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General Education Teachers Implementing Common Core with Students in Special Education: A Mixed Methods Study of Teachers' Self-Efficacy Beliefs

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By

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This embedded mixed method study addresses the problems teachers have reported in believing themselves capable to implement the Common Core State Standards with students in special education. This study examines the effect professional development on implementing the Common Core State Standards had on the participating teachers' self-efficacy beliefs. The participants (N=21) in this study were drawn from a 20-day professional development for teachers based on implementing the Common Core State Standards. The instrument used in the study was the Teacher Efficacy Beliefs System-Self. Data were subject to both statistical and qualitative analysis.

The results of this study provide insight into the self-efficacy beliefs of the participants during and shortly after professional development about implementing the Common Core State Standards with students in special education. The Wilcoxon test of signed ranks revealed a significant increase in the TEB-S subscale areas of Accommodating Individual Differences and Managing Learning Routines, but not in

Positive Classroom Climate. Qualitative analysis of data found both support for the statistical findings and also contradicted the statistical findings. Further qualitative analysis showed that practices presented in the professional development such as using the arts, formative assessment, and technology were effective in maintaining their teachers' self-efficacy beliefs after professional development. Factors unrelated to the professional development, such as support from administrators and colleagues and poorly working technology were not supportive in carrying over the increase in teachers' self-efficacy beliefs in implementing the Common Core State Standards with students in special education.

The study is framed by Social Cognitive Theory and organized into 5 parts. Chapter I provides an overview of the study. Chapter II includes a review of literature related to teachers' self-efficacy belief's Common Core State Standards, and professional development. Chapter III describes the methodology of the study. Chapter IV presents the results of the analysis of data. Chapter IV reports the findings of the study and presents the conclusions of the study and ideas for future research.

DEDICATION

This project is dedicated to my Heavenly Father who provided the strength for its completion when I lost faith in myself. It is dedicated to my earthly father, Dan, who taught me to never give up. It is also dedicated to my wife, Mary, who encouraged me to keep working. To my sons, Timothy and Tobias, who were patient and loving through many missed weekends together. This project is further dedicated to the memory of Dr. Dwight Hare who was a fountain of encouragement, learning, and motivation.

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CHAPTER I

NATURE OF THE STUDY

Background

The No Child Left Behind Act (NCLB) has erased the line between students whose education is directed by an individual education plan (IEP) and students whose education is determined by general education standards for all students (Fuchs, Fuchs, & Stecker, 2010). This erasure places a large number of students receiving their special education services in inclusive general education classrooms. These students may also receive services directed by IEPs that are not individualized. The annual goals for many special education students in inclusive classrooms are based on the student mastering varying percentages of the general education curriculum in mathematics, English Language Arts, and science.

Best practices in inclusion call for a special educator to collaborate and co-teach with a general education teacher (Browder, Mims, Spooner, Ahlgrim-Delzell, & Lee, 2009). NCLB calls for both special and general education teachers to be highly qualified in the subject areas where they provide inclusive education (NCLB, 2001). According to Quigney (2009), there is a shortage of highly qualified special educators in academic subject areas, particularly at the middle school and high school level. There is no mandate for general education inclusion teachers to be highly qualified in special education. While many of the general educators in inclusion classrooms are considered highly qualified in

their subject areas, few have the training necessary to be successful teaching students in special education. Special education students in inclusive classrooms receive instruction and participate in assessment that are increasing in rigor to match the same level as students in general education (Kavale & Spaulding, 2009). As special education continues to be folded into a continuum of services for all students, more emphasis is placed on general education teachers providing high quality instruction to students in both general and special education (Fuchs et al., 2010).

Common Core State Standards

According to the National Governors Association & Council of Chief State School Officers (2010), the Common Core State Standards (CCSS) are a nationwide initiative to improve American education. Forty-five states, the District of Columbia, four territories, and the Department of Defense Education Activity have adopted the CCSS. The CCSS are a set of standards that outline what students are expected to learn. All students in the states that adopt the CCSS will be taught to the same standards.

Even before the CCSS, individualization of IEPs began to fade (Fuchs et al., 2010). As the CCSS are implemented nationwide, the responsibility for general education teachers to educate students in special education should only increase because the CCSS hold all students to the same standard. Previous reforms such as NCLB accounted for students with disabilities, the CCSS does not differentiate between students in general education and special education. The CCSS suggest addressing the needs of students with disabilities through Universal Design for Learning (International Center for Leadership in Education, 2011; National Governors Association and Council of Chief State School Officers, 2010).

A nationwide survey conducted by the Editorial Projects in Education Research Center (2013) reported findings concerning teacher perspectives on implementing the CCSS. Less than half of the teachers surveyed believed themselves prepared to implement the CCSS with their general education students. Only 10% believed themselves very prepared to implement the standards for their students in special education (p. 23). The survey asked the teachers to identify the method by which they were trained to implement the CCSS. Those surveyed overwhelmingly identified professional development (PD) as the delivery system by which they received most of their information on the CCSS. General education teachers do not feel the PD they receive prepares them to implement the CCSS with students in special education, even though they are increasingly responsible for their learning outcomes.

The CCSS is a sweeping change for education in America, and PD is considered an important aspect of the CCSS. The standards movement places a great importance on PD, and many researchers have found that PD eventually improves student outcomes (Guskey & Passaro,1994; Hora & Ferrare, 2012; Pajares, 1996). As Chatterji (2002) noted, any successful reform of education will begin with PD.

