selection and adaptation of curriculum and instructional materials, and use of computers in classroom with certification type and years of experience. Teacher preparedness variables incorporating classroom management and using a variety of instructional strategies were not statistically significant. The following paragraphs summarize each of the teacher preparedness variables in this study.

### **Classroom Management**

The first teacher preparedness variable in this study asked teachers to self-report their level of preparation in handling a range of classroom management or discipline situations. This study had no statistically significant findings between certification route and years of experience with classroom management. The lack of statistically significant interactions in this particular study does not reflect the literature on new teachers and their struggles with classroom management. Kratochwill (2009) says classroom management has been a priority for nearly 40 years and has consistently cited classroom management as a major issue for teachers. Although there is no consistent definition of classroom management, Evertson and Weinstein (2006) claim classroom management has two purposes, "it not only seeks to establish and sustain an orderly environment so students can engage in meaningful academic learning, it also aims to enhance student social and moral growth" (p. 4). Marzano (2003) defines classroom management of combination of four areas

(a) rules and procedures, (b) discipline actions, (c) relationships with students, and (d) mental set (withitness and objectivity).

In an era of highly qualified teachers, state certification agencies require passing scores on exams but no proof of classroom management skills. Wong and Wong (2009) assert classroom management is the most important factor controlling student learning (p. 80). In addition, Jensen, Sandoval-Hernandez, Knoll and Gonzalez (2012) reported that new teachers often lack the necessary classroom management skills for effective teaching and learning (Jensen et al., 2012, p. 9). New teachers are given the same task and classroom assignments as experienced teachers without the necessary skills to manage a classroom. The management of student behaviors has been identified as the most prominent cause of teacher stress and turnover (Ingersoll & Smith, 2003).

Teachers whose classrooms were found to be more susceptible to behavior problems reported less confidence regarding their knowledge of classroom management (Almog & Shechtman, 2007). Teacher stress has been shown to be more prevalent among teachers who do not feel capable to deal with student behavior problems (Slider, Noell & Williams, 2006). Good and Brophy (1984) investigated teacher skills and efficacy and found that a teacher's self-worth was directly related to their successful implementation of classroom management skills. Therefore, exploring teacher's perceptions regarding their classroom management efficacy could help teachers be successful by identifying crucial areas for professional development and mentorship for teachers.

### **Instructional Methods**

Freiberg (2002) wrote, "New teachers are often limited in their repertoire of instructional strategies. Many teachers enter the field directly from university teacher

preparation programs, where they mastered minimal pedagogical knowledge or skills” (p. 56). He goes on to say that alternative certification programs may provide almost no formal teacher training on instructional strategies. Instructional strategies may be presented or recommended in their education but implementation and planning for those strategies are more difficult for beginning teachers based on their limited experience.

Instructional strategies encompass both teacher-centered and the new wave of student-centered strategies. Even though lecturing remains the dominant strategy. Teaching strategies include but are not limited to lecture, demonstration, questioning, discussion, guided and independent practice, grouping, role play, simulation, and inquiry (Freiberg & Driscoll, 2000). During a demonstration or lecture the teacher is the source of information but independent practice and grouping involves the student as the source of information. Teachers who do not have sufficient preparation to organize their classroom and instruction to meet student needs are at a disadvantage as they begin their careers. “If beginning teachers are to be successful, they must wrestle simultaneously with issues of pedagogical content (or knowledge) as well as general pedagogy (or generic teaching principles)” (Grossman, as cited in Ornstein, Thomas & Lasley, 2000, p. 508).

Freiberg (2002) wrote, “New teachers are most familiar with teacher-centered instructional strategies and often revert to them when under pressure” (p. 59). For example, a math teacher demonstrates solving problems at the board, then has students execute their own problem, questions are answered, and then homework over the same type of problems is given. This traditional method of teaching math may be a result of struggling with classroom management, implementing new instructional strategies, or fear of failure. New teachers revert to the way they were taught when under stress (Freiberg, 2002). Marzano

(2003), in *What Works in Schools*, declared, “It is perhaps self-evident that more effective teachers use more effective instructional strategies” (p. 78). He goes on to say that effective teachers, “have more instructional strategies at their disposal” (p. 78). It is not merely knowing a variety of instructional strategies but rather knowing when each strategy is most effective.

### **Subject Matter Knowledge**

Adequate subject matter knowledge is an essential component of teacher effectiveness and is not a stand-alone characteristic. Teaching students to learn subject matter involves more than the sharing of facts and information (Allen, 2003) but of the knowledge on how to teach a particular subject. Ball and McDiarmid (1989) wrote, “The myriad tasks of teaching, such as selecting worthwhile learning activities, giving helpful explanations, asking productive questions, and evaluating students’ learning, all depend on the teacher’s understanding of what it is that students are to learn” (p. 1). In essence, if teaching includes helping others learn then it is imperative that teachers understand what is to be taught. Subject matter knowledge has an impact on teachers’ instructional decisions when using materials and varying instructional strategies (Grossman, Wilson & Shulman, 1989). Teachers must understand the subject matter so deeply and flexibly that they can get students to relate ideas to each other, make connections, and address misconceptions. A social studies teacher needs detailed knowledge of historical people and events, understand what history is, and be able to make connections to current events and politics. This kind of understanding provides a foundation for content knowledge that enables to teachers to make ideas accessible to others (Shulman, 1986).

Researchers have tried to assess the effect of teachers' subject matter knowledge on students' achievement by examining differences in student outcomes for teachers with different academic majors. Most of these studies have focused on high schools and classes where teachers have an academic major in the subject area students are being tested. Monk and King (1994) report that teacher subject matter preparation in math and science does have some positive impact on student achievement in those subjects. Goldhaber (2002) also suggests that teachers' knowledge of their subject matter, based on degrees and certifications, is associated with high student performance. However, having an advanced degree in subjects outside of math and science does not appear to affect student achievement (Goldhaber, 2002). Monk and King (1994) found that teaching higher-level courses requires greater knowledge of subject matter than does teaching of lower-level courses, such as, advanced placement and dual credit courses.

The importance of subject matter knowledge for teachers is overlooked in teacher preparation programs with the majority of course work in liberal arts. Ball and McDiarmid (1989) report elementary teachers take a range of introductory courses in a variety of disciplines while secondary teachers focus on a specific subject area and minimize teacher preparation courses. New teachers lack of experience with their content shapes their instruction with the types of questions they ask, the ideas they reinforce, or the kind of tasks they assign to students. While learning to teach begins before teacher education programs, it also continues for years after (Feiman-Nemser, 1983). Therefore, it isn't surprising that new teachers in this study reported feeling less prepared in the subject matter knowledge than experienced teachers. Certification route of experienced teachers had little to no impact on

self-reported preparedness of subject matter. Thus, a teacher's sense of self-efficacy in knowledge of subject matter increases with years of experience in the classroom.

### **Computers in Classroom Instruction**

In The National Center for Education Statistics (2010) digest on Educational Technology, they indicated that 97 percent of the 4,133 teachers surveyed had one or more computers in their classroom in 2009 and 54 percent could bring computers into their classroom. Over 90 percent had Internet access available in their classroom and that 29-40 percent of their instructional time students utilized the computers. Teacher devices such as interactive whiteboards and projectors made up 23 to 48 percent respectively of teachers surveyed. Teachers with the devices only reported using them 57 to 72 percent of time for instruction (National Center for Education Statistics, 2010). Unfortunately, the availability of technology does not indicate its effective use as a learning tool. A 2003 Massachusetts's study of 22 school districts and 2,894 teachers indicated that teachers generally used technology more for preparation of a lesson and communication than for delivering or assigning learning activities that required technology (Russell, Bebell, O'Dwyer & O'Connor, 2003).

Some of the differences in how learning occurs in classrooms abundant with technology as compared to traditional classrooms may account for consistent findings that technology can be especially effective with Bloom's taxonomy of learning, at risk, and special needs students (Pitler, Hubbell, Kuhn & Malenoski, 2012). There is little doubt that teachers have increased their technology use, although, high-level, effective technology use in classrooms is still missing (Mueller, Wood, Willoughby, Ross & Specht, 2008). As addressed in NCES's study, teachers most frequently use technology to support, rather than

alter, their existing practices (National Center for Education Statistics, 2010). Overhead projectors are merely replaced with digital, multi-media projectors leaving the teaching unchanged. Achieving the kinds of technology uses for the 21st century requires teachers to know how to facilitate meaningful learning with the use of technology (November, 2012). Research indicates that teachers need training and experiences to use technology for student learning (November, 2012; Pitler et al., 2012). Simply stated, “Technology is now considered by most educators and parents to be an integral part of providing high-quality education” (U.S. Department of Education, 2003, p. 3).

Ertmer (2006) reports that while many teachers are using technology for low-level tasks or activities, “higher-level uses are still very much in the minority” (p. 5). Very few teachers know how to use high-tech tools such as spreadsheets, presentation software, or digital imaging to enhance their lessons (Ertmer, 2006; November, 2012). Technology integration models proposed by the researchers for the Apple Classrooms of Tomorrow, indicate that it takes five to six years for teachers to accumulate expertise to use technology in higher level learning (Ertmer, 2006). Alan November (2012) says, “Rather than simply focusing on the transfer of knowledge process...guide students in the complex tasks of innovation and problem solving” (p. 18).

In U.S. Department of Education’s report, *Preparing Tomorrow’s Teachers to Use Technology: Perspectives of the Leaders of Twelve National Education Associations* edited by Lynn Bell (2001) a common issue in teacher preparation programs trying to incorporate education technology into their curriculum is the cost and adding to an already full schedule of methods. In addition, many teachers report a lack of time to learn innovative technology and unfamiliarity with the literature on technology in the classroom (Bell, 2001). Some

teachers may be turned off by and feel they, “may be using technology for the sake of using technology” (p. 525). Even with training, technology availability could influence integrating technology into instruction. For example, booked computer labs, only one computer in classroom, or reliable Internet connections could prevent trained teachers from integrating technology into their classroom. Few of the respondents reported being well prepared in classroom computer use with first year teachers reporting this as their weakest preparation area.

### **Student Assessment**

Teaching is much more than knowing the content and using multiple instructional strategies. Teachers must learn to teach subject matter in a way that students are going to get it and then check for understanding. Those checks for understanding emerge in assessments. Researchers promote the need for utilization of a variety of assessments, both formative and summative (Dodge, 2009; Marzano, 2010).

In an age of increased school accountability, using data from a variety of assessments to drive instruction is at the forefront of professional development. Marzano (2010) wrote, “Designing effective assessments is critical for any teacher...teachers need as much accurate data as possible about an individual student’s progress, or the progress of the class as a whole, to determine their next instruction steps” (p. 1). He goes on to discuss that using assessment “purposefully,” takes insight and practice. Formative assessments include but are not limited to observations, questioning, discussion, exit/admit slips, graphic organizers, whiteboards, quizzes, and projects (Dodge, 2009; Marzano, 2010; National Council on Teacher Quality, 2012; William, 2011). It is no surprise that this is a difficult technique to master or feel well prepared in for experienced teachers and especially

beginning teachers. Overall, the teachers sampled at this research site indicated they were not prepared for student assessment.

Surprisingly, there is little research on efficacy of teacher training in assessment. The studies found had a small number of subjects and the main finding of these studies was that teachers have difficulty analyzing data from assessments and do not use the data to guide instruction (Bellara & Hibbard, 2010; DeLuca & Klinger, 2010; National Council on Teacher Quality, 2012). The National Council on Teacher Quality's (2012) study of 180 teacher preparation programs in 30 different states found that most of the programs provide at least basic exposure to formative and summative assessments. In approximately 67% of the programs, coursework contained at least some reference to standardized testing. Unfortunately, a basic exposure does not lead teachers to high levels of self-efficacy or feelings of preparedness in student assessment.

### **Curriculum and Instruction**

The final teacher preparedness variable focused on the selection and adaptation of curriculum and instructional materials yielded similar results to the five other variables in this study. New teachers reported less preparation in this area than experienced teachers. Further analysis of new teachers indicated alternatively certified new teachers felt less prepared than their traditionally certified counterparts. Limited research is available on new teachers ability to select or adapt curriculum. Marzano (2003) indicates, "It may be the least addressed teacher-level factor" (p. 106). Researchers tend to focus on curriculum theory, curriculum of new teachers, or how to construct, map, or revise curriculum (Wyse et al., 2012).

Shulman (1986) and his colleagues consider curricular knowledge to be a separate domain of teaching but other researchers, such as Grossman (1990), have included curricular knowledge as part of pedagogical content knowledge. A teacher's belief system reflects personal theories about the nature of knowledge, thus, influence a teacher's curriculum decisions and teaching approaches (Pajares, 1992). A study conducted by Canbazoglu (2008) identifies the effect of experienced teacher's views concerning new curriculum. An experienced teacher may keep a relationship with the old curriculum even though expectations to teach new curriculum exists. Both new and experienced teachers self-efficacy of curriculum may be impacted by lack of knowledge or a commitment to past standards.

Marzano (2003) defines curriculum as, "the sequencing and pacing of content along with the experiences students have with that content" (p. 106). The lack of guidance and curriculum for lesson and unit planning is a common concern of new teachers. How do you plan a unit well when you are unsure of lengths of time or most effective strategy to use for a particular skill or set of information? In a survey of more than 8,000 Teach for America teachers, 41 percent said they were provided with few or no instructional resources. When classroom materials were provided they were seldom useful with 15 percent reporting materials were of sufficient quality to use (Mathews, 2011). Inadequate resources add to the burden of new teachers who have not yet developed a large collection of lesson ideas or plans (Fry, 2007). Although, some schools have taken a different approach and instead supply a multitude of resources for new teachers rather than letting new teachers sink or swim. New teachers are given binders full of model lesson plans and teaching resources created by experienced teachers (Chenoweth, 2009).

## Teaching Experience

In the book, *Becoming a Reflective Teacher*, Marzano and his colleagues declared, “Clearly, teaching is a skill, and like any skill, it must be practiced” (Marzano, Boogren, Hefleblower, Kanold-Mcintyre & Pickering, 2012, p. 1). And yet new teachers are still likely to be assigned the most challenging students and receive little more than a quick orientation on school policies and procedures before beginning their first day in the classroom. Essentially, new teachers have been left to sink or swim (Feiman-Nemser, 2003; Strong, 2011). Additional resources are reported as readily available to new teachers but only if they know where to find them. For example, the U.S. Department of Education website located at [www.ed.gov](http://www.ed.gov) advertises that it posts multiple resources if one simply types in “first-year teachers” into the search engine. Unfortunately, their definition of resources means research on new teacher struggles rather than a quick read or list of tips to assist new teachers. New teachers lack of time in the classroom limits their mastery of effective teaching experiences (Hartfield, 2011).