Professional Development

Professional development for teachers is going to be especially important in the transition to the CCSS (Perry & Manery, 2011). Much has been written about what makes for effective PD. For instance Loucks-Horsley and Sparks (1989) noted that the effectiveness of PD is a function of time and teacher participation. Other researchers such as Denscombe (2007) noted that PD is not a quick fix, but scarce time for training required PD to be concentrated and effective. Effective PD is focused on teacher

learning outcomes in order to facilitate a change. PD that is dynamic and fluid meets the need of teacher learning and provides a context for teacher understanding of the new strategies presented (Guskey & Passaro, 1994).

Hirsh and Killion (2008) characterized prevailing thought on PD for teachers, much like prevailing thought on learning for students, as being influenced by the standards movement. As the United States moves closer to unifying standards, PD to implement those standards will become more standardized as well. CCSS is not a national curriculum, and how students reach those standards is still considered a local issue to be decided at the state, city, and community level. However, CCSS is a nationwide system of shared goals and objectives. It is not a stretch to imagine that best practices that build capacity for students in one state will be shared with those in another.

According to Hord and Sommers (2008), standards-based PD that is both of high quality and builds capacity for teachers shares the following characteristics: (a) the PD will invest in quality opportunities to grow individually and collaboratively; (b) it will enhance job-related skills; (c) it will allow teachers to acquire new knowledge; and (d) it will provide opportunities for teachers to share expertise and insights. To help general education teachers in implementing the CCSS with students in special education, a better understanding of how PD helps teachers believe themselves to be ready to implement the standards could be useful. Cody and Guskey (1996) supported a close examination in the design of PD, and they suggested developing indicators of successful learning during PD. These researchers stated:

> To develop specific indicators of successful learning, select or construct instruments or situations in which that learning can be demonstrated, and collect

> the information through appropriate methods. The methods used will depend, of course, on the nature of the learning sought. In most cases a combination of methods or procedures will be required (p. 197).

These characteristics of effective PD, where PD is relevant and allows participants to practice appropriate methods and procedures may help in the implementation of CCSS. PD should also center on helping the participants believe themselves competent to carry back to their classrooms what they learned in PD.

Teachers' Self-efficacy Beliefs

A measurable indicator of teacher learning is the construct of teachers' self-efficacy beliefs. Teachers' self-efficacy beliefs are a construct of Bandura's (1986) Social Cognitive Theory. Bandura theorized that there is a connection between what a person does and what they believe they can do. For Bandura, self-efficacy is the belief people have concerning their ability to complete tasks. The stronger their belief that they can accomplish specific tasks, the more success they have in completing the tasks.

Bandura (1986) also theorized that self-efficacy had precursors which he referred to as self-efficacy beliefs. These self-efficacy beliefs are mastery experiences, vicarious experiences, verbal persuasion, and physiological arousal. Bandura applied these precursors to the self-efficacy teachers develop about their pedagogical practice. Self-efficacy beliefs are the precursors that when they occur in context result in self-efficacy. Self-efficacy determines what teachers do with the knowledge and skills they have acquired to deliver instruction. A teacher's classroom practice is shaped by what he or she has learned and believes can be accomplished. For Bandura, teachers' self-efficacy beliefs become the building blocks for what a teacher believes he or she can do. For

teachers this would be the tools they have in their mental toolbox, and teachers use that toolbox to construct instruction.

A teacher's beliefs in his or her own abilities affects behavior, decisions, and classroom structure. Pajares (1992, 1996, 1997) believed that a greater understanding of how teachers think pales against understanding what teachers believe about their own abilities. According to Pajares, a teacher's beliefs in his or her own ability has true impact on student outcomes. Other researchers agree and have found that teachers' self-efficacy beliefs positively correlate with teacher effectiveness. Teacher effectiveness is positively correlated with higher student achievement (Hora & Farrare, 2012). For teachers participating in PD, this translates into: (a) Teachers practicing what they have been taught, (b) Teachers practicing what they see others do successfully, (c) Teachers putting into practice what others encourage teachers to accomplish, (d) H ow excited teachers are by what they have been taught to do (Dellinger et al, 2008; Pajares, 1992). More importantly, these beliefs may also be measureable (Bandura, 1997, Delinger et al, 2008, Tschannen-Moran & Johnson, 2011),

The Teachers' Efficacy Belief System-Self (TEBS-S) is a survey-based measure of teachers' self-efficacy beliefs (Dellinger, 2001). This survey may provide insight into the benefits of training that occurs in PD by measuring the change in teachers' self-efficacy beliefs before and after training. The four areas of the TEBS-S: accommodating individual differences (AID), maintaining a positive classroom climate (PCC), monitoring and feedback for learning (MFL), and managing learning routines (MLR)—are based on Bandura's (1986) four categories of self-efficacy beliefs. Analysis of

teachers' responses in three areas of the TEBS-S-AID, PCC, and MLR—may lead to a better understanding of the effect PD has on teachers' self-efficacy beliefs.

Statement of the Problem

Teachers do not believe in their ability to implement the CCSS with students in special education, and the PD they are participating in is not helping. According to the Editorial Projects in Research Center (2013) nationwide survey, teachers feel unprepared to implement CCSS for students in special education. Teachers in the same survey overwhelmingly identified PD as the way they received most of their training on implementing the CCSS. Henson (2001) stated: "If teacher efficacy is the powerful predictive construct it has been thought to be, then research examining the processes by which such efficacy is built is critical to fostering teacher efficacy and, ultimately, changing behavior" (p. 12). Since full implementation of the CCSS for most students began in the fall of 2014, increasing the number of general education teachers who believe they are prepared to implement the standards for students in special education is an important task.

Purpose of the Study

The 4C Institute (4cPD) was a grant provided by the Mississippi Institutes of Higher Learning and the NCLB Teacher Preparation Program that focused on implementing the CCSS. The 4cPD was a 20-day PD opportunity centered on implementing the CCSS. This training provided the data for this study where the purpose was to examine the effect PD has on teachers' self-efficacy beliefs, and the experiences

of general education teachers during and after PD that have an effect on teachers' self-efficacy beliefs in implementing the CCSS with students in special education.

Theoretical Framework of the Study

The theoretical basis for this project is Bandura's (1986, 1995, 1997) social cognitive theory. Bandura's (1986) social cognitive theory provides a possible explanation of the process people use to regulate thoughts, feelings, motivation, and actions. This process of self-regulation helps individuals order their own thoughts and actions and alter their environment through by regulating their own behavior. The process is an intuitive one. The process is also the beginning of behavior, behavior regulation, and behavioral change. Social cognitive theory views human functioning as a mechanism that assigns a central role to cognitive, vicarious, self-regulatory, and self-reflective processes in human development, adaptation, and behavioral change. Similar theories emphasize environmental or biological influences, but those theories neglect to account for the power of self-beliefs (Pajares, 1997).

Social cognitive theory makes two major assumptions. First, people act in their own self-interest by being proactive, self-reflective, and by self-regulating their behavior in order to accomplish tasks. Second, people have the capacity to take an active part in shaping their environment rather than having the environment dictate the way they behave (Bandura, 1986).

The internal factors stemming from cognitive and affective mental processes that lead to self-efficacy are called self-efficacy beliefs. When people form self-efficacy beliefs, they create a mental course of action that enables them to confidently perform the behavior resulting from their self-efficacy beliefs. Self-efficacy beliefs are antecedents to

behavior, and have been considered a powerful construct that may be useful to predict and improve behavior. The construct has also been extended to many different areas of research, including the areas of teaching and learning.

Conceptual Design of the Study

Little is known about teachers' self-efficacy beliefs in implementing the CCSS for students in special education. Therefore, a concurrent mixed method study to identify how PD affects teachers' self-efficacy beliefs may add to the emerging body of literature about the CCSS and students in special education. Results of this study have the potential to inform designers of PD that will improve the implementation of CCSS by general education teachers for their students in special education.

Significance of the Study

This study will contribute to special education and PD literature by examining teachers' self-efficacy beliefs as PD designed for implementing the CCSS is delivered. Similarly, this study may contribute to special education literature for general education inclusion teachers who work with students in special education. Additionally, a better understanding of this problem may lead to more effectively designed PD for general education inclusion teachers with growing responsibility for students who they feel unprepared to teach.

CHAPTER II

REVIEW OF LITERATURE

Teachers' Self-efficacy Beliefs

Pajares (1996) described self-efficacy beliefs in education settings as being directly linked to student achievement and teacher behaviors that lead to job satisfaction. Teachers' self-efficacy beliefs can enhance teacher accomplishment. They influence the choices teachers make and the courses of action they pursue. Teachers with low teachers' self-efficacy beliefs tend to select tasks and activities in which they feel competent and confident. These teachers avoid those tasks in which they do not feel competent and confident. Teachers also practice activities they believe will produce actions that will have the desired consequence of increased student learning. They have little incentive to engage in those actions they feel they cannot accomplish or will not produce student learning . Teachers who are supported by their administrators through verbal encouragement and are provided opportunities for mastery experiences have a better sense of job satisfaction. These employees believe they can help students achieve a higher level of success with learning.

Woolfolk and Hoy (1990) researched teachers' self-efficacy beliefs and found that teacher's self-efficacy beliefs were correlated with success in teaching. Teachers' self-efficacy beliefs also heavily influenced their specific pedagogical approaches. Teachers with high self-efficacy beliefs were more likely to persist in the face of challenging

situations. This included new mandates in training or adapting to new rules and regulations. High self-efficacy beliefs also helped determine how much effort teachers expended on an activity. Wolfolk and Hoy reported in their study that teachers' self-efficacy beliefs determined how long teachers persevere when confronting obstacles, and how resilient they were in the face of adverse situations. The higher the sense of efficacy, the greater the effort, persistence, and resilience.

Even in schools with a history of poor academic performance, teachers' self-efficacy beliefs predicted student achievement in math and language (Ashton & Webb, 1986). Ashton and Webb described teachers with high self-efficacy beliefs as professionals that built better relationships with students and saw all students as teachable. Teachers were more likely to take time with individual students who could not keep up with the class. These teachers also created ways for quicker students to be enriched.

Caprara, Barbaranelli, Steca, and Malone (2006) studied 75 schools across two years. They found teachers with high levels of self-efficacy beliefs impacted every facet of school functioning. Teachers with high self-efficacy beliefs also produced middle school students that made higher grades at the end of the year. Additionally, teachers' self-efficacy beliefs influenced a student's achievement in several other ways. For instance, teachers with high self-efficacy beliefs were more likely than teachers with a low sense of self-efficacy to implement innovative methods and techniques in the classroom. Teachers with high self-efficacy belief were better at inspiring students to take more ownership of their own achievement. Their students felt themselves more

highly motivated to demonstrate what they have learned. Teachers' self-efficacy beliefs have also shown a relationship for factors specific to students in special education.

Stephens and Braun (1990) researched teachers' self-efficacy beliefs and found a relationship between high levels of efficacy and the willingness to teach students with special needs. These researchers studied general education teachers who felt they had a strong grounding in pedagogy. These teachers showed resilience in making sure each of their students performed at a level that matched the student's ability. These teachers tended to believe in their own skills, felt they were trained to a very high level, and held tightly to a view that all students had the ability to learn.