Research regarding experienced teachers has shown experienced teachers behave differently in the classroom than new teachers do, have different attitudes regarding their students, and know more about the content they teach (Wolters & Daugherty, 2007). Teachers with experience report more confidence in their ability to manage a classroom and ability to utilize best teaching and assessment practices (Wolters & Daugherty, 2007). Increased experience as a teacher has been linked to higher levels of self-efficacy (Hoy & Tschannen-Moran, 2007; Ross, Cousins & Gadalla, 1996).

An expected outcome of this study was new teachers reporting less preparedness than experienced teachers. The gap in the level of reported preparedness continued between

new, alternatively certified and new, traditionally certified teachers with traditionally certified teachers reporting greater levels of preparedness in three specific areas of knowledge of content, assessment of students, and curriculum and instructional materials. The analyses suggest that reported preparedness is similar between alternatively and traditionally certified teachers after they have taught for five years (veteran). In essence, experienced teachers report being more prepared in Teacher Preparedness variables and alternatively certified, new teachers report being the least prepared.

### **Recommendations for School Districts**

People in a variety of professions participate in continuous job training or professional development to help them learn and use new skills and information. Professional development for teachers has become increasingly important due to reform initiatives that place accountability for teachers and schools based upon student achievement on standardized assessments. Mizell (2010) acknowledged that higher education institutions do not provide the extensive range of experiences in learning that are needed for graduates to be effective teachers. This lack of experience must be changed in new teacher induction programs and ongoing professional development in school districts (Darling-Hammond & McGlaughlin, 1995).

There are other reasons to support professional development for enhancing teacher quality. Teachers are expected to adjust their classroom practices and to teach using new methods and techniques (Darling-Hammond & McLaughlin, 1995). Sometimes, teachers were trained prior to a reform movement, such as 1:1 initiatives or differentiated instruction theories, and teachers need to adjust to the frequently changing standards; they may not have learned the skills or knowledge necessary to teach based on the newly emerging standards

(Boe, Bobbitt, & Cook, 1997). In other instances, new research on education may emerge which requires teachers to update their understandings of learning theories and what comprises good pedagogy (Coburn, 2003). In general, professional development programs are designed to change teachers' practices, their attitudes, and/or their beliefs, all of which are thought to lead to improved learning opportunities for their students (Guskey, 2002).

Increasing the quality of teaching in United States classrooms is one way to increase student achievement in mathematics. McCaffrey and Hamilton (2003) indicated that teachers are responsible for a large amount of variation in student achievement. The differences in gains in mathematics based on teacher quality ranges from 3 to 54 percentile points. Thus, increasing teacher quality has the potential to have huge impacts on student gains. Professional development is one of the most common vehicles of increasing in-service teacher quality (Sowder, 2007).

The American Federation of Teachers (AFT) states, "A school system's most important asset is its teaching force" (2013, p. 1). Professional development is a tool schools use to continuously improve their teaching practice to meet the needs of all students. For teachers and school leaders to be effective, they must continually expand their knowledge and skills to implement best practices. Cindy Strickland (2009) in her book, *Professional Development for Differentiating Instruction*, specifies that teacher PD needs to be differentiated just as the learning for students. She continues with identifying grade-level, special need, and subject-specific criteria supporting needs for differentiation but contends that with the simple statement, "good teaching is good teaching" (p. 5). Her trick is to refine and add to those practices over time.

Studies similar to this one identify specific areas of need for teachers that may be used in professional development. The key to differentiating is identifying your end goal for teachers and their current reality. Meshing those two together provides meaningful, relevant training for teachers to improve their teaching practices. Experienced teachers may not need the same training as new teachers. Strickland wrote, “Differentiation is a continuing journey toward expertise in teaching. Just as our students start out at different places in their paths to new learning, so do teachers” (p. 6).

Districts must employ effective professional development strategies to support and improve teachers in the classroom, both new and experienced. Accommodating new reform movements, such as, standards-based grading, differentiated instruction, and reading in all content areas, as well as, continuously improving or refining research-based instructional strategies. Utilization of teacher reported preparedness in teaching practices would allow districts to differentiate professional development for teachers and provide a guiding focus to the specific needs of teacher groups, such as, new teachers or alternatively certified.

### **Recommendations for Teacher Preparation Programs**

Effective teacher training must prepare new teachers to deal with a myriad of tasks including lesson planning, student behaviors, special needs, curriculum, and stress.

Wadlington, Slaton, and Partridge (1998) propose ways that professors can help future teachers see themselves as constantly growing and changing, as well as, how to deal with the anxiety and stress of the teaching profession. They can create a more realistic picture of the classroom through classroom observations and teacher interviews. Incorporating effective behavior management training is also an essential element in teacher training (Wong & Wong, 2009; Wadlington, Slaton & Partridge, 1998).

In reviewing traditional teacher certification degree requirements of three Missouri universities, each university requires a basic general or Liberal Arts education of all teachers. Approximately, 40-45 credit hours are required from general education requirements and total degree requirements are 120 hours as seen in Table 11. They begin to differ in individual teacher preparation programs and the table below identifies those differences, including, which schools address the teacher preparedness variables found statistically significant in this study. None of the university programs of study addressed all of the teacher preparedness variables and one university (University of Missouri-Columbia Department of Education, 2008) didn't address any of them. With the differences represented in their preparation programs, it is no wonder that new teachers hired into districts have such varied levels of preparation.

Table 11

*Elementary Education (1-6) Certification Program Requirements*

	University A	University B	University C
Liberal Arts/General Education Requirements	40	40	45
Total Degree Requirements	120	120	120
Field Experience/Practicum (three semesters)	6	3	10
Student Teaching (one semester)	12	12	15
Methods/Teaching Strategies	14	17	14
Subject Matter Knowledge	14	20	18
Classroom Management	3	3	0
Assessment of Students	3	0	0
Technology in Education	3	2	0
Curriculum & Instructional Materials	0	3	0

University of Missouri-Columbia offers a master's program to traditionally certified teachers called MU Teaching Fellows Program (University of Missouri-Columbia Department of Education, 2013). The program offers new teachers with an induction and support system while earning master's degree hours. Part of the incentive to districts in hiring these new teachers is the professional development experience of the district's mentor teachers and continuance guidance of the new teacher. Table 1 above outlined criteria for elementary education certification, each of the universities required hours in secondary education areas. For example, Biology certified teachers are required to take 61 hours while English teachers are only required to take 42 hours of content-specific courses. Why the difference in content requirements between Biology and English? The plans of studies reviewed are representative of the same inconsistencies in state's routes or plans for licensure requirements.

Missouri has more than one route for obtaining alternative certification. The University of Missouri-Columbia offers SMAR<sup>2</sup>T for individuals with an undergraduate degree in mathematics, science, or related field that need an accelerated teacher preparation program. The program is 32-35 additional credit hours of a candidate with a bachelor's degree in mathematics or science. In addition to required credit hours, the program has an undergraduate grade-point average requirements and is designed to meet the shortage of math and science teachers (University of Missouri-Columbia Department of Education, 2013). Missouri's certification routes listed on DESE's website include (a) traditional route, (b) alternative or innovative route, (c) temporary authorization route, (d) out-of-state certified route, (e) American Board of Certification for Teacher Excellence (ABCTE) route, and (f) doctoral route. Specifically, the alternative or innovative route requires a teacher

candidate with an undergraduate degree to return to college and take 30 semester hours, an exit exam, and a college recommendation for certificate. Thirty hours of course work falls short of the minimum 40 hours that are offered in most Missouri traditional certification route programs. Therefore, it isn't surprising that alternatively certified teachers would feel a lack of preparation in specific areas.

Not only is the preparation of traditional and alternative certification teachers different but also the research studies of the concerns and attitudes of traditional college prepared teachers and alternative certification teachers show different patterns. In this study, traditionally certified new teachers reported higher levels of preparedness than alternatively certified teachers in all six variables. Although, Hayman (2002) conducted a study of traditional and alternative certified first year teachers and concluded that both considered classroom management their first concern. Wayman, Foster, Mantle-Bromley and Wilson (2003) also conducted a study in Colorado to compare traditionally certified teachers with Colorado's Teacher in Residence (TIR). The TIR teachers were four times more likely to indicate concerns over lesson planning and twice as likely to indicate concern about classroom management. Classroom management and effective instruction were two areas with significant differences. Both traditional and alternatively certified new teachers were similar in their order of concerns but TIR teachers had higher scores in every category.

A California study of alternatively certified teachers (Stone, 2000) found that they listed their needs, in order of importance, as (a) curriculum development, (b) classroom resources, (c) teaching strategies, (d) techniques for handling difficult students, and (e) classroom management. Stone (2000) indicated participants reported the college or university should provide assistance in the areas of paperwork, curriculum development,

teaching strategies, classroom management, and mentoring. Regardless of certification type, the results of this study indicate that new teachers need in-depth training in knowledge of their subject matter, student assessment, and selection and adaptation of curriculum and instructional materials.

Based on the results of this study and the research, teacher preparation programs should provide coursework encompassing classroom management (Jensen et al., 2012; Wong & Wong, 2009), how to teach their subject matter (Allen, 2003), effective use of assessment in instruction (Dodge, 2009; Marzano, 2010), and work with curriculum and instruction (Fry, 2007; Grossman, 1990; Marzano, 2003). In addition, both certification routes programs would benefit from strategic placement in field experiences (Allen, 2003) and with expert supervising teachers (Ingersoll & Smith, 2011) to mentor new teachers. One class in one semester just isn't enough for a teacher to feel adequate preparation.

The results of this study add to the research on teacher preparedness, years of experience and certification route in self-efficacy. The results support the need for teachers to participate in mentorship programs, relevant professional development, and teacher preparation programs. The research identifies the varied teacher preparation requirements and some short falls in individual institutions may be seen. Districts can use this information to guide their hiring and retention practices while evolving their induction or mentorship programs for new teachers. Preparation programs for new teachers, alternatively or traditionally certified, would benefit from using the results to guide their instruction and evaluation of new teachers, as well as, revise or expand their course offerings.

Local school administrators and teachers should join forces with local colleges and universities and collaborate on an ongoing basis to study local education issues and

research-based approaches to improving teacher effectiveness and student achievement. Collaboration at even a local level builds a strong alliance for improvement in education, revised teacher preparation programming, and local or regional professional development activities. Such collaboration speaks loud and clear to the community, educators, and policy makers.

Furthermore, universities could use the teacher reported preparedness survey in their teacher preparation programs. This survey tool could become a National teacher preparation program follow-up tool or exit survey. By measuring teacher preparation program, results could guide educational institutions in identifying areas in need of improvement and areas of excellence in their courses of study. Results of this instrument at a National or state-level would identify patterns, relationships, or differences between teacher demographic variables and teacher preparedness variables, as well as, state and university-level preparation comparisons. Universities could also employ repeated measures with this survey tool in a longitudinal study of recent teacher preparation program graduates and their school districts to determine if teacher efficacy levels change after graduation, with teaching experience, or with district professional development activities. This would only further the collaboration and interdependency between school districts and teacher preparation educational institutions in their plight to create effective teachers.

### **Limitations**

One limitation of this study was in the sample selection. The sample of teachers was derived from a single school district in a Midwestern suburban school district. An imbalance of alternatively certified and traditional teachers created unequal cell sizes even after combining responses in years of experience and grade level. In addition to the locale and

cell sizes, the sample consisted only of voluntary participants at the start of a school year, which may have been made up of more efficacious teachers than those who chose not to participate.

Another limitation is the use of a self-reporting tool. The information in this study is limited to the understandings of the participants and the responses they entered to the questions. Since the sample population was made aware that the study was designed to investigate teacher preparedness, this knowledge may have impacted their responses. Respondents may have felt the need to inflate their level of preparedness, impacting the findings of the study. Generalizability of the this study's results are limited to similar school districts and the results of this study may not be generalized to all school districts in the state of Missouri, all new traditionally and alternatively certified teachers, and all experienced traditionally and alternatively certified teachers employed. These results only apply to teachers in one Midwest school district.

### **Recommendations for Future Research**

The examination of teacher preparedness and its relation to varied preparation programs and district professional development is a topic that could be pursued at all local, state, and federal levels. Missouri is currently gathering data regarding teacher preparation of all employed, certified teachers in the state. Although, the data from their collections is not being used at the school district or school level to guide hiring or training practices of teachers. This study sought to understand the relationship between years of experience and certification with teacher reported preparedness variables using quantitative methodology. Replication of this study at a local level would have several advantages and provide immediate relevance in designing differentiated professional development trainings

(Strickland, 2009) for teachers in all areas. The results could also identify highly efficacious teachers in a school district or school and the specific areas of their preparedness.

Identifying talented teachers to mentor new teachers is said to aid in the improvement of the new teacher (Ingersoll & Smith, 2011) and ultimately student outcomes.

The study could be replicated and expanded to examine additional demographic variables, such as gender, teacher age, ethnicity, and grade level. Areas of refinement in the replication of this study include methods of increasing teacher response rates, repeated measures of the survey tool, and the addition of a qualitative component. Specifically, the response rate for this study was 24.3%, or 345 of 1,422 certified teachers with one invitation and one follow-up invite. This was shy of the 30% goal for a single invitation with no follow-up. First, the method of improvement would include changing the time of year the survey requests are sent. The beginning of the school year is a hectic time for teachers and may have influenced the response rate. Teachers may have been more focused on the setup of their classroom than completing a survey. In contrast, responses may have been skewed by only highly efficacious teachers choosing to participate in the survey. The timing of the survey didn't account for first year teachers beginning their teaching career. For example, first year teachers may report a higher teacher efficacy at the start of their school year because they may believe they are well prepared. At this point, first year teachers may not know what they do not know about teaching. Lastly, the use of a personal representative of the study meeting with each building faculty soliciting participation may increase response rates.

Additionally, researchers interested in teacher preparedness could revise the study to a qualitative or mixed methodology. A qualitative methodology would encompass the

qualitative component, providing oral and written responses and seeking to understand the role experience and licensure influence teacher efficacy through interviews or even classroom observations. Specifically, teacher interviews could assist in answering questions deriving from the survey data. For example, in this study alternatively certified, experienced teachers reported the highest level of preparedness in *using computers in classroom instruction* than any other group. A teacher interview could seek to answer the question, what is causing alternatively certified, experienced teachers to feel highly efficacious in this teacher skill area? Moreover, the addition of classroom observations could detail a relationship between teacher efficacy and actual observed teaching practice. Utilization of a teacher performance assessment performed by an administrator could link teacher efficacy level with teacher performance evaluation results.