Hoy and Woolfolk (1993) reported that schools with teachers with high teachers' self-efficacy beliefs showed decreased referral rates into special education. These schools had teachers that held similar beliefs to those found in the Stephen and Braun (1990) study, but Wolfolk and Hoy used administrative support as a construct. Teachers that received continuous support from administrators and continuous PD from their districts reported an increased willingness to help students with learning disabilities and other high incidence disabilities.

In another study, Allinder (1994) found that special education teachers who reported higher levels of teachers' self-efficacy beliefs reported better organization skills. Allinder also noted that teachers with higher teachers' self-efficacy beliefs were more likely to engage in high quality instructional planning. Instructional planning is a hallmark of success for working with students with or without disabilities. However, students with disabilities demonstrated improved outcomes when the teachers that worked with them were afforded both the time and the support to plan instruction for

their classes. Given the body of research on the positive impact of teachers' self-efficacy beliefs, it may be useful to identify other variables that increase teachers' self-efficacy beliefs or act in concert with teachers' self- efficacy beliefs. (Caprara, Barbaranelli, Borgogni, & Steca, 2003).

Sources of Teachers' Self-efficacy Beliefs

Teachers' self-efficacy beliefs are influenced by environmental context. Tschannen-Moran, Woolfolk-Hoy, and Hoy (1998) described teacher judgment as a factor that influenced a teacher's beliefs about their teaching capability in a particular context. Teachers make two related judgments in relation to assessing their own self-efficacy beliefs: the requirements of a teaching task and an assessment of their own competence in meeting of those requirements. Teachers who make a personal judgment that they are able to apply the knowledge and skills necessary to meet a task will be more likely to produce the behavior required to successfully accomplish the task. By providing teachers with knowledge and skill, they are more likely to believe themselves capable of delivering effective instruction. The judgments teachers make about their own abilities have great importance for teaching students in special education.

Schon's (1983) ideas are closely related to increasing teachers' self-efficacy beliefs. Shon wrote that a teacher's ability to improve their practice began with a teacher's understanding of their own learning through self-reflection. Schon demonstrated that self-reflection centering on a teacher's own learning experiences immediately after pedagogical training increased a teacher's ability to produce effective instruction that reflected their newly attained skills. Self-reflection may increase teachers' self-efficacy beliefs. When teachers reflect on newly learned skills, their belief that they

will be able to later put those skills into practice increases. Self-reflection would also support Bandura's (1986) categories of self-efficacy belief by improving mastery experiences, which Bandura considered the most important factor in improving teacher self-efficacy. This view is also supported by Hora and Ferrare (2012) who wrote that self-reflection "may play an important role in mediating the relationship between the environment and the development of self-efficacy beliefs" (p. 2).

Finally, seeing others successfully perform tasks that teachers are expected to do may help teachers believe themselves capable of performing the same task (Bandura, 1997). This idea is supported by Gist and Mitchell (1992) who suggested that in many situations, employees lack sufficient information by which to measure their successful performance on a task. Models demonstrating effective performance strategies provide teachers with increased self-efficacy beliefs by providing reassurance that the task they are being asked to perform is both possible and within their skill-set (Albion, 1999). Providing teachers with opportunities to see experts model what is expected may increase teachers' self-efficacy beliefs and be an important function of PD.

Measurement of Teachers' Self-efficacy Beliefs

Measurement of teachers' self-efficacy beliefs involves the researcher establishing an optimal level of specificity in the context of the research questions (Tschannen-Moran & Johnson, 2011). These authors further contended that there was agreement among researchers and theorists that teachers' self-efficacy beliefs were situation specific. Although, the researchers reported that the appropriate level of specificity was often not clear. The level of specificity depended on the purposes of the research. It was determined that definitions that were too general could be hazardous for

researchers because too much of the behavior could be attributed to teachers' self-efficacy beliefs. On the other hand, highly specific definitions could be hazardous for researchers because highly specific definitions would miss the true contribution made by teachers' self-efficacy beliefs.

The construct of self-efficacy beliefs as described by Bandura (1997) produces behaviors required to achieve chosen goals. Self-efficacy beliefs are predictive of the outcomes people desire to achieve. Bandura suggested that researchers should take care to carefully define the context of the outcome. In his view, how researchers should fully explain the conclusions drawn from a fully explained context. Several researchers have reported success in measuring teachers' self-efficacy beliefs. Their results have supported the power and importance of the construct. Different instruments have been developed over time to measure teachers' self-efficacy beliefs.

One of the earliest measurements come from Gibson and Dembo (1984) who developed a measure of teachers' self-efficacy beliefs that linked teachers' self-efficacy beliefs to teachers' ability to teach students academic achievement behaviors. Their measure looked at two types of efficacy they felt were important for teachers. The first was teacher efficacy that influenced student learning because teachers felt confident in their teaching skills. The second was personal efficacy where teachers held a high degree of belief about their own personal abilities.

Nearly a decade later, Watters and Ginns (1997) created the Science Teaching Efficacy Beliefs Instrument. This measure examined the effect variations in course design of elementary science had on teachers' beliefs in their ability to improve students' science skills. This measure reported that school related constructs such as curriculum

and administrator support were important in determining the self-efficacy beliefs held by teachers.

In the previous decade, measurement of teachers' self-efficacy beliefs led Dellinger (2001) to conceptualize teachers' self-efficacy beliefs as a system of beliefs that helps a person to organize and execute behaviors to acquire chosen attainments during specific teaching tasks. Teachers' self-efficacy beliefs are self-reported by scores on the TEBS-S (see Appendix C). According to Dellinger, Babbette, Olivier, and Ellett (2008) the TEBS-S was developed through a system of measures that assessed teachers' self-efficacy beliefs. The system of measures consisted of: teachers' self-efficacy, teacher work-group collective efficacy, and teacher work-group efficacy. The intent of the TEBS-S was to assess teachers' self-efficacy beliefs within a classroom context concerning specific tasks associated with correlates of effective teaching and learning. For a complete history of measuring teachers' self-efficacy beliefs, see Tschannen-Moran and Hoy (2001).

The TEBS-S is divided into four sub-scales. The four areas of the TEBS-S: accommodating individual differences (AID), maintaining a positive classroom climate (PCC), monitoring and feedback for learning (MFL), and managing learning routines (MLR) are based on Bandura's (1986) four categories of self-efficacy beliefs. Dellinger (2001) wrote that the subscales are grounded in self-efficacy theory. They describe the key areas into which self-efficacy measurement can be divided into the context where the behaviors occur. The full TEBS-S system is a single measure that is part of a larger system called the Teacher Efficacy Belief System that measures the collective efficacy of teacher groups.

In specific contexts, there is a large difference between teacher efficacy and teachers' self-efficacy beliefs. A teacher with a high sense of teacher efficacy may believe herself to be a great teacher of physics, or may believe he can teach physics to a specific group of students. Teachers with high self-efficacy beliefs believe themselves capable of accomplishing specific tasks once they have the knowledge and skill necessary to accomplish the specific task in a context or environment similar to where they gained their skills and knowledge. Where teacher efficacy is considered a trait of the teacher, self-efficacy beliefs are the ability to reproduce gained knowledge and skill (Bandura, 1997; Dellinger, 2001).

Measuring teacher efficacy is difficult. Dellinger (2001) described the historical pitfalls of measuring teacher efficacy and noted that measures of teacher efficacy have suffered from poor conceptual design based on self-efficacy theory, difficulty in operationalizing definitions of self-efficacy, and an inability to account for extraneous factors. The measurement of teachers' self-efficacy beliefs is considered by Dellinger to be a more effective way to measure the more specific construct because beliefs are measured in the context of the environment in which the beliefs are practiced. Dellinger's characterization is in line with Bandura's (1997) description of self-efficacy beliefs as being both multifaceted and contextual.

Common Core State Standards

Beginning in the 1990's, the United States moved toward a model of greater accountability in education. The implementation of the CCSS is the latest chapter of the accountability movement. An aspect of CCSS that makes them unique is that the CCSS emphasize what students should achieve and be able to demonstrate. Perry and Manery

(2011) note that the CCSS movement deemphasizes arbitrary changes to education such as time spent in school or adequate classroom materials. The CCSS suggest that students use higher order thinking skills applied to authentic situations with the purpose of solving real life problems. Perry and Manery further stipulate that teachers must have high quality training to implement sweeping initiatives like CCSS. The International Center for Leadership in Education (2011) further clarified that training includes PD "which is a fundamental element in launching and sustaining any initiative to support learning for all students" (p 12).

America's international profile in education has declined steadily over the last 40 years (Chatterji, 2002). Individual states have increased rigor and accountability in order to reverse this trend (Bales, 2006). In addition to the states' attempts, the federal government has become more involved in education (Pascheco, 2003). A partnership between state governors, the U.S. Department of Education, and Council of Chief State School Officers (2010) sought a set of standards made up common and appropriate benchmarks for all students across the United States. The CCSS would raise the level of educational attainment for all of the country's students. The CCSS would draw on other models of education throughout the world. Input from departments of education, research from scholars and professional organizations, and ideas from educators, parents, and students culminated in CCSS. The creation of the CCSS was intended to implement fewer, higher, and clearer standards, leading to learning outcomes for students with and without disabilities (International Center for Leadership in Education, 2011).

A movement toward the CCSS was an attempt to shore up American education because the United States has continued to lose ground in education compared to the rest

of the industrialized world (Chatterji, 2002). Bales (2006) noted that in order to reclaim international standing, educational reforms in the 1990's increased the authority of states in setting goals and standards for accountability. The federal government also became more involved in education as stakeholders in education began demanding higher standards for schools, teachers, and students (Pascheco, 2003). The intent of the CCSS was to provide common and appropriate benchmarks for all students across the United States (National Governors Association Center for Best Practices & Council of Chief State School Officers, 2010).

The new creation of the CCSS drew on important international models, research, input from departments of education, scholars, professional organizations, educators, parents, and students. The authors of the document stated that the new standards represented fewer, higher and clearer learning outcomes for all students, even students from special populations. The International Center for Leadership in Education (2011) described the standards as a way of evening the playing field for students with special needs. The idea of evening the playing field provides a sound argument for the CCSS in that students must meet the demands of the classroom and those demands must meet the needs of the national economy (Darling-Hammond, 2000). The CCSS rationale is that all students individually and nationwide should be prepared for either college or the workforce. The CCSS are considered a way for schools to improve their contribution to the nation's economic future (National Governors Association Center for Best Practices & Council of Chief State School Officers, 2010).

The introductory section of the CCSS notes what the CCSS do not cover (National Governors Association Center for Best Practices & Council of Chief State

School Officers, 2010). The CCSS do not dictate what should be taught. What is taught is left up to curriculum designers and teachers. According to Perry and Manery (2011) the states can utilize the CCSS for 85% of their standards for English language arts and mathematics. The remaining 15% can come from their own state standards. The National Governors Association and Council of Chief State School Officers (2010) were explicit in their crafting of the CCCSS concerning the skills students were expected to demonstrate at the end of a year. Teachers and district curriculum designers may best decide how students reach their end-of-the-year goals. The intent was for pedagogical decisions to be left in the hands of schools and classroom teachers at the local level.