An additional question that could be explored through a qualitative methodology would be to identify the impact of the implementation of Common Core curriculum in this school district during the 2012-13 school year. Did this new curriculum overhaul influence teacher responses to the 6th teacher variable, "*How prepared were you to select and adapt curriculum and instructional materials?*" The implementation of Common Core came two years before the state of Missouri required the use of these standards in the classroom. A second question emerges, do new teachers know what the Common Core requires of students to know and be able to do?

Lengthening the study and surveying the same teachers at the beginning, middle, and end of school year would measure their growth in a year and evaluate employed professional development and mentoring programs. Repeated measures of the same teachers in the same school year would yield more reliable results, as well as, identify patterns, relationships, or

differences in teacher reported preparedness throughout the school year. Also, following new teachers for three to five years would deepen the understanding of teacher preparedness and provide an opportunity to plot the decline or growth of teachers in individual teaching areas. The data collected could aid districts in hiring, retaining, mentoring, and professionally developing teachers.

The ultimate goal of employing quality teachers in the classroom is to positively impact student achievement. Future studies could make the connection to teacher reported preparedness variables and student achievement data. Darling-Hammond (2012) asserts that teacher preparation and certification are by far the strongest correlates of student achievement in reading and mathematics. Ferguson (1991) suggests that teacher qualifications play an important role in what students learn. Analysis of teacher preparedness variables could provide relevant feedback to schools and school districts on identifying characteristics that positively impact their students' academic achievement.

Future studies could use a larger sample targeting new or alternatively certified teachers to examine the role certification or teacher preparation programs play in classroom preparedness. Specifically, one unique attribute of this study that could be explored further is the finding of increased teacher reported preparedness of experienced, alternatively certified teachers over experienced, traditionally certified teachers in the assessment of students. Furthermore, state level and national studies could expand the study's demographic variables and look at geographic regions, school attributes (rural, suburban, or urban), and student demographics. Researchers could also explore student achievement as it relates to teacher reported preparedness. Additionally, one national study, the Schools and Staffing Survey continued their study in 2012 but changed some of the teacher preparedness

variables. This type of large-scale study would allow for the oversampling of alternatively certified teachers to create balanced cell sizes for analysis.

School districts, colleges and universities, and policy makers should take steps to routinely study teacher preparedness, licensure, and experience for use in developing relevant professional development, coursework, and support for teachers in the classroom. Cooperation with local universities and colleges to participate in qualitative, quantitative, and mixed-methodology studies would encourage scholarly endeavors and provide valuable information regarding teachers' perceptions of their teaching practices.

### **Summary**

Are qualified teachers effective teachers? If a teacher is the single most important factor affecting student achievement, isn't it important to identify the characteristics of an effective teacher? And yet, there is no consensus about what makes an effective teacher, although, there is agreement that an effective teacher positively impacts student achievement (Darling-Hammond, 2000; Marzano, 2010; Wong & Wong, 2009). Researchers frequently identify good classroom management and good pedagogy, both content and instructional, as making a quality teacher. In this study, teacher characteristics surveyed were the teacher preparedness variables: (a) handling classroom management, (b) usage of a variety of instructional strategies, (c) subject matter knowledge, (d) usage of computers in classroom, (e) assessing students, and (f) selecting and adapting curriculum and instructional materials.

What about what a teacher believes they can do? How does that impact success in the classroom? Bandura (1997) asserts that one's sense of self-efficacy can play a major role in how one approaches goals, tasks, and challenges. By determining the beliefs a teacher holds regarding the power to teach, it strongly influences both the power a teacher actually

has to face challenges competently but also the choices a teacher will make. In theory, a highly efficacious teacher is more likely to take on new challenges, view difficult tasks as something to be mastered, less likely to quit or avoid tough tasks or situations. For example, a teacher with a higher self-efficacy in classroom management would run an effective classroom without disruptions or poor behavior. Therefore, surveying the perceptions of teachers' on their preparation can identify weak and strong areas in their own teaching.

The results from this study from the onset have the potential to inform schools and universities of teacher reported strengths and deficiencies in the skill of teaching. Based on the premise that teacher quality plays a significant role in student academic success (Hattie, 2009; Marzano, 2007; Wong & Wong, 2009) school districts and universities need to be informed of teacher skills to guide their professional development, district hiring and retention practices, and teacher preparation programming. Determining if there was a connection between a teacher's chosen certification route and their level of perceived preparedness, as well as, a teacher's level of experience provides the potential for differentiated teacher training to meet the needs of students.

The perceptions of teacher preparedness of both traditional or alternative certified and new or experienced teachers in this study with the six teacher skill areas may help inform future studies. First, results from this study extend current literature on teacher preparation beyond the accepted notion that more experienced teachers feel more prepared and traditional certified teachers feel more prepared than alternatively certified teachers. Particularly, this study presented a detailed descriptive analysis relating teacher perceptions of their own preparedness with years of experience and certification route and their relationship to six variables. Second, the contrasting findings between traditional or

alternative certification and years of experience with teacher preparedness variables provide support to the advancement of teacher preparation programs, school district professional development, and hiring practices. Specifically, the current study clarifies research on how different certification routes and years of experience relate to teachers' perceptions of their own preparedness. Future studies may utilize similar or different sampling methodologies to compare, confirm, or potentially expand on findings presented in this study.

Currently, there is scarcity of information on how teachers' levels of preparedness impact student achievement. This was also evident in the present study through the teacher surveys regarding their experience, certification route, and six teaching items. Consequently, current findings may be considered a first step in understanding teacher preparation in this school district. It can be suggested that experienced teachers in this district are equipped with more specific knowledge of their content, but need support in using computers in the classroom, student assessment, and selecting and adapting curriculum and instructional materials. By attributing the presence of these features to more effective teacher professional development and teacher training programs schools will enhance teachers' efficacy beliefs to successfully educate students.

One consistent implication from this study is to continue the exploration of teacher preparedness variables in an effort to provide teacher preparation programs with theoretical models along with teaching and coping approaches to train teacher candidates for classroom readiness. For example, focusing on how to assess student learning, both formative and summative, and using that information to teach and re-teach students. Subsequently such efforts can direct teachers' actions through more relevant preparation or professional development and the effective use of research-based instructional strategies. Promising

findings in the area of teacher preparedness can help guide teacher preparation programs and schools in enriching course offerings, addressing specific needs of future teachers, practical training and professional development units post employment with useful information and specific tools to increase student achievement.

Ideally, the training that every aspiring teacher receives would fully prepare them for the classroom. Instead, every teacher has a unique set of experiences they bring based on their own personal experiences as a student or teacher and their teacher preparation program that impact their skills as a teacher. In addition, schools hiring teachers must create a bridge between the needs of new teachers and the needs of veteran teachers who have been trained in different decades or on different educational reform movements. Meeting the needs of all these teachers to ultimately meet the needs of students is a massive undertaking and requires continuous improvement. Studies similar to this one need to be purposeful and relevant for use among teachers, school officials, and university officials.

## APPENDIX A

### 2007-2008 SASS PUBLIC TEACHER QUESTIONNAIRE SELECTED QUESTIONS

**I GENERAL INFORMATION**

**1. How do you classify your position at THIS school, that is, the activity at which you spend most of your time during this school year?**  
● Mark (X) only one box.

0025

1  Regular full-time teacher

2  Regular part-time teacher

3  Itinerant teacher (i.e., your assignment requires you to provide instruction at more than one school)

4  Long-term substitute (i.e., your assignment requires that you fill the role of a regular teacher on a long-term basis, but you are still considered a substitute)

5  Short-term substitute

6  Student teacher

7  Teacher aide

8  Administrator (e.g., principal, assistant principal, director, school head)

9  Library media specialist or Librarian

10  Other professional staff (e.g., counselor, curriculum coordinator, social worker)

11  Support staff (e.g., secretary)

---

**2. Which box did you mark in item 1 above?**

0026

1  Box 1 → **GO TO item 5 on page 5.**

2  Box 2, 3, or 4 → **GO TO item 4 below.**

3  Box 5, 6, or 7 → **Please STOP now and return this questionnaire to the U.S. Census Bureau. Thank you for your time.**

4  Box 8, 9, 10, or 11

↓

**3. Do you TEACH any regularly scheduled class(es) at this school?**  
● If you work as a library media specialist or librarian at this school, do not include classes in which you teach students how to use the library (e.g., library skills or library research).

0027

1  Yes

2  No → **Please STOP now and return this questionnaire to the U.S. Census Bureau. Thank you for your time.**

---

**4. How much time do you work as a TEACHER at THIS school?**  
● Mark (X) only one box.

0028

1  Full time

2  3/4 time or more, but less than full-time

3  1/2 time or more, but less than 3/4 time

4  1/4 time or more, but less than 1/2 time

5  Less than 1/4 time

**5. How many days are covered by your contract?**

Include professional development, student contact days, and any other days covered by your contract.

0029.    Days

**6. What was your MAIN activity LAST school year (2006-07)?**

Mark (X) only one box.

- 0030
- 1  Teaching in this school
  - 2  Teaching in another public elementary or secondary school IN THIS SCHOOL SYSTEM
  - 3  Teaching in a public elementary or secondary school IN A DIFFERENT SCHOOL SYSTEM IN THIS STATE
  - 4  Teaching in a public elementary or secondary school IN ANOTHER STATE
  - 5  Teaching in a PRIVATE elementary or secondary school
  - 6  Student at a college or university
  - 7  Teaching in a preschool
  - 8  Teaching at a college or university
  - 9  Working in a position in the field of education, but not as a teacher
  - 10  Working in an occupation outside the field of education
  - 11  Caring for family members
  - 12  Military service
  - 13  Unemployed and seeking work
  - 14  Retired from another job
  - 15  Other – please specify

**7a. Did you mark box 10 (Working in an occupation outside the field of education) in item 6?**

0031

- 1  Yes
- 2  No → **GO TO item 8 on page 6.**

**b. What kind of work did you do, that is, what was your occupation?**

Please record your job title; for example, plumber, typist, or farmer.

5032

**c. What were your usual activities or duties at the job?**

For example, typing, keeping account books, filing, selling cars, operating printing press, laying brick.

5033

**d. In addition to these usual activities, were you also teaching in one or more of grades K-12 last school year?**

- 0034
- 1  Yes → **GO TO item 7e on page 6.**
  - 2  No → **GO TO item 8 on page 6.**

7. Continued –

e. How would you classify that teaching position?

☛ Mark (X) only one box.

0035

1  Regular full-time teacher

2  Regular part-time teacher

3  Substitute teacher

4  Itinerant teacher

5  Other – please specify →

5035

8. In what year did you begin teaching in THIS school?

☛ If you have had a break in service of **one year or more**, please report the year that you returned to this school.

☛ Do not include time spent as a student teacher.

0036

Year

9. In what year did you begin teaching, either full-time or part-time, at the elementary or secondary level?

☛ Do not include time spent as a student teacher.

0037

Year

10a. How many years have you worked as a FULL-TIME elementary or secondary teacher in PUBLIC SCHOOLS?

☛ Include the current school year if you are a full-time teacher this year.

☛ Public schools include public charter and/or Bureau of Indian Affairs-funded schools.

☛ Record whole years, not fractions or months.

☛ If none, please mark (X) the box.

0038

o  None or  Year(s)

b. How many years have you worked as a PART-TIME elementary or secondary teacher in PUBLIC SCHOOLS?

☛ Include the current school year if you are a part-time teacher this year.

☛ Public schools include public charter and/or Bureau of Indian Affairs-funded schools.

☛ Record whole years, not fractions or months.

☛ If none, please mark (X) the box.

0039

o  None or  Year(s)

## II CLASS ORGANIZATION

12. In which grades are ALL of the STUDENTS you currently teach at THIS school?

☛ Mark (X) all that apply.

0050 1  Prekindergarten

0055 1  4th

0060 1  9th

0051 1  Kindergarten

0056 1  5th

0061 1  10th

0052 1  1st

0057 1  6th

0062 1  11th

0053 1  2nd

0058 1  7th

0063 1  12th

0054 1  3rd

0059 1  8th

0064 1  Ungraded

### III EDUCATIONAL BACKGROUND

23a. Do you have a bachelor's degree?

Yes  
 No → **GO TO item 26a on page 15.**  
If you have more than one bachelor's degree, information about additional degrees will be asked in item 26a.

0110

1

Yes

2

No →

**GO TO item 26a on page 15.**

b. In what year did you receive your bachelor's degree?

0111     Year

c. Was this degree awarded by a university's Department or College of Education, or a college's Department or School of Education?

0112

1

Yes

2

No

d. What was your major field of study?

Record the field of study code and the field name from Table 2 on page 12.

0113

Code

5113

Major

25a. Do you have a master's degree?

Yes  
 No → **GO TO item 26a on page 15.**  
If you have more than one master's degree, information about additional degrees will be asked in item 26a.

0120

1

Yes

2

No →

**GO TO item 26a on page 15.**

b. In what year did you receive your master's degree?

0121     Year

c. Was this degree awarded by a university's Department or College of Education, or a college's Department or School of Education?

0122

1

Yes

2

No

d. What was your major field of study?

Record the field of study code and the field name from Table 2 on page 12.

0123

Code

5123

Major

**28. Have you taken the following tests?**

● *Mark (X) only one box.*

**a. The Praxis I Pre-Professional Skills Test (PPST): Reading**

(The Praxis was formerly called the National Teachers Exam [NTE].)

0145

- 1  Taken and passed  
2  Taken and have not yet passed  
3  Not taken

**b. The Praxis I Pre-Professional Skills Test (PPST): Mathematics**

(The Praxis was formerly called the National Teachers Exam [NTE].)

0146

- 1  Taken and passed  
2  Taken and have not yet passed  
3  Not taken

**c. The Praxis I Pre-Professional Skills Test (PPST): Writing**

(The Praxis was formerly called the National Teachers Exam [NTE].)

0147

- 1  Taken and passed  
2  Taken and have not yet passed  
3  Not taken

**d. The Praxis II: Subject Assessment in a specific content area**

(The Praxis was formerly called the National Teachers Exam [NTE].)

0148

- 1  Taken and passed  
2  Taken and have not yet passed  
3  Not taken

**e. Another test of basic skills or subject knowledge, other than those listed above, required by your state or district**

0149

- 1  Taken and passed  
2  Taken and have not yet passed  
3  Not taken

29. Have you ever taken any graduate or undergraduate courses that focused on teaching methods or teaching strategies?

- Include courses you have taken to earn a degree and courses taken outside a degree program.
- Do not include student teaching.

0150

- 1  Yes  No
- 2

How many courses?

- Mark (X) only one box, then GO TO item 30 below.

0151

- 1  1 or 2 courses
- 2  3 or 4 courses
- 3  5 to 9 courses
- 4  10 or more courses

30. How long did your practice teaching last?

- Mark (X) only one box.

0152

- 1  I had no practice teaching
- 2  4 weeks or less
- 3  5-7 weeks
- 4  8-11 weeks
- 5  12 weeks or more

31. Did you enter teaching through an alternative certification program?

- (An alternative program is a program that was designed to expedite the transition of non-teachers to a teaching career, for example, a state, district, or university alternative certification program.)

0153

- 1  Yes
- 2  No

32a. Are you certified by the National Board for Professional Teaching Standards in at least one content area?

- (The National Board for Professional Teaching Standards is a nongovernment organization that administers National Board certification, a voluntary national assessment program that certifies teachers who meet high professional standards. In order to gain certification, the candidate must at least complete a portfolio of classroom practice and pass one or more tests of content knowledge.)

0154

- 1  Yes, fully certified → [GO TO item 33a on page 19.](#)
- 2  No

b. Are you working toward National Board Certification?

0155

- 1  Yes
- 2  No

## IV CERTIFICATION AND TRAINING

33a. Which of the following describes the teaching certificate you currently hold in THIS state?

☛ Mark (X) only one box.

☛ If you currently hold more than one of the following, a second certification may be listed in item 34.

- 0160
- 1  Regular or standard state certificate or advanced professional certificate
  - 2  Certificate issued after satisfying all requirements except the completion of a probationary period
  - 3  Certificate that requires some additional coursework, student teaching, or passage of a test before regular certification can be obtained
  - 4  Certificate issued to persons who must complete a certification program in order to continue teaching
  - 5  I do not hold any of the above certifications in THIS state → [GO TO item 35a on page 23.](#)

b. Using Table 3 on page 18, in what content area(s) does the teaching certificate marked above allow you to teach in THIS state?

(For some teachers, the content area may be the grade level, for example, elementary general, secondary general, etc.)

☛ If this certificate allows you to teach in more than one content area, you may report additional content areas in later items.

1) Code  Content area

2) Which of the following grade ranges does this certificate apply to?

☛ Mark (X) all that apply.

☛ If your certificate does not restrict you to a specific grade range(s), mark all three grade ranges.

- 0162 1  Early childhood, preschool, and any of grades K-5
- 0163 1  Any of grades 6-8
- 0164 1  Any of grades 9-12

c. Does this certificate marked in item 33a allow you to teach in additional content areas?

- 0165
- 1  Yes
  - 2  No → [GO TO item 34a on page 21.](#)

34a. Do you have another current teaching certificate in THIS state?

- 0185
- 1  Yes
  - 2  No → [GO TO item 35a on page 23.](#)

b. Which of the following describes this current teaching certificate you hold in THIS state?

☛ Mark (X) only one box.

- 0186
- 1  Regular or standard state certificate or advanced professional certificate
  - 2  Certificate issued after satisfying all requirements except the completion of a probationary period
  - 3  Certificate that requires some additional coursework, student teaching, or passage of a test before regular certification can be obtained
  - 4  Certificate issued to persons who must complete a certification program in order to continue teaching

**35a. This school year, are you a Highly Qualified Teacher (HQT) according to your state's requirements?**  
 (Generally, to be Highly Qualified, teachers must meet requirements related to 1) a bachelor's degree, 2) full state certification, and 3) demonstrated competency in the subject area(s) taught. The HQT requirement is a provision under No Child Left Behind (NCLB).)

- 0211
- 1  Yes → *GO TO item 36 on page 24.*
- 2  No

**b. Do you meet your state's requirements for a Highly Qualified Teacher in at least one subject that you teach?**

- 0212
- 1  Yes
- 2  No

**36. Was your FIRST year of teaching before the 2003-04 school year?**

- 0213
- 1  Yes → *GO TO item 40 on page 26.*
- 2  No

**37. In your FIRST year of teaching, how well prepared were you to –**  
 🍎 *If you are in your first year of teaching, please answer for THIS school year.*

		🍎 <i>Mark (X) one box on each line.</i>			
		Not at all prepared	Somewhat prepared	Well prepared	Very well prepared
a. Handle a range of classroom management or discipline situations?	0214	1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>
b. Use a variety of instructional methods?	0215	1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>
c. Teach your subject matter?	0216	1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>
d. Use computers in classroom instruction?	0217	1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>
e. Assess students?	0218	1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>
f. Select and adapt curriculum and instructional materials?	0219	1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>

**67. Are you male or female?**  
0352 1  Male  
2  Female

---

**68. Are you of Hispanic or Latino origin?**  
0353 1  Yes  
2  No

---

**69. What is your race?**  
☛ *Mark (X) one or more races to indicate what you consider yourself to be.*

0354 1  White  
0355 1  Black or African-American  
0356 1  Asian  
0357 1  Native Hawaiian or Other Pacific Islander  
0358 1  American Indian or Alaska Native

} **GO TO item 71 below.**

The survey questions are from “Teacher Questionnaire: Schools and Staffing Survey 2007-2008 School Year,” by National Center for Education Statistics, U.S. Department of Education. Reprinted and adapted with permission.

## APPENDIX B

### PERMISSION TO USE SASS PUBLIC TEACHER QUESTIONNAIRE



#### Permission to Link to NCES or Replicate Information

LINKING to NCES: All information on our site is in the public domain. If you feel that a link to our website from yours is beneficial, please feel free to create a link.

REPLICATION: Unless specifically stated otherwise, all information on the U.S. Department of Education's NCES website at <http://nces.ed.gov> is in the public domain, and may be reproduced, published or otherwise used without NCES' permission. This statement does not pertain to information at websites other than <http://nces.ed.gov>, whether funded by or linked to, from NCES or not.

Please use the following citation when referencing NCES products and publications:  
*National Center for Education Statistics, U.S. Department of Education.*

[Return to Contact NCES](#)

#### Allison Murphy-Pope - Request for permission to utilize the SASS Teacher Survey

**From:** Allison Murphy-Pope  
**To:** edpubs@inet.ed.gov  
**Date:** 11/29/2010 5:51 PM  
**Subject:** Request for permission to utilize the SASS Teacher Survey  
**CC:** Allison Murphy-Pope; arm553@mail.umkc.edu

My name is Allison Murphy-Pope, and am a doctorate student at University of Missouri-Kansas City. I am writing to ask permission to use the Schools and Staffing Survey (SASS), developed by the NCES, in my dissertation.

I have followed the Schools and Staffing Survey for years and participated in the 2003-04 SASS workshops in Washington, D.C. under the name Allison Murphy (University of Missouri-Kansas City student).

Today, I spoke with one of the customer representatives regarding usage of the SASS-Teacher Survey in conducting my own research on Teacher Reported Preparedness, and I want to secure permission from you to modify the SASS Public Teacher Questionnaire from 2007-08 to only include the following questions:

- Questions 1-10
- Question 23 (a-f)
- Question 25 (a-b)
- Questions 26-33
- Questions 35-36
- Question 37 (a-e)

My plan is to simply minimize the number of questions to identify new teachers and their perceptions of their own preparation (Question 37). The newly designed survey would contain questions which would exactly parallel those of the original survey, so that comparisons could be made between groups

As the Schools and Staffing Survey has been discontinued, I appreciate, in advance, your response to this request, and I appreciate your generosity in allowing me to use the SASS Public Teacher Questionnaire. Please let me know if you have any questions. I may be reached at this email or cellular phone number of 816-674-9191.

Respectfully,

Allison Murphy-Pope

Allison Murphy-Pope  
Assistant Principal  
Winnetonka High School  
North Kansas City Schools  
816-413-5500

## APPENDIX C

### TEACHER REPORTED PREPAREDNESS SURVEY

Adapted from 2007-2008 Schools and Staffing Survey Public Teacher Questionnaire

**Are you male or female?**

- Female
- Male

**Are you of Hispanic or Latino origin?**

- Yes
- No

**What is your race?**

*Mark (X) one or more races to indicate what you consider yourself to be.*

- White
- Black or African-American
- Asian
- Native Hawaiian or Other Pacific Islander
- American Indian or Alaska Native

**How do you classify your position at THIS school, that is, the activity at which you spend most of your time during this school year?**

*Mark (X) only one box.*

- Regular full-time teacher, regular part-time teacher, or itinerant teacher
- Long-term substitute
- Short-term substitute
- Administrator (e.g., principal, assistant principal, director, superintendent)
- Library media specialist
- Other professional staff (e.g., counselor, curriculum coordinator, social worker)

**How many years have you worked as an elementary or secondary teacher in PUBLIC SCHOOLS? Include current school year but exclude time spent student teaching.**

*Mark (X) only one box.*

- 5 years or less
- More than 5 years

**In which grade levels are ALL of the students you currently teach?**

*Mark (X) all that apply.*

- Pre-K or Early Childhood
- Elementary grades
- Middle grades
- Secondary grades

**Which of the following describes the teaching certificate you currently hold in Missouri?**

Mark (X) only one box.

- Initial
- Career Continuous or Lifetime
- Provisional
- Temporary
- Substitute

**Did you enter teaching through an alternative certification program?** (An alternative program is a program that was designed to expedite the transition of non-teachers to a teaching career, for example, a state, district, or university alternative certification program.)

- Yes
- No

**This school year, are you a Highly Qualified Teacher (HQT) according to your state's requirements?** (Generally, to be Highly Qualified, teachers must meet requirements related to 1) a bachelor's degree, 2) full state certification, and 3) demonstrated competency in the subject area(s) taught. The HQT requirement is a provision under No Child Left Behind (NCLB).)

- Yes
- No

**In your first year of teaching, how well prepared were you to -**

If you are in your first year of teaching, please answer for THIS school year.

Mark (X) one box on each line.

	Not at all prepared	Somewhat prepared	Well Prepared	Very well prepared
Handle a range of classroom management or discipline situations? <input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Use a variety of instructional methods? <input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Teach your subject matter? <input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Use computers in classroom instruction? <input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Assess students? <input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Select and adapt curriculum and instructional materials? <input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**In your current year of teaching, how well prepared were you to –**  
*If you have taught more five or more years, please answer for THIS school year.*  
*Leave blank if you are a first year teacher.*

*Mark (X) one box on each line.*

	Not at all prepared	Somewhat prepared	Well prepared	Very well prepared
Handle a range of classroom management or discipline situations? <input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Use a variety of instructional methods? <input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Teach your subject matter? <input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Use computers in classroom instruction? <input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Assess students? <input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Select and adapt curriculum and instructional materials? <input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

## APPENDIX D

### CONSENT TO PARTICIPATE IN A RESEARCH STUDY

#### ***Project Title: Teacher Reported Preparedness: A Study of One Midwest Metropolitan School District***

You are being invited to participate in a research study. The purpose of this survey is to gather information regarding teacher perceptions of their own preparation in specific areas. You will recognize that the statements are of such a nature that there are no correct or incorrect answers. I am only interested in your frank opinions.

#### **Investigator**

This study will be conducted by Allison Murphy-Pope, a doctoral student in the School of Education at the University of Missouri-Kansas City.

#### **Who will Participate**

All certificated teachers in the school district will be invited to participate.

#### **Purpose**

The goal of this study is to investigate teacher perceptions of their own preparation based on years of experience and certification route. This research will supplement the literature on teacher reported preparedness and teacher certification preparation routes, both traditional and alternative.

#### **Methods/Procedures**

You will be completing a survey that will take approximately 10 minutes and your identity will not be tracked or revealed at any time.

#### **Voluntary Participation**

Your participation in this research is voluntary. You may choose to participate or to withdraw your participation at any time.

#### **Fees and Expenses/Compensation**

You are not responsible for any costs or expenses associated with this study and you will receive no compensation for your time to participate in this study.

#### **Risks and Inconveniences**

The risks associated with participating in this study are similar to the risks of everyday life.

## **Benefits**

Study participants will benefit by gaining a deeper understanding of the influence, or lack thereof, that their certification preparation route or years of experiences may have in their perceived success in teaching.

## **Alternatives to Study Participation**

You may choose not to participate in this study. Your decision to not participate will not affect your employment or job evaluation, now or in the future.

## **Confidentiality**

All of the information you complete and share in this study will be remain absolutely confidential. Your identity will not be tracked or revealed. Data produced by this study will be included in a dissertation report to the University of Missouri-Kansas city and potentially presented at state and national conferences.

## **In Case of Injury/Questions**

Although it is not the University's policy to compensate or provide medical treatment for persons who participate in studies, if you think you have been injured as a result of participating in this study, please call the IRB Administrator of UMKC's Social Sciences Institutional Review Board at 816-235-1764.

## **Questions**

If you have any questions please contact the Mrs. Allison Murphy-Pope at 816-674-9191 or [arm553@mail.umkc.edu](mailto:arm553@mail.umkc.edu).

## **Authorization**

By submission of the study survey, you are giving permission to the researcher to use the information you provide in the survey as described

Thank you for participating in the study.