However, suggestions for successful implementation have been made. Zygouris-Coe (2012) made the case for the potential of the CCSS to develop students' content and literacy knowledge, preparing them for college and careers. Successful implementation of the CCSS may improve knowledge, skills, and performance of students above the previous standards in many states. Zygouris-Coe described the CCSS as a way to back-map college and career readiness. After implementation of the CCSS, students begin building college and career readiness skills in kindergarten, adding skills in increments through the 12th grade. Zygouris-Coe also suggested that the CCSS may help students develop specialized knowledge and skills which are relevant to different subject areas, improve college and career preparation, and help the United States bridge the gap between American adolescent education and the rest of the world.

Other researchers have disagreed with a movement toward standards. Long before the creation of the CCSS, Ohanian (1999) claimed that educational standards were folly and did more harm than good. According to Ohanian, an American push toward higher

standards may result in students memorizing long lists of culturally biased facts, created by professionals lacking classroom experience. In addition, standardization minimizes a child's ability and interest, undermining a student's uniqueness. Ohanian further noted that possible assessments based on standards could lead to packaged curriculums sold to school districts on the basis of exaggerated promises. Teachers could find themselves as nothing more than pacing-guide facilitators, creating a body of instructors with similar intent and similar methods.

After a decade of moving toward the CCSS, researchers such as Fisher, Frey, and Aldaro (2013) have found that standards are not the only answer to improving American education, but some standardization may work well for students in K-12 classrooms. These authors suggested that the CCSS may focus school-wide attention on literacy. In order for students in general education and special education to meet the standards, teachers have to teach literacy across all disciplines. This view is also supported by Zygoris-Coe's (2012) who stated that disciplinary literacy, which is the teaching of literacy specific to different subject areas, may improve the United States' standing in adolescent education. Disciplinary literacy may help students achieve success in the CCSS by pushing teachers to emphasize literacy instruction in all classes.

Understanding how best to help students meet the CCSS is challenging, but necessary. The National Governors Association Center for Best Practices and Council of Chief State School Officers (2010) intended for the CCSS to meet the needs of all learners. The creators of the CCSS note that all students need the same standards to reach the goal of attaining college or a career. However, student needs are diverse, and few teachers are trained to meet the needs of the diverse learners that populate their

classes (Fuchs et al., 2010; Kavale & Spaulding, 2009). In fact the design of the CCSS in the form of behavioral objectives allows for gaps in skills to be identified, bridging the gap between each individual student and the CCSS (Perry & Mannery, 2011). The idea that all students have similar needs diminishes the role of special education and may further erode the ability of teachers to individualize educational programming (Fuchs et al., 2010).

To explain the difference between educators who believe instruction should be individualized and those who see special education as simply an extension of general education, Fuchs et al. (2010) divided educators into two camps. The first group is an NCLB camp. In the NCLB camp, school personnel believe special education students deserve the same access to the curriculum as students in general education, but need special services to access the curriculum. The second group belongs to the IDEA camp. In the IDEA camp, school personnel believe access to the curriculum is guaranteed to all students, but each student's access is determined by their individual educational programming specific for their needs.

The NCLB camp hold the view that general and special education could be merged into a seamless strategy of "challenging standards and accountability for all" (Fuchs et al. 2010, p. 304). An example of this camp's influence on the CCSS was reflected in the work of Zygoris-Coe (2012) and Fisher et al. (2013). Students requiring individualized instruction may benefit from group assessment. They suggest teachers use disciplinary literacy and scaffold the complexity of the texts used in their classrooms, bringing all students up to the CCSS. These researchers reflect the NCLB camp view that that disciplinary literacy and scaffolding complexity would work for students with or

without disabilities. As long as instruction was the result of instructional planning designed to meet students of all ability levels, and a school-wide model of Response to Intervention (RTI) was properly used to meet the demands of the NCLB law, then individualization may be less important.

The influence of the NCLB camp has heavily influenced the CCSS. The creators of the CCSS suggest all students in both general and special education to perform at the level of the more rigorous standards. The CCSS increase incrementally in rigor from kindergarten to 12th grade. If a student continuously demonstrates that they have met the standards, they should leave high school prepared for college or career. This diminishes the ability of schools to individualize the education of students in special education. The Individuals with Disabilities Education Act (2004) requires schools to transition students to college or career based on a student's unique abilities, interests, and resources. Assessment must be based on the student's access to the curriculum of the school the student attends (IDEA, 2004). The creators of the CCSS maintain that the CCSS is not a curriculum, yet all students must meet the standards (National Governors Association and Council of Chief State School Officers, 2010). This may be a cause of celebration for Fuchs et al.'s (2010) NCLB camp, but a cause for alarm in the Individuals with Disabilities Education Act (IDEA) camp.

The educators in the IDEA camp agree that an education for students with disabilities should not be held to any certain standard, but should be rigorous and meaningful. However, students on IEP should receive a free and appropriate public education "calibrated to the student's individual needs" (Fuchs et al., 2010, p. 304). Fuchs et al. (2010) discussed the NCLB and IDEA groups in the context of RTI.

However, understanding the difference between the two camps may provide an important backdrop for preparing teachers in general education to implement CCSS for students in special education.