Allison Murphy-Pope  
Doctoral Student  
University of Missouri-Kansas City  
816-674-9191

I have read this letter and agree to participate in the study by proceeding to the survey link at <http://www.surveymonkey.com/>

APPENDIX E

SPSS OUTPUT: MULTIVARIATE TESTS

Multivariate Tests<sup>c</sup>

Effect		Value	F	Hypothesis df	Error df	Sig.	Partial Eta Squared	Noncent. Parameter	Observed Power <sup>b</sup>
Intercept	Pillai's Trace	.949	775.307 <sup>a</sup>	6.000	251.000	.000	.949	4651.843	1.000
	Wilks' Lambda	.051	775.307 <sup>a</sup>	6.000	251.000	.000	.949	4651.843	1.000
	Hotelling's Trace	18.533	775.307 <sup>a</sup>	6.000	251.000	.000	.949	4651.843	1.000
	Roy's Largest Root	18.533	775.307 <sup>a</sup>	6.000	251.000	.000	.949	4651.843	1.000
AltCert	Pillai's Trace	.035	1.524 <sup>a</sup>	6.000	251.000	.171	.035	9.146	.585
	Wilks' Lambda	.965	1.524 <sup>a</sup>	6.000	251.000	.171	.035	9.146	.585
	Hotelling's Trace	.036	1.524 <sup>a</sup>	6.000	251.000	.171	.035	9.146	.585
	Roy's Largest Root	.036	1.524 <sup>a</sup>	6.000	251.000	.171	.035	9.146	.585
yr_5	Pillai's Trace	.071	3.194 <sup>a</sup>	6.000	251.000	.005	.071	19.166	.922
	Wilks' Lambda	.929	3.194 <sup>a</sup>	6.000	251.000	.005	.071	19.166	.922
	Hotelling's Trace	.076	3.194 <sup>a</sup>	6.000	251.000	.005	.071	19.166	.922
	Roy's Largest Root	.076	3.194 <sup>a</sup>	6.000	251.000	.005	.071	19.166	.922
elemid_second	Pillai's Trace	.037	1.608 <sup>a</sup>	6.000	251.000	.145	.037	9.649	.612

	Wilks' Lambda	.963	1.608 <sup>a</sup>	6.000	251.000	.145	.037	9.649	.612
	Hotelling's Trace	.038	1.608 <sup>a</sup>	6.000	251.000	.145	.037	9.649	.612
	Roy's Largest Root	.038	1.608 <sup>a</sup>	6.000	251.000	.145	.037	9.649	.612
AltCert * yr_5	Pillai's Trace	.057	2.518 <sup>a</sup>	6.000	251.000	.022	.057	15.106	.835
	Wilks' Lambda	.943	2.518 <sup>a</sup>	6.000	251.000	.022	.057	15.106	.835
	Hotelling's Trace	.060	2.518 <sup>a</sup>	6.000	251.000	.022	.057	15.106	.835
	Roy's Largest Root	.060	2.518 <sup>a</sup>	6.000	251.000	.022	.057	15.106	.835
AltCert * elemid_second	Pillai's Trace	.025	1.084 <sup>a</sup>	6.000	251.000	.372	.025	6.507	.426
	Wilks' Lambda	.975	1.084 <sup>a</sup>	6.000	251.000	.372	.025	6.507	.426
	Hotelling's Trace	.026	1.084 <sup>a</sup>	6.000	251.000	.372	.025	6.507	.426
	Roy's Largest Root	.026	1.084 <sup>a</sup>	6.000	251.000	.372	.025	6.507	.426
yr_5 * elemid_second	Pillai's Trace	.024	1.039 <sup>a</sup>	6.000	251.000	.401	.024	6.232	.408
	Wilks' Lambda	.976	1.039 <sup>a</sup>	6.000	251.000	.401	.024	6.232	.408
	Hotelling's Trace	.025	1.039 <sup>a</sup>	6.000	251.000	.401	.024	6.232	.408
	Roy's Largest Root	.025	1.039 <sup>a</sup>	6.000	251.000	.401	.024	6.232	.408
AltCert * yr_5 * elemid_second	Pillai's Trace	.016	.668 <sup>a</sup>	6.000	251.000	.676	.016	4.005	.264

Wilks' Lambda	.984	.668 <sup>a</sup>	6.000	251.000	.676	.016	4.005	.264
Hotelling's Trace	.016	.668 <sup>a</sup>	6.000	251.000	.676	.016	4.005	.264
Roy's Largest Root	.016	.668 <sup>a</sup>	6.000	251.000	.676	.016	4.005	.264

a. Exact statistic

b. Computed using alpha = .05

c. Design: Intercept + AltCert + yr\_5 + elemid\_second + AltCert \* yr\_5 + AltCert \* elemid\_second + yr\_5 \* elemid\_second + AltCert \* yr\_5 \* elemid\_second

### Univariate Follow-Ups

#### Tests of Between-Subjects Effects

Source	Dependent Variable	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared	Noncent. Parameter	Observed Power <sup>b</sup>
Corrected Model	cur yr behavior	4.857 <sup>a</sup>	7	.694	2.017	.053	.052	14.120	.779
	cur yr instruction	4.531 <sup>c</sup>	7	.647	1.988	.057	.052	13.913	.772
	cur yr content	3.957 <sup>d</sup>	7	.565	2.501	.017	.064	17.509	.874
	cur yr tech	9.691 <sup>e</sup>	7	1.384	2.164	.038	.056	15.151	.813
	cur yr assess	4.578 <sup>f</sup>	7	.654	1.569	.145	.041	10.986	.649
	cur yr curric	6.922 <sup>g</sup>	7	.989	2.469	.018	.063	17.285	.869
	Intercept	cur yr behavior	926.809	1	926.809	2694.678	.000	.913	2694.678
cur yr instruction		932.030	1	932.030	2861.792	.000	.918	2861.792	1.000
cur yr content		980.267	1	980.267	4337.370	.000	.944	4337.370	1.000
cur yr tech		848.504	1	848.504	1326.531	.000	.838	1326.531	1.000
cur yr assess		892.493	1	892.493	2141.721	.000	.893	2141.721	1.000

	cur yr curric	887.902	1	887.902	2217.215	.000	.896	2217.215	1.000	
AltCert	cur yr behavior	1.219	1	1.219	3.545	.061	.014	3.545	.467	
	cur yr instruction	1.625	1	1.625	4.990	.026	.019	4.990	.605	
	cur yr content	1.222	1	1.222	5.409	.021	.021	5.409	.639	
	cur yr tech	.142	1	.142	.221	.638	.001	.221	.076	
	cur yr assess	1.241	1	1.241	2.979	.086	.012	2.979	.405	
	cur yr curric	3.052	1	3.052	7.622	.006	.029	7.622	.785	
	yr_5	cur yr behavior	.272	1	.272	.790	.375	.003	.790	.144
		cur yr instruction	.071	1	.071	.218	.641	.001	.218	.075
cur yr content		.320	1	.320	1.415	.235	.005	1.415	.220	
cur yr tech		2.525	1	2.525	3.947	.048	.015	3.947	.508	
cur yr assess		.844	1	.844	2.025	.156	.008	2.025	.294	
cur yr curric		1.265	1	1.265	3.158	.077	.012	3.158	.425	
elemid_second		cur yr behavior	.122	1	.122	.355	.552	.001	.355	.091
		cur yr instruction	.093	1	.093	.285	.594	.001	.285	.083
	cur yr content	.354	1	.354	1.565	.212	.006	1.565	.238	
	cur yr tech	2.443	1	2.443	3.819	.052	.015	3.819	.495	
	cur yr assess	.036	1	.036	.086	.769	.000	.086	.060	
	cur yr curric	.246	1	.246	.616	.433	.002	.616	.122	
	AltCert * yr_5	cur yr behavior	.103	1	.103	.299	.585	.001	.299	.085

	cur yr instruction	.953	1	.953	2.925	.088	.011	2.925	.399
	cur yr content	1.247	1	1.247	5.519	.020	.021	5.519	.648
	cur yr tech	.643	1	.643	1.005	.317	.004	1.005	.170
	cur yr assess	3.486	1	3.486	8.366	.004	.032	8.366	.822
	cur yr curric	3.880	1	3.880	9.689	.002	.036	9.689	.873
AltCert *	cur yr	1.317	1	1.317	3.829	.051	.015	3.829	.496
elemid_second	behavior								
	cur yr instruction	.129	1	.129	.395	.530	.002	.395	.096
	cur yr content	.336	1	.336	1.485	.224	.006	1.485	.229
	cur yr tech	.059	1	.059	.092	.762	.000	.092	.061
	cur yr assess	.531	1	.531	1.275	.260	.005	1.275	.203
	cur yr curric	.133	1	.133	.333	.564	.001	.333	.089
yr_5 *	cur yr	.720	1	.720	2.094	.149	.008	2.094	.302
elemid_second	behavior								
	cur yr instruction	.804	1	.804	2.468	.117	.010	2.468	.347
	cur yr content	.334	1	.334	1.479	.225	.006	1.479	.228
	cur yr tech	1.489	1	1.489	2.328	.128	.009	2.328	.330
	cur yr assess	.043	1	.043	.103	.748	.000	.103	.062
	cur yr curric	.066	1	.066	.165	.685	.001	.165	.069
AltCert * yr_5 *	cur yr	.137	1	.137	.398	.529	.002	.398	.096
elemid_second	behavior								
	cur yr instruction	.111	1	.111	.341	.560	.001	.341	.090
	cur yr content	.352	1	.352	1.559	.213	.006	1.559	.238

	cur yr tech	.001	1	.001	.001	.970	.000	.001	.050
	cur yr assess	.668	1	.668	1.602	.207	.006	1.602	.243
	cur yr curric	.806	1	.806	2.012	.157	.008	2.012	.293
Error	cur yr behavior	88.049	256	.344					
	cur yr instruction	83.374	256	.326					
	cur yr content	57.857	256	.226					
	cur yr tech	163.748	256	.640					
	cur yr assess	106.680	256	.417					
	cur yr curric	102.517	256	.400					
Total	cur yr behavior	3843.000	264						
	cur yr instruction	3929.000	264						
	cur yr content	4057.000	264						
	cur yr tech	3228.000	264						
	cur yr assess	3764.000	264						
	cur yr curric	3852.000	264						
Corrected Total	cur yr behavior	92.905	263						
	cur yr instruction	87.905	263						
	cur yr content	61.814	263						
	cur yr tech	173.439	263						
	cur yr assess	111.258	263						

cur yr	109.439	263						
curric								

- a. R Squared = .052 (Adjusted R Squared = .026)
- b. Computed using alpha = .05
- c. R Squared = .052 (Adjusted R Squared = .026)
- d. R Squared = .064 (Adjusted R Squared = .038)
- e. R Squared = .056 (Adjusted R Squared = .030)
- f. R Squared = .041 (Adjusted R Squared = .015)
- g. R Squared = .063 (Adjusted R Squared = .038)

## REFERENCES

- Abelson, R. (1979). Differences between belief systems and knowledge systems. *Cognitive Science*, 3, 355-366.
- Advisory Commission on Intergovernmental Relations (1981). *An agenda for American federalism*. Washington, DC: Author.
- Allen, M. (2003). *Eight questions on teacher preparation: What does the research say? A summary of the findings*. Denver, CO: Education Commission of the States (ECS). Retrieved from ERIC database. (ED479051)
- Almog, O., & Shechtman, Z. (2007, May). Teachers' democratic and efficacy beliefs and styles of coping with behavioural problems of pupils with special needs. *European Journal of Special Needs Education*, 22(2), 115-129. Retrieved from ERIC database. (EJ764248)
- American Association of Colleges for Teacher Education. (1987). *Teaching teachers: Facts and figures*. Washington, DC: Author.
- American Association of Colleges for Teacher Education. (1994). *Teacher education pipeline: Schools, colleges, and departments of education*. Washington, DC: Author.
- American Federation of Teachers. (2013). *Professional development for teachers*. Retrieved from <http://www.aft.org/issues/teaching/profdevel/>
- Andrews, J., Blackman, C., & Mackey, J. (1980). Preservice performance and the national teacher exams. *Phi Delta Kappan*, 61(5), 358-59.
- Aoki, K., & Elasmr, M. (2000, May). *Opportunities and challenges of conducting web surveys: Results of a field experiment*. Paper presented at the annual meeting of American Association for Public Opinion Research, Portland, Oregon.

- Archer, T. M. (2008, June). Response rates to expect from web-based surveys and what to do about it. *Journal of Extension, 46*(3).
- Armor, D., Conroy-Oseguera, P., Cox, M., King, N., McDonnell, L., Pascal, A., ... & Zellman, G. (1976). *Analysis of the school preferred reading program in selected Los Angeles minority schools*. Report No. R-2007-LAUDS. ERIC Document Reproduction No. 130 243. Santa Monica, CA: Rand Corporation.
- Armour-Thomas, E. (1989). The application of teacher cognition in the classroom: A new teaching competency. *Journal of Research and Development in Education, 22*(3), 29-37.
- Ashton, P. T. (1985). Motivation and the teacher's sense of efficacy. In C. Ames & R. Ames (Eds.), *Research on motivation in education: Volume 2. The classroom milieu* (pp. 141-174). Orlando, FL: Academic Press.
- Ashton, P. T., & Webb, R. B. (1986). *Making a difference: Teachers' sense of efficacy and student achievement*. New York, NY: Longman.
- Ashton, P. T., Webb, R. B., & Doda, N. (1983). *A study of teacher sense of efficacy*. Final Report. Gainesville, FL: University of Florida. ERIC EDRS # ED231833
- Association of Teacher Educators. (1988). *Teacher assessment*. Reston, VA: Author.
- Ball, D., & McDiarmid, G. (1989). The subject matter preparation of teachers. In W. R. Houston (Ed.), *Handbook of research on teacher education* (pp. 437-449). New York, NY: Routledge.
- Bandura, A. (1977). Self-efficacy: Toward a unifying theory of behavioral change. *Psychological Review, 84*, 191-215.

- Bandura, A. (1986). *Social foundations of thought and action: A social cognitive theory*. Englewood Cliffs, NJ: Prentice-Hall.
- Bandura, A. (1994). Self-efficacy. In V. S. Ramachaudran (Ed.), *Encyclopedia of human behavior* (Vol. 4, pp. 71-81). New York, NY: Academic Press. Retrieved from <http://www.emory.edu/EDUCATION/mfp/BanEncy.html>
- Bandura, A. (1997). *Self-efficacy: The exercise of control*. New York, NY: W. H. Freeman and Company.
- Beale, H. K. (1941). *A history of freedom of teaching in American schools*. New York, NY: Scribner.
- Bell, L. (Ed.) (2001). Preparing tomorrow's teachers to use technology: Perspectives of the leaders of twelve national education associations. *Contemporary Issues in Technology and Teacher Education*, 1(4), 517-534.
- Bellara, A. P., & Hibbard, S. T. (2010). Assessing learner needs through formative evaluations in a prescriptive course: Self-reflection of teaching practices through student input. *International Journal of Learning*, 17(7), 359-368.
- Berman, P., McLaughlin, M., Bass, G., Pauly, E., & Zellman, G. (1977). *Federal programs supporting educational change: Volume VII. Factors affecting implementation and continuation*. Santa Monica, CA: Rand Corporation.
- Birkeland, S., & Johnson, S. M. (2002). What keeps new teachers in the swim? *Journal of Staff Development*, 23(4), 18-21.
- Boe, E. E., Bobbitt, S. A., & Cook, L. H. (1997). Whither didst thou go? Retention, reassignment, migration, and attrition of special and general education teachers from a national perspective. *The Journal of Special Education*, 30, 371-389.

- Brown, C. (2002). *Opportunities and accountability to leave no child behind in the middle schools: An examination of the No Child Left Behind Act of 2001*. Prepared for the Edna McConnell Clark Foundation. Retrieved from [http://www.emcf.org/programs/student/student\\_pub.htm](http://www.emcf.org/programs/student/student_pub.htm)
- Bullard, L. G., & Felder, R. M. (2003). Mentoring: A personal perspective. *College Teaching*, 51(2), 66-69.
- Burley, W. W., Hall, B. W., Villeme, M. B., & Brockmeier, L. L. (1991, April). *A path analysis of the mediating role of efficacy in first-year teachers' experiences, reactions, and plans*. Paper presented at the first annual meeting of the American Educational Research Association, Chicago, IL.
- Bush, G. W. (2001). *No Child Left Behind*. [Speech]. Washington, DC: U.S. Government. Retrieved from <http://www.whitehouse.gov/news/reports/no-child-left-behind.html#1>
- Canbazoglu, S. (2008). *Assessment of pre-service elementary science teachers' pedagogical content knowledge regarding the structure of matter*. (Unpublished masters thesis). Gazi University, Ankara, Turkey.
- Carnegie Corporation. (1986). *A nation prepared: Teachers for the 21st century*. New York, NY: Author.
- Carnegie Foundation for the Advancement of Teaching. (1988). *An imperiled generation: Saving urban schools*. Princeton, NJ: Carnegie Foundation.
- Chenoweth, K. (2009). *How it's being done: Urgent lessons from unexpected schools*. Cambridge, MA: Harvard Education Press.

- Citron, C. H. (1985). An overview of legal issues in teacher quality. *Journal of Law and Education, 14*(3), 277-307.
- Civil Rights Act of 1964. Publ. L. No. 88-352. Retrieved from [http://www.archives.nysed.gov/edpolicy/research/res\\_digitized.shtml](http://www.archives.nysed.gov/edpolicy/research/res_digitized.shtml)
- Claycomb, C. (2000). *High-quality urban school teachers: What they need to enter and to remain in hard-to-staff schools*. National Association of State Boards of Education. Retrieved from <http://www.nasbe.org/>
- Clifford, G. J. (1978). Home and school in 19th century America: Some personal history reports from the United States. *History of Education Quarterly, 18*(3), 3-34.
- Clifford, G. J. (1989). Man/woman/teacher: Gender, family, and career in American educational history. In D. Warren (Ed.), *American teachers: Histories of a profession at work* (pp. 293-343). New York, NY: Macmillan.
- Coburn, C. (2003). Rethinking scale: Moving beyond the numbers to deep and lasting change. *Education Researcher, 32*(6), 3-12.
- Cohen, J. H. (1988). *Statistical power analysis for the behavioral sciences* (2nd ed.). Hillsdale, NJ: Erlbaum.
- Cohen, J. H. (1989). Legal challenges to testing for teacher certification. *Journal of Law and Education, 18*(2), 229-265.
- Coleman, J. S., Campbell, E. Q., Hobson, C. J., McPartland, J., Mood, A. M., Weinfield, F. D., & York, R. L. (1966). *Equality of educational opportunity*. Washington, DC: U.S. Government Printing Office.

- Colker, L. J. (2008, March). Twelve characteristics of effective early childhood teachers. *Beyond the journal: Young children on the web*. Retrieved from [http://www.naeyc.org/files/yc/file/200803/BTJ\\_Colker.pdf](http://www.naeyc.org/files/yc/file/200803/BTJ_Colker.pdf)
- Costa, A. L., & Garmston, R. J. (2002). *Cognitive coaching: A foundation for renaissance schools*. Norwood, MA: Christopher-Gordon.
- Costa, A. L., & Garmston, R. J. (2007). *Cognitive coaching foundation seminar: Learning guide* (7th ed.). Canada: Center for Cognitive Coaching.
- Cruickshank, D. R., & Haefele, D. (2001). Good teachers, plural. *Educational Leadership*, 58, 26-30.
- Cubberley, E. P. (1922). *A brief history of education*. New York, NY: The Riverside Press.
- Cunningham, P. M., & Allington, R. (2003). *Classrooms that work: They can all read and write* (3rd ed.) Boston, MA: Allyn & Bacon.
- Darling-Hammond, L. (1997). *What matters most: Investing in quality teaching*. New York, NY: National Commission on Teaching and America's Future.
- Darling-Hammond, L. (1999). *Reshaping teaching policy, preparation, and practice: Influences of the National Board for Professional Teaching Standards*. Washington, DC: American Association of Colleges for Teacher Education.
- Darling-Hammond, L. (2000). Teacher quality and student achievement: A review of state policy evidence. *Education Policy Analysis Archives*, 8(1). Retrieved from <http://www.nctaf.org>
- Darling-Hammond, L. (2001). Standard setting in teaching: Change in licensing, certification, and assessment. In V. Richardson (Ed.), *Handbook of research on*

- teaching* (4th ed., pp. 751-776). Washington, DC: American Educational Research Association.
- Darling-Hammond, L. (2003). *Standards and assessments: Where we are and what we need*. Retrieved from <http://www.tcrecord.org>
- Darling-Hammond, L. (2012), *What makes a teacher effective? A summary of research findings on teacher preparation*. National Council for Accreditation of Teacher Education. Retrieved from <http://www.ncate.org/LinkClick.aspx?fileticket=JFRrmWqa1jU%3d&tabid=361>
- Darling-Hammond, L., & Ball, D. L. (1997). Doing what matters most: Investing in quality teaching. *National Commission on Teaching and America's Future*. Retrieved from <http://www.nctaf.org/documents/DoingWhatMattersMost.pdf>
- Darling-Hammond, L., Holtzman, D. J., Gatlin, S. J., & Heilig, J. V. (2005). Does teacher preparation matter? Evidence about teacher certification, Teach for America, and teacher effectiveness. *Education Policy Analysis Archives*, 13(42). Retrieved from <http://epaa.asu.edu/epaa/v13n42>
- Darling-Hammond, L., & McLaughlin, M. W. (1995). Policies that support professional development in an era of reform. *Phi Delta Kappan*, 76(8), 597-604.
- Darling-Hammond, L., Wise, A. E., & Klein, S. P. (1995). *A license to teach: Building a profession for 21st century schools*. Boulder, CO: Westview Press.
- DeLuca, C., & Klinger, D. A. (2010). Assessment of literacy development: Identifying gaps in teacher candidates' learning. *Assessment in Education: Principles, Policy & Practice*, 17(4), 419-438.
- Dewey, J. (1904). *The educational situation*. Chicago, IL: The University of Chicago Press.

- Dewey, J. (1933). *How we think*. Boston, MA: D. C. Heath.
- Dexter, E. G. (1904). *A history of education in the United States*. New York, NY: Macmillan.
- Dodge, J. (2009). *25 quick formative assessments for a differentiated classroom: Easy, low-prep assessments that help you pinpoint students' needs and reach all learners*. New York, NY: Scholastic.
- Earley, P. M. (1994). *Goals 2000: Educate America Act implications for teacher certification*. Washington, DC: American Association of Colleges for Teacher Education.
- Earley, P. M., & Schneider, E. J. (1996). Federal policy and teacher education. In J. Sikula, T. Buttery, & E. Guyton (Eds.), *Handbook of research on teacher education* (2nd ed., pp. 306-319). New York, NY: Macmillan.
- Education Professions Development Act of 1967. Publ. L. No. 90-35. Retrieved from [http://www.archives.nysed.gov/edpolicy/research/res\\_digitized.shtml](http://www.archives.nysed.gov/edpolicy/research/res_digitized.shtml)
- Elementary and Secondary Education Act 1965. Publ. L. No. 89-10. Retrieved from [http://www.archives.nysed.gov/edpolicy/research/res\\_digitized.shtml](http://www.archives.nysed.gov/edpolicy/research/res_digitized.shtml)
- Elsbree, W. S. (1939). *The American teacher: Evolution of a profession in a democracy*. Westport, CT: Greenwood Press.
- Emmer, E. T., & Hickman, J. (1991). Teacher efficacy in classroom management and discipline. *Educational and Psychological Measurement*, 51, 755-765.
- Ertmer, P. A. (2006). Teacher pedagogical beliefs and classroom technology use: A critical link. Retrieved from [http://www.edci.purdue.edu/ertmer/docs/AERA06\\_TchrBeliefs.pdf](http://www.edci.purdue.edu/ertmer/docs/AERA06_TchrBeliefs.pdf)

- Evenden, E. S. (1933). National Survey of the Education of Teachers: Summary and evaluation. *Education in the United States history: A documentary*. Washington, DC: Government Printing Office.
- Evertson, C. M., & Weinstein, C. S. (2006). *Handbook of classroom management: Research, practice, and contemporary issues*. New York, NY: Routledge.
- Feiman-Nemser, S. (1983). Learning to teach. In L. Shulman & G. Sykes (Eds.), *Handbook of teaching and policy* (pp. 150-170). New York, NY: Longman.
- Feiman-Nemser, S. (2003, May). What new teachers need to learn. *Education Leadership*, 60(8), 25-29. Retrieved from <http://www.ascd.org>
- Feistritzer, C. E. (1999). Teacher quality and alternative certification program: Hearings before the Subcommittee on Postsecondary Education, Training and Life-Long Learning, of the House Committee on Education and the Workforce, 106th Cong. (1999) (testimony of Dr. C. Emily Feistritzer, President, National Center for Education Information). Retrieved from <http://edworkforce.house.gov/hearings>
- Feistritzer, C. E., & Haar, C. K. (2008). *Alternative routes to teaching*. Upper Saddle River, NJ: Pearson Education.
- Ferguson, R. F. (1991). Paying for public education: New evidence on how and why money matters. *Harvard Journal of Legislation*, 28(2), 465-498.
- Ferguson, R. F., & Ladd, H. (1996). How and why money matters: An analysis of Alabama schools. In H. F. Ladd (Ed.), *Holding schools accountable: Performance-based reform in education* (pp. 265-298). Washington, DC: Brookings Institution Press.
- Ferguson, P., & Womack, S. T. (1993). The impact of subject matter and education coursework on teaching performance. *Journal of Teacher Education*, 44, 55-63.

- Field, A. (2005). *Discovering statistics using SPSS* (2nd ed.). London: Sage.
- Finance Project and Public Education Network. (2004). *Teacher professional development: A primer for parents and community members*. Retrieved from <http://www.financeproject.org>
- Fink, A. (2006). *How to conduct surveys: A step-by-step guide*. London: Sage.
- Flanagan, A., & Gissmer, D., (2001). *The role of federal resources in closing the achievement gap of minority and disadvantage students*. Arlington, VA: Rand Corporation.
- Fraenkel, J. R., & Wallen, N. E. (2003). *How to design and evaluate research in education*. New York, NY: McGraw-Hill.
- Fraser, J. W. (2007). *Preparing America's teachers: A history*. New York, NY: Teachers College Press.
- Freiberg, H. J. (2002). Essential skills for new teachers. *Educational Leadership*, 59(6), 56-60. Retrieved from [www.ascd.org](http://www.ascd.org)
- Freiberg, H. J., & Driscoll, A. (2000). *Universal teaching strategies* (3rd ed.). Boston: Allyn and Bacon.
- Fry, S. W. (2007, June). First-year teachers and induction support: Ups, downs, and in-betweens. *The Qualitative Report*, 12(2), 216-237. Retrieved from <http://www.nova.edu/ssw/QR/QR12-2/fry.pdf>
- Fultz, M. (1995). Teacher training and African American education in the South, 1900-1940. *Journal of Negro Education*, 64(2), 196-210.

- Ghaith, G., & Yaghi, H. (1997). Relationships among experience, teacher efficacy, and attitudes towards the implementation of instructional innovation. *Teaching and Teacher Education, 14*, 451-458.
- Glickman, C., & Tamashiro, R. (1982). A comparison of first-year, fifth-year, and former teachers on efficacy, ego development, and problem solving. *Psychology in Schools, 19*, 807-818.
- Goals 2000: Educate America Act of 1994. Publ. L. No. 103-227. Retrieved from [http://www.archives.nysed.gov/edpolicy/research/res\\_digitized.shtml](http://www.archives.nysed.gov/edpolicy/research/res_digitized.shtml)
- Gold, Y. (1996). Beginning teacher support: Attrition, mentoring, and induction. In J. Sikula (Ed.), *Handbook of research on teacher education* (2nd ed., pp. 548-594). New York, NY: Macmillan.
- Goldhaber, D. (2002, March). The mystery of good teaching. *Education Next, 2*(1). Retrieved from <http://www.stcloudstate.edu/tpi/initiative/documents/preparation/The%20Mystery%20of%20good%20teaching.pdf>
- Goldhaber, D. D., & Anthony, E. (2003). *Teacher quality and student achievement*. New York, NY: Teachers College, Institute for Urban and Minority Education, ERIC Clearinghouse on Urban Education.
- Goldhaber, D. D., & Brewer, D. J. (1998). Do school and teacher characteristics matter? Evidence from high school and beyond. *Economics of Education Review, 14*, 1-23.
- Goldhaber, D. D., & Brewer, D. J. (2000). Does teacher certification matter? High school teacher certification status and student achievement. *Education Evaluation and Policy Analysis, 22*(2), 129-145.

- Good, T., & Brophy, J. (1984). *Looking in classrooms*. New York, NY: Harper and Row.
- Good, T. L., & Brophy, J. E. (1986). School effects. In M. C. Wittrock (Ed.), *Handbook of research on teaching* (3rd ed., pp. 570-602). New York, NY: Macmillan.
- Good, T., & Brophy, J. (1995). *Contemporary educational psychology* (5th ed.). New York, NY: Longman Publishers.
- Goodlad, J. I. (1984). *A place called school: Prospects for the future*. New York, NY: McGraw-Hill.
- Gravetter, F. J., & Wallnau, L. B. (2004). *Statistics for the behavioral sciences* (6th ed). Belmont, CA: Wadsworth/Thomson Learning.
- Grossman, P. L. (1990). *The making of a teacher: Teacher knowledge and teacher education*. New York, NY: Teachers College Press.
- Grossman, P. L., Wilson, S., & Shulman, L. (1989). Teachers of substance: Subject matter knowledge for teaching. In M. Reynolds (Ed.), *Knowledge base for the beginning teacher* (pp. 23-26). Oxford: Pergamon.
- Guskey, T. R. (2002, March). Does it make a difference? Evaluating professional development. *Educational Leadership*, 59(6), 45-51.
- Gwynne-Thomas, E. H. (1981). *A concise history of education to 1900 A.D.* Lanham, MD: University Press of America.
- Haberman, M. (1999, Fall). The Milwaukee public schools: How a great city prepares its teachers. *Kappa Delta Pi Record*, 27-30.
- Hanes, R. C., & Mitchell, K. F. (1985). Teacher career development in Charlotte-Mecklenburg. *Educational Leadership*, 43(3), 11-13.