Common Core State Standards and General Education

For students to achieve the higher, clearer CCSS, teachers must believe themselves capable to produce the behaviors necessary for the students to produce the desired outcome. Guskey (1988) noted that there was a significant relationship between high teacher' self-efficacy beliefs and teachers' attitudes toward the implementation of new and unfamiliar instructional innovations. Teachers with high self-efficacy beliefs are essential because educational reform is often aimed at increasing student achievement. Reform in education directed the learning standards and evaluation protocols required of students. Evaluation will now be conducted based problems using constructed response. It is the teachers that frame these constructed responses, so having a large group of teachers that have high beliefs in their own abilities would increase the likelihood that sweeping initiatives created positive change.

One barrier to increasing self-efficacy beliefs in teachers is creating high standards that became too high for teachers to effectively teach and too high for students to achieve, even with high quality instruction. Pajares (1997) wrote:

> High self-efficacy helps create feelings of serenity in approaching difficult tasks and activities. Conversely, people with low self-efficacy may believe that things are tougher than they really are, a belief that fosters stress, depression, and a narrow vision of how best to solve a problem (p. 5).

According to Fisher et al. (2013), for teachers to overcome the barriers to successfully implement CCSS, they need to understand what students are expected to do. In the CCSS, students demonstrate evidence to defend their position when answering questions based on what they had read. The CCSS requires students to constantly analyze their prior knowledge and apply it effectively to new learning. Exploring, experiencing, and integrating learning strategies that work best between the student and the information may benefit the students and increase their knowledge base. This may be a way to provide individual students with multiple learning opportunities; if he or she does not learn it one way, the students could learn it in another that best suits the way they learn.

With the CCSS, all students who fall behind in reaching the expected standards are required to move at a faster pace to catch up. Students who were behind required additional teacher intervention such as: one- on-one teaching, writing and implementing individualized growth plans, and creating positive personalized learning environments that encourage an increased rate of learning. In some cases, students required extended school days that included before and after school tutoring, Saturday school, and spring break programs in order to bring them up to grade level performance that met the CCSS (Ehren, Blosser, Roth, Paul, & Nelson, 2012).

The creators of the CCSS intended to provide common and appropriate benchmarks for all students no matter where they lived, what strengths or deficits they demonstrated with the curriculum, or whether or not they had a disability. According to the National Governors Association Center for Best Practices and Council of Chief State School Officers (2010), the CCSS built on the foundation laid by the states and created

high-quality educational outcomes. The new standards represent "the best elements of standards-related work to date and an important advance over that previous work" (p. 3).

Some researchers have found that high standards were only part of the picture in preparing students for college and career readiness. Lee (2012) studied state standards and learning trajectories for students across the fifty states. This researcher revealed that even in states with high curriculum standards, college readiness was is often determined by a student's racial group and the amount of educational attainment of the parents (Lee, 2012). Graham, McKeown, Kiuhara, and Harris (2012) noted that high standards helped students in lower grades where they progressed from the beginning in a more rigorous curriculum. Students in upper grades still had have to receive quality instruction from well- trained teachers using proven methods and techniques to achieve college and career readiness (Graham et al., 2012).

The CCSS require teachers to transition from their old standards to the higher, clearer standards by making mental shifts. For effective implementation of CCSS, teachers must understand the shifts from the current curriculum to one aligned to the CCSS, the supports available to the teachers through curriculum and instruction supports, and how to use those supports to plan instruction and assessment for implementation of CCSS (Santos, Darling-Hammond, & Cheuk, 2012). Hands-on opportunities through PD can help teachers acquire teaching strategies that respond to these shifts.

The PD must inform the teachers about different curriculum and instruction supports that allowed them to implement the strategies they learned through PD. The new strategies, supported by curriculum and instruction materials, may aid teachers in making the shifts needed for the students to produce deep learning. Successfully implementing

the shifts may rely on the teachers gaining deep pedagogical content knowledge. Further, educators must understand disciplinary learning and the learning progressions that operate within the domains of each discipline. They have to understand formative assessment and used the formative assessment feedback to guide students through the ever-increasing complexity of text used by the students. Santos et al., (2012) suggested that teachers know the following to implement CCSS with all students:

1. Language progressions - How students learn language, both in terms of general language acquisition and in terms of the acquisition of discipline-specific academic language;
2. Language demands - What kinds of linguistic expectations are embedded within specific texts and tasks with which students are being asked to engage.
3. Language scaffolds - How specific representations and instructional strategies can be used to help students gain access to the concepts as well as to the language they need to learn; and
4. Language supports - How classrooms and schools can be organized to support students in continually building a deep understanding of language and content. (p. 4)

These suggestions from researchers may help teachers understand how to implement the CCSS for students in general education. For students in special education, more may need to be understood for these students to access the higher, clearer standards.

Common Core State Standards and Special Education

IDEA (2004) ensured that all students with disabilities received a free appropriate public education that met their unique needs and prepared them for further education and employment. Prior to IDEA, over 4 million children with disabilities were denied appropriate access to the same curriculum as students in general education. Many students were denied entry into public school altogether (Katsiyannis, Yell, & Bradley, 2001). The CCSS goals are focused on the knowledge and skills needed by all students so they can be successful in college and careers. Students in special education are expected to meet the same goals as students in general education. According to the National Governors Association Center for Best Practices and Council of Chief State School Officers (2010), students in special education are expected to excel within the CCSS framework.

Fuchs et al. (2010) see the standards movement as a product of the 2004 merging of NCLB and IDEA. This prevailing thought in education "has dominated education policy in this country for more than a decade" (p. 303). For students with special needs, the standards-driven approach assumes that uniformly challenging standards are established for all children; assessments are aligned with the standards; virtually all children (including most students with disabilities) participate in the assessments; and student performance is the basis for district-level and school- level accountability. This may not be the case nationwide. However, Fuchs and colleagues were careful to ascribe no motivation to the movement other than noting that standards-driven reform is a means of closing the achievement gap "between enfranchised and disenfranchised (including special-needs) groups" (p. 303).