- Haney, W., Madaus, G., & Kreitzer, A. (1987). Charms talismanic: Testing teachers for the improvement of American education. *Review of Research in Education, 14*, 169-238.
- Hanushek, E. A. (1992, February). The trade-off between child quantity and quality. *The Journal of Political Economy, 100*(1), 84-117. Retrieved from <http://www.hanushek.stanford.edu>
- Hanushek, E. A., Kain, J. F., & Rivkin, S. G. (1998, August). *Teachers, schools, and academic achievement*. NBER Working Paper No. 6691. Cambridge, MA: National Bureau of Economic Research. Retrieved from <http://www.nber.org/papers/w6691>
- Hanushek, E. A., Kain, J. F., & Rivkin, S. G. (2005, February). The market for teacher quality. NBER Working Paper No. 11154. Retrieved from <http://www.nber.org/papers/w11154>
- Hartfield, K. N. (2011). *Perceived levels of teacher self-efficacy among secondary Arizona agricultural education teachers*. (Unpublished doctoral dissertation). The University of Arizona, Tucson, AZ.
- Hattie, J. (2003, October). *Teachers make a difference: What is the research evidence?* Paper presented at Australian Council for Educational Research Annual Conference, Melbourne, Australia. Retrieved from [http://research.acer.edu.au/research\\_conference\\_2003/](http://research.acer.edu.au/research_conference_2003/)
- Hattie, J. (2009). *Visible learning: A synthesis of over 800 meta-analyses relating to achievement*. Milton Park, UK: Routledge.
- Hayman, E. L. (2002, February). *A comparison of the alternative and traditional licensure programs at Metropolitan State College of Denver*. Paper presented at the Annual

- Meeting of the American Association of Colleges for Teacher Education. New York, NY.
- Heppner, P. P., & Heppner, M. J. (2004). *Writing and publishing your thesis, dissertation & research: A guide for students in the helping professions*. Belmont, CA: Thomson Brooks/Cole.
- Herbst, J. (1989). Teacher preparation in the nineteenth century: Institutions and purposes. In D. Warren (Ed.), *American teachers: Histories of a profession at work* (pp. 213-236). New York, NY: Macmillan.
- Higher Education Act of 1965. Publ. L. No. 89-328. Retrieved from [http://www.archives.nysed.gov/edpolicy/research/res\\_digitized.shtml](http://www.archives.nysed.gov/edpolicy/research/res_digitized.shtml)
- Higher Education Amendments of 1992. Publ. L. No. 102-325. Retrieved from [http://www.archives.nysed.gov/edpolicy/research/res\\_digitized.shtml](http://www.archives.nysed.gov/edpolicy/research/res_digitized.shtml)
- Holmes Group. (1986). *Tomorrow's teachers*. East Lansing, MI: Author.
- Hoy, W. A., & Tschannen-Moran, M. (2007). The differential antecedents of self-efficacy beliefs of novice and experience teachers. *Teaching and Teacher Education, 23*(6), 944-956.
- Hudson, L., & Darling-Hammond, L. (1987). *The schooling and staffing surveys: Analysis recommendations*. Washington, DC: National Center for Education Statistics. Retrieved from <http://www.nces.ed.gov>
- Ingersoll, R., & Smith, T. (2003, May). The wrong solution to the teacher shortage. *Educational Leadership, 60*(8), 30-33. (EJ666112)

- Ingersoll, R., & Smith, T. (2011). The impact of induction and mentoring programs for beginning teachers: A critical review of the research. *Review of Education Research* 81(2), 201-233. Retrieved from <http://repository.upenn.edu>
- Jackson, R. R. (2009). *Never work harder than your students and other principles of great teaching*. Alexandria, VA: Association for Supervision and Curriculum Development.
- Jefferson, T. (1787). *Objections to the Constitution*. Charlottesville, VA: University of Virginia Library Electronic Text Center. Retrieved from <http://etext.virginia.edu/toc/modeng/public/Jef4Gri.html>.
- Jensen, B., Sandoval-Hernandez, A., Knoll, S., & Gonzalez, E. J. (2012). *The experience of new teachers: Results from TALIS 2008*. Paris, France: OECD Publishing. Retrieved from <http://www.oecd.org/edu/school/49846877.pdf>
- Johanningmeier, E.V., & Richardson, T. (2008). *Educational research: The national agenda and educational reform: A history*. Charlotte, NC: Information Age Publishing.
- Jones, J. (2008). All educational politics are local: New perspectives on Black schooling in the postbellum South. In W. Reese & J. Rury (Eds.), *Rethinking the history of American education* (pp. 47-72). New York, NY: MacMillan.
- Jordan, K. F., & Borkow, N. B. (1985). *Federal efforts to improve America's teaching force*. Washington, DC: Congressional Research Service.
- Kentucky Department of Education. (2013, July). *Characteristics of highly effective teaching and learning (CHETL)*. Retrieved from <http://www.education.ky.gov>
- Kittelson, J. (1997). Determining effective follow-up of e-mail surveys. *American Journal of Health Behavior*, 21(3), 193-196.

- Kozol, J. (1991). *Savage inequalities: Children in America's schools*. New York, NY: Crown Publishers.
- Kratochwill, T. (2009). Classroom management: Teachers modules. *American Psychological Association*. Retrieved from <http://www.apa.org/education/k12/classroom-mgmt.aspx>.
- Labaw, P. (1981). *Advanced questionnaire design*. Cambridge, MA: ABT Books.
- Laczko-Kerr, I., & Berliner, D. C. (2002). The effectiveness of "Teach for America" and other under-certified teachers on student academic achievement: A case of harmful public policy. *Education Policy Analysis Archives*, *10*(37), 1-53. Retrieved from <http://epaa.asu.edu/ojs/articleviewFile/316/442>
- Laczko-Kerr, I., & Berliner, D. C. (2003, May). In harm's way: How undercertified teachers hurt their students. *Educational Leadership*, *60*(8), 34-39. Retrieved from <http://www.ascd.org>
- Levin, J., & Quinn, M. (2003). *Missed opportunities: How to keep high-quality teachers out of urban classrooms*. Brooklyn, NY: The New Teacher Project. Retrieved from <http://www.edpolicy.org/research/teacherq/index.php>
- Lewis, L., Parsad, B., Carey, N., Bartfai, N., Farris, E., Smerdon, B., & Green, B. (1999). *Teacher quality: A report on the preparation and qualifications of public school teachers*. Washington, DC: National Center for Education Statistics.
- Lippman, L., Burns, S., & McArthur, E. (1996). *Urban schools: The challenge of location and poverty*. Washington, DC: U.S. Department of Education, National Center for Educational Statistics. Retrieved from <http://nces.ed.gov/>

- Louis, K. S., & Miles, M. B. (1990). *Improving the urban high school: What works and why*. New York, NY: Teachers College Press.
- Loveless, T. (2001). *The 2001 Brown Center Report on American Education. How well are American students learning?* Washington, DC: Brookings Institution.
- Marzano, R. J. (2003). *What works in schools: Translating research into action*. Alexandria, VA: Association for Supervision and Curriculum Development.
- Marzano, R. J. (2007). *The art and science of teaching*. Alexandria, VA: Association for Supervision and Curriculum Development.
- Marzano, R. J. (2009). *Designing and teaching learning goals and objectives: The classroom strategies series*. Bloomington, IN: Marzano Research Laboratory.
- Marzano, R. J. (2010). Developing expert teachers. In R. J. Marzano (Ed.), *On excellence in teaching* (pp. 9-11). Bloomington, IN: Solution Tree Press.
- Marzano, R. J. (2011, March). Art and science of teaching/relating to students: It's what you do that counts. *Educational Leadership*, 68(6), 82-83.
- Marzano, R. J., Boogren, T., Hefleblower, T., Kanold-Mcintyre, J., & Pickering, D. (2012). *Becoming a reflective teacher*. Bloomington, IN: Marzano Research Laboratory.
- Marzano, R. J., & Hefleblower, T. (2012). *Teaching and assessing 21st century skills: The classroom strategies series*. Bloomington, IN: Marzano Research Laboratory.
- Marzano, R. J., Pickering, D., & Pollock, J. E. (2001). *Classroom instruction that works: Research-based strategies for increasing student achievement*. Alexandria, VA: Association for Supervision and Curriculum Development.
- Marshall, K. (2009). *Rethinking teacher supervision and evaluation: How to work smart, build collaboration, and close the achievement gap*. San Francisco, CA: Jossey-Bass.

- Mathews, J. (2011, December 18). *New teacher decries lesson plan gap* [blog post]. Class struggle at the Washington Post. Retrieved from <http://www.washingtonpost.com/blogs/class-struggle/post/new-teacher-decries-lesson-plan-gap/2011/12/17/gIQAt0C500>
- Mayer, S. E., & Jencks, C. (1989). Growing up in poor neighborhoods: How much does it matter? *Science*, *243*, 1441-1445.
- McCaffrey, D. F., & Hamilton, L. S. (2003). *Value-added assessment in practice*. RAND Technical Report. Santa Monica, CA: The RAND Corporation.
- McLaughlin, M. W. (1990). The Rand Change Agent Study: Macro perspectives and micro realities. *Educational Researcher*, *19*, 11-16.
- Merriam, S.B. (1998). *Case study research in education: A qualitative approach*. San Francisco, CA: Jossey-Bass.
- Mertler, C. A., & Vannatta, R. A. (2002). *Advanced and multivariate statistical methods* (2nd ed.). Los Angeles, CA: Pyrczak Publishing.
- Miller, J., McKenna, M., & McKenna, B. (1998). A comparison of alternatively and traditionally prepared teachers. *Journal of Teacher Education*, *49*, 165-176.
- Missouri Department of Elementary and Secondary Education [MDESE]. (2008). *Teacher qualifications*. Retrieved from [http://www.dese.mo.gov/divteachqual/teachcert/professional\\_development.html](http://www.dese.mo.gov/divteachqual/teachcert/professional_development.html)
- Missouri Department of Elementary and Secondary Education [MDESE]. (2010). *Facts about the ABCTEP process*. Jefferson City, MO: Author. Retrieved from <http://www.dese.mo.gov/divteachqual/teachcert/documents/FactsabouttheABCTEPprocess.pdf>

- Missouri Department of Elementary and Secondary Education [MDESE]. (2011). District Information. Retrieved from <http://mcds.dese.mo.gov/>
- Missouri Department of Elementary and Secondary Education [MDESE]. 2012. *Educator certification*. Retrieved from <http://dese.mo.gov/divteachqual/teachcert/edcert.html>
- Mizell, H. (2010). *Why professional development matters (learning forward)*. Retrieved from <http://www.learningforward.org>
- Monk, D. H. (1994). Subject area preparation of secondary mathematics and science teachers and student achievement. *Economics of Education Review*, 13, 125-145.
- Monk, D., & King, J. (1994). Multilevel teacher resources effects on pupil performance in secondary mathematics and science. In R. G. Ehrenberg (Ed.), *Choices and consequence* (pp. 125-145). Ithaca, NY: ILR Press.
- Mueller, J., Wood, E., Willoughby, T., Ross, C., & Specht, J. (2008, December). Identifying discriminating variables between teachers who fully integrate computers and teachers with limited integration. *Science, Computers and Education*, 51(4), 1523-1537.
- Nardi, P. M. (2003). *Doing survey research: A guide to quantitative research methods*. Boston: Pearson
- National Board for Professional Teaching Standards. (2010). *National board certification*. Arlington, VA: Author. Retrieved from <http://www.nbpts.org>
- National Center for Education Statistics, U.S. Department of Education. (1994). *Digest of education statistics, 1994*. Washington DC: Author. Retrieved from <http://nces.ed.gov/pubsearch/pubsinfo.asp?pubid=94115>

- National Center for Education Statistics, U.S. Department of Education. (1996). *An overview of the Schools and Staffing Survey (SASS)*. Washington, DC: Author. Retrieved from <http://www.nces.ed.gov/pubs1996/1996081.pdf>
- National Center for Education Statistics. (2001). *Digest of education statistics, 2001*. Retrieved from <http://www.nces.ed.gov/pubsearch/pubsinfo.asp?pubid=2002130>
- National Center for Education Statistics, U.S. Department of Education. (2002a). *CCD quick facts*. Washington DC: Author. Retrieved from <http://nces.ed.gov/ccd/quickfacts.asp>
- National Center for Education Statistics, U.S. Department of Education. (2002b). *The condition of education 2003*. Washington, DC: Author. Retrieved from <http://nces.ed.gov/ccd/quickfacts.asp>
- National Center for Education Statistics, U.S. Department of Education. (2003). *The condition of education 2003*. Washington DC: Author. Retrieved from <http://nces.ed.gov/pubsearch/pubsinfo.asp?pubid=2003067>
- National Center for Education Statistics, U.S. Department of Education. (2004). *Common core of data*. Washington DC: Author. Retrieved from <http://nces.ed.gov/ccd>
- National Center for Education Statistics, U.S. Department of Education. (2007). *Teacher questionnaire: Schools and staffing survey 2007-2008 school year*. Washington, DC: Author. Retrieved from <http://www.nces.ed.gov/>
- National Center for Education Statistics, U.S. Department of Education. (2008). *Schools and Staffing Survey 2007-2008*. Washington DC: Author. Retrieved from <http://www.nces.ed.gov/surveys/SASS/index.asp>

- National Center for Education Statistics, U.S. Department of Education. (2009). *The condition of education 2009*. Washington DC: Author. Retrieved from <http://nces.ed.gov/pubsearch/pubsinfo.asp?pubid=2009081>
- National Center for Education Statistics, U.S. Department of Education. (2010). *Teachers' use of educational technology in U.S. public schools: 2009* (NCES 2010-040).
- National Center for Education Statistics, U.S. Department of Education. (2013). *Schools and Staffing Survey (SASS)*. Retrieved from <http://www.nces.ed.gov/surveyts/sass>
- National Commission on Excellence in Education. (1983). *A nation at risk: The imperative for educational reform*. Washington, DC: United States Government Printing Office.
- National Commission for Excellence in Teacher Education (NCETE). (1985). *A call for change in teacher education*. Washington, DC: Author.
- National Commission on Teaching and America's Future. (1996). *What matters most: Teaching for America's future*. New York, NY: Carnegie Corporation. Retrieved from <http://www.nctaf.org/documents/WhatMattersMost.pdf>.
- National Commission on Teaching and America's Future. (2002). *Unraveling the "teacher shortage" problem: Teacher retention is the key*. Washington DC: NCTAF. Retrieved from [http://www.ncsu.edu/mentorjunction/text\\_files/teacher\\_retentionsynposium.pdf](http://www.ncsu.edu/mentorjunction/text_files/teacher_retentionsynposium.pdf)
- National Commission on Teaching and America's Future. (2003). *No dream denied: A pledge to America's children*. Washington DC: NCTAF. Retrieved from [http://www.nctaf.org/wp-content/uploads/no-dream-denied\\_summary\\_report.pdf](http://www.nctaf.org/wp-content/uploads/no-dream-denied_summary_report.pdf)

- National Council for Accreditation of Teacher Education (2011). *About NCATE*. Washington, DC: Author. Retrieved from <http://www.ncate.org/Public/AboutNCATE/tabid/179/Default>
- National Council on Teacher Quality. (2012). *What teacher preparation programs teach about K-12 assessment: A review*. Retrieved from [www.nctq.org/p/publications/docs/assessment\\_report.pdf](http://www.nctq.org/p/publications/docs/assessment_report.pdf).
- National Defense Education Act of 1958. Publ. L. No. 85-864 Retrieved from [http://www.archives.nysed.gov/edpolicy/research/res\\_digitized.shtml](http://www.archives.nysed.gov/edpolicy/research/res_digitized.shtml)
- National Teacher Development Initiative. (1978). *Analysis of U.S. Office of Education discretionary programs having a professional development of educational personnel component*. Report submitted to U.S. Commissioner of Education Ernest Boyer. Washington, DC: U.S. Office of Education.
- Network for Educator Effectiveness. (2013). *Teacher growth and evaluation: Training manual for participants*. Columbia, MO: Curators of the University of Missouri.
- New York Division of Assessment and Accountability. (2000). *Impact of teacher certification on reading and mathematics performance in elementary and middle schools in New York City: Flash Report #2*. Retrieved from [http://www.nycenet.edu/daa/reports/flash\\_report\\_2.pdf](http://www.nycenet.edu/daa/reports/flash_report_2.pdf)
- Nisbett, R., & Ross, L. (1980). *Human inference: Strategies and shortcomings of social judgment*. Englewood Cliffs, NJ: Prentice-Hall.
- No Child Left Behind Act of 2001. Publ. L. No. 107-110. Retrieved from <http://www.ed.gov/policy/elsec/leg/esea02/index.html>
- November, A. (2012). *Who owns the learning?* Bloomington, IN: Solution Tree Press.

- Omnibus Budget Reconciliation Act of 1981. Publ. L. No. 97-35. Retrieved from [http://www.archives.nysed.gov/edpolicy/research/res\\_digitized.shtml](http://www.archives.nysed.gov/edpolicy/research/res_digitized.shtml)
- Ordozensky, P. (1990). National certification sounds sweet all right, but will it fly? *Executive Educator*, 12(1), 18-30.
- Ormrod, J. E. (2004). *Human learning* (4th ed.). Upper Saddle River, NJ: Pearson.
- Ornstein, A. C., Thomas, J., & Lasley, I. (2000). *Strategies for effective teaching*. New York, NY: McGraw-Hill.
- Paige, R. (2003). *Education in America: The complacency must end*. Remarks of U.S. Secretary of Education. Washington, DC: Author.
- Pajares, F. (1992). Teachers' beliefs and educational research: Cleaning up a messy construct. *Review of Educational Research*, 62, 307-332.
- Pajares, F. (1996). Self-efficacy beliefs in academic settings. *Review of Educational Research*, 66(4), 543-578. Retrieved from <http://rer.sagepub.com/content/66/4/543>.
- Pajares, F. (1997). Current directions in self-efficacy research. In M. L. Maehr & P. R. Pintrich (Eds), *Advances in motivation and achievement* (pp. 1-49). Greenwich, CT: JAI Press.
- Pajares, F. (2001). *Self-efficacy web site*. Retrieved from <http://www.emory.edu/EDUCATION/mfp/effpage.html>
- Parelius, R. J., & Parelius, A. P. (1987). *The sociology of education*. Englewood Cliffs, NJ: Prentice-Hall.
- Parramore, B. M. (1986). The impact of deregulation on the partnership in teacher certification. *Action in Teacher Certification*, 8(2), 7-12.
- Patton, M. Q. (1997). *Utilization-focused evaluation* (3rd ed.). Thousand Oaks, CA: Sage.

- Phillips, C. A. (1911). *A history of education in Missouri*. Jefferson City, MO: Hugh Stephens Printing.
- Pitler, H., Hubbell, E. R., Kuhn, M., & Malenoski, K. (2012). *Using technology with classroom instruction that works*. Bloomington, IN: Solution Tree Press.
- Podgursky, M. (2006). Is there a “qualified teacher” shortage? What factors do affect the market for teachers, anyway? *Education Next*, 6(2). Retrieved from <http://educationnext.org/qualified-teacher-shortage>
- Prince, C. D. (2002). *Higher pay in hard-to-staff schools: The case for financial incentives*. Arlington, VA: American Association of School Administrators.
- Rivkin, S. G., Hanushek, E. A., & Kain, J. F. (2005, March). Teachers, schools, and academic achievement. *Econometrica*, 73(2), 417-458.
- Ross, J. A. (1992). Teacher efficacy and the effect of coaching on student achievement. *Canadian Journal of Education*, 17(1), 51-65.
- Ross, J. A., Cousins, J. B., & Gadalla, T. (1996) Within-teacher predictors of teacher efficacy. *Teaching and Teacher Education*, 12(4), 385-400.
- Roth, R. A. (Ed.). (1999). *The role of the university in the preparation of teachers*. Philadelphia, PA: Falmer Press.
- Roth, R. R., & Mastain, R. (Eds.). (1984). *Manual on certification and preparation of educational personnel in the United States*. Sacramento, CA: National Association of State Directors of Teacher Education and Certification.

- Rowan, B., Chiang, F. S., & Miller, R. J. (1997). Using research on employees' performance to study the effects of teacher on students' achievement. *Sociology of Education*, 70, 256-284.
- Russell, M., Bebell, D., O'Dwyer, L., & O'Connor, K. (2003). Examining teacher technology use: Implications for preservice and inservice teacher preparation. *Journal of Teacher Education*, 54(4), 297-310.
- Sanders, M. G., & Rivers, J. C. (1996). *Cumulative and residual effects of teachers on future student academic achievement*. Research Progress Report. Knoxville, TN: University of Tennessee Value-Added Research and Assessment Center.
- Schalock, H. D. (1976). Structuring process to improve student outcomes. *New Directions for Higher Education*, 16, 25-53.
- Scheerens, J. & Bosker, R. J. (1997). *The foundations of educational effectiveness*. Oxford: Pergamon.
- Shulman, L. (1986). Those who understand: Knowledge growth in teaching. *Educational Researcher*, 15(2), 4-14.
- Slider, N. J., Noell, A. M., & Williams, K. L. (2006, December). Providing practicing teachers classroom management professional development in a brief self-study format. *Journal of Behavioral Education*, 15(4), 215-228. doi:10.1007/s10864-006-9033-7
- Snyder, T. D., & Hoffman, C. M. (1994). *Digest of education statistics, 1994*. Washington, DC: National Center for Education Statistics, U.S. Department of Education.
- Retrieved from <http://nces.ed.gov/pubsearch/pubsinfo.asp?pubid=94115>

- Soar, R. S, Medley, D. M., & Coker, H. (1983). Teacher evaluation: A critique of currently used methods. *Phi Delta Kappan*, 65, 239-46.
- Soto, G., & Goetz, L. (1998). Self-efficacy beliefs and the education of students with severe disabilities. *Journal of the Association of the Severely Handicapped*, 23(2), 134-143.
- Spencer, D. A. (2001). Teachers' work in historical and social context. In V. Richardson (Ed.), *Handbook of research on teaching* (4th ed., pp. 803-825). Washington, DC: American Educational Research Association.
- Strickland, C.A. (2009). *Professional development for differentiating instruction*. Alexandria, VA: Association for Supervision and Curriculum Development.
- Stanford University. (2013). Teaching resources. *Stanford teaching commons*. Retrieved from <https://teachingcommons.stanford.edu/resources/teaching-resources>
- Stone, J. E. (2000). *Teacher training and Texas education reform: A study in contradiction* (Working paper 35). Oakland, CA: The Independent Institute. Retrieved from <http://www.independent.org/tii/WorkingPapers/TeacherTraining.html>
- Strong, M. (2011). *The highly qualified teacher: What is teacher quality and how do we measure it?* New York, NY: Teachers College, Columbia University.
- Strong, M., Fletcher, S., & Villar, A. (2004). *An investigation of the effects of teacher experience and teacher preparedness on the performance of Latino student in California*. Santa Cruz, CA: New Teacher Center.
- Stronge, J. H. (2007). *Qualities of effective teachers* (2nd ed.). Alexandria, VA: Association for Supervision and Curriculum Development.

- Sowder, J. (2007, April). *Preparing teachers to prepare students for Algebra* (Ohio Symposium on Mathematics and Science). Retrieved from [http://www.sci.sdsu.edu/CRMSE/files/sowder\\_algebra\\_2007.pdf](http://www.sci.sdsu.edu/CRMSE/files/sowder_algebra_2007.pdf)
- Tabachnick, B. G., & Fidell, L. S. (2001) *Using multivariate statistics* (4th ed.). Boston, MA: Allyn and Bacon.
- Teach for America. (2011). *About us*. New York, NY: Author. Retrieved from <http://www.teachforamerica.org/about-us/>
- Tschannen-Moran, M., Hoy, A. W., & Hoy, W. K. (1998). Teacher efficacy: Its meaning and measure. *Review of Educational Research*, 68(2), 202-248.  
doi: 10.3102/00346543068002202
- University of Central Missouri Department of Education. (2008). *Teacher programs*. Warrensburg, MO: Author. Retrieved from <http://www.ucmo.edu/x67479.xml>
- University of Missouri-Columbia Department of Education. (2013). *SMAR2T: Science and mathematics academy for the recruitment and retention of teachers*. Retrieved from <http://smar2t.missouri.edu/>
- University of Missouri-Kansas City Department of Education. (2008). *Teacher programs*. Kansas City, MO: Author. Retrieved from <http://education.umkc.edu/TE/tempauth.asp>
- Viadero, D. (2005, February). Researchers connect lower achievement, high school exit tests. *Education Week*, 24(21), 10.
- Wadlington, E. M., Slaton, E., & Partridge, E. M. (1998). Alleviating stress in pre-service teachers during field experiences. *Education*, 119(2), 335. Retrieved from

<http://www.questia.com/library/journal/1G1-53985392/alleviating-stress-in-pre-service-teachers-during>

Walker, R. J. (2008). *12 characteristics of an effective teacher*. Raleigh, NC: Lulu Press.

Wayman, J. C., Foster, A. M., Mantle-Bromley, C., & Wilson, C. (2003). A comparison of the professional concerns of traditionally prepared and alternatively licensed new teachers. *The High School Journal*, 86(3), 35-40. Retrieved from [http://muse.jhu.edu/login?auth=0&type=summary&url=/journals/high\\_school\\_journal/v086/86.3wayman.pdf](http://muse.jhu.edu/login?auth=0&type=summary&url=/journals/high_school_journal/v086/86.3wayman.pdf)

Wenglinsky, H. (2000). *How teaching matters: Bringing the classroom back into discussions of teacher quality*. Educational Testing Service. Retrieved from <http://epaa.asu.edu/epaa/v10n12/>

William, D. (2011). *Embedded formative assessment*. Bloomington, IN: Solution Tree Press.

Wilson, S. M., Floden, R. E., & Ferrini-Mundy, J. (2001). *Teacher preparation research: Current knowledge, gaps, and recommendations*. Retrieved from <http://depts.washington.edu/ctpmail/PDFs/TeacherPrep-WFFM-02-2001.pdf>

Wise, A. E., & Levine, M. (2002). Ten steps to improve student achievement in low-performing schools in urban districts. *Education Week* [reproduced by NCATE]. Retrieved from [http://www.ncate.org/newsbrfs/ten\\_steps.htm](http://www.ncate.org/newsbrfs/ten_steps.htm)

Wolters, C. A., & Daughery, S. G. (2007, February). Goal structures and teachers' sense of efficacy: Their relation and association to teaching experience and academic level. *Journal of Educational Psychology*, 99(1), 181-193. DOI:10.1037/0022-0663.99.1.181

- Wong, H. K. (2004). Induction programs that keep new teachers teaching and improving. *NASSP Bulletin*, 88(638), 41-58.
- Wong, H. K., & Wong, R. T. (2009). The first days of school: How to be an effective teacher. Mountain View, CA: Harry K. Wong Publications.
- Wright, S. P., Horn, S. P., & Sanders, W. L. (1997). Teacher and classroom context effects on student achievement. Implications for teacher evaluation. *Journal of Personnel Evaluation in Education*, 11, 57-67.
- Wyse, D., Baumfield, V., Egan, D., Hayward, L., Hulme, M., Menter, I.,...& Lingard, B. (2012). *Creating the curriculum*. Great Britain: Taylor and Francis.

## VITA

Allison Murphy-Pope was born in Springfield, Missouri. She was educated in Marionville public schools and graduated from Marionville High School in 1992. She played basketball at University of Central Missouri and graduated with honors in 1997. Her Bachelors of Science in Education was in Business Education and she began her teaching career in Tipton, Missouri. Mrs. Murphy-Pope changed teaching positions to North Kansas City High School and completed her Masters of Science in Education at University of Central Missouri with a major in Curriculum and Instruction in 1999. During her teaching career, she served as a Business Education Department Chair, North Central Accreditation committee chair, and an assistant to the Principal. While working in North Kansas City High School, she completed her Education Specialist in Administration at University of Missouri-Kansas City in 2003.

After obtaining administrative certification, Mrs. Murphy-Pope began her administrative career as an assistant principal at William Chrisman High School in the Independence School District. She returned to the North Kansas City School District as vice-principal at Winnetonka High School and began working toward her doctorate in the University of Missouri-Kansas City Interdisciplinary Ph.D. program. In 2012, Mrs. Murphy-Pope relocated to southwest Missouri to be a building principal. She currently serves students in that position in the Aurora School District. She is a member of ASCD, MASSP, NASSP, SWMASSP, and MARE.

Mrs. Murphy-Pope returned to southwest Missouri to be close to family and raise two sons on the family farm. Her husband is a police officer, a veteran of the Gulf War and Afghanistan's Enduring Freedom, and is active with Missouri National Guard. Her parents

run a successful orchard in Marionville, Missouri, with the involvement of her brother and sister.