The issue for students in special education taught by general education teachers in an inclusive classroom is how to fairly and accurately teach children in special education. In light of the conflict between IDEA and the NCLB's focus on testing and accountability of schools and school districts, students in special education still have a right to an individualized education (IDEA, 2004; NCLB, 2001). According to the International Center for Leadership in Education (2011), students with learning disabilities make up the largest percentage of students in special education. This group accounts for 39% of classified students. Students who are speech impaired make up the second largest group, accounting for 22% of students in special education. The remainder of students in special education is in the other 11 disability categories. By definition, students receiving special education services in these two largest categories do not have a significant cognitive disability. Most of the students in special education fit within the normal range on the intelligence scale. The federal definition of special education categories describes these students as having average or above average intelligence.

The intent of the CCSS was to outline a rigorous course of study for American students (Haager & Vaughn, 2013). College and career readiness is a goal for all students. Reading and the ability to produce writing from what is read are areas of serious difficulty facing many students in special education. Increasing the rigor of K-12 expectations is likely to present increased challenges for students in special education and their teachers. The rigorous grade-level expectations that increase the complexity of text and the deep analysis of text could lead to an increased achievement gap for students in special education. Most importantly, the CCSS suggest that educators ensure accommodations and supports are present in classrooms (National Governors Association

Center for Best Practices and Council of Chief State School Officers, 2010). A problem that may loom concerning the CCSS is that the creators offer little guidance on how teachers should accommodate the standards with their students. Etscheidt (2012) notes that access to the general education curriculum, membership in the public school accountability system, and higher standards are insufficient to guarantee students in special education a free and appropriate public education.

Contrary to the claims of the CCSS, the national standards take some control away from teachers in deciding what should be taught in their literacy classrooms. Texts from suggested lists may be taken as more than suggestion. Texts that are complex and on grade level may also prove a difficult challenge for students in special education (Etscheidt, 2012). For students whose educational programming is determined by an IEP, choosing literacy goals and objectives may prove difficult in helping students in special education demonstrate master of the CCSS. General education teachers who plan for the accommodation of individual learners may be able to aid their students in special education reach the CCSS by utilizing important aspects of Universal Design for Learning (Fuchs et al., 2006).

Using the principles of Universal Design for Learning (UDL), general education and special education teachers work together to design instruction to meet the needs of students with and without disabilities (Perry & Mannery, 2011). The creators of the CCSS suggest that students in special education will be able to demonstrate mastery of the standards by utilizing UDL. Through collaborative planning and UDL, students with diverse needs are challenged to excel within the general curriculum and be better prepared for success in their post-school lives. The implementation of the CCSS provides

an opportunity to improve access to high content standards for students with diverse needs.

Instructional Practices and Common Core State Standards

The purpose NCLB was to help close the achievement gap between low achieving students from low-income families and students from families that had more economic advantages. Tomlinson (2010) notes that the passage of NCLB caused a renewed interest in differentiated instruction as a way to close the achievement gap among different student populations. With differentiated instruction, teachers provide multiple ways of presenting information to a student so that each student has access to the content of a lesson. Fuchs et al. (2010) note that differentiated instruction does not occur in our schools. However, it is a practice supported by research.

Differentiated instruction is curricula material adaptable to differing levels of individual learning. It is used to take a concept and teach it to a student in a way that the student can understand the material (Parpart, 1995). Other researchers characterize differentiated instruction as varying the pace, the level of rigor, and complexity of material to meet the needs, readiness, and capabilities of a student. Also, when multiple students are close the same place or have similar abilities, differentiated instruction makes it possible to teach a challenging curriculum targeted to the needs of a group of students (Gentry, 1999).

Differentiated instruction can be seen as a problem solving strategy requiring data-driven decisions that are implemented with fidelity, embedded in a tier approach to teaching students, and are a method of helping students in special education participate in a school's curriculum (Fuchs et al., 2010). Tomlinson and McTighe (2006) note that the

research foundation for differentiated instruction is based on decades of cognitive studies. Further, differentiated instruction allows students make connections to their assignments, complete challenging tasks, and find success in their learning experiences.

O'Connor and Simic (2002) wrote that providing differentiated instruction to students in literacy classrooms was considered an effective way to provide intervention for reading problems. States that adopt intervention models that involve a tiered approach include differentiated instruction for all students and provide an effective basis for implementing a coming set of national standards (Berkeley, Bender, Peaster, & Saunders, 2009). Santos et al., (2012) noted that for effective implementation of CCSS teachers must understand the supports available to the teachers through curriculum and instruction supports, differentiated instruction provides that support. Teachers must be trained to use those supports through PD.

Professional Development

PD is considered learning for teachers. Much like student learning may improve in a curriculum based on high standards, PD may also be improved if it is created according to high standards. For instance, Hord and Sommers (2008) suggested that PD be based on a set of high standards. PD should enabled teachers to collaborate, gain new knowledge, receive knowledge beneficial to their career, and provide a collaborative environment. Having standards for PD is important because PD is very important in American schools. Most importantly, teacher participation in quality PD is positively correlated with student achievement (Hora & Ferrare, 2012; Wagner, 2004).

When a new skill is thought to produce student achievement, teachers have a tendency to embrace the skill (Pajares, 1992). Teachers have their own perspectives of

what goes on in schools, and have valuable input into the types of changes that need to take place for improved student learning. When allowed to choose the direction of their own development, teachers often use improved student learning as a basis for choosing PD (Hamre & Pianta, 2001; Schon, 1983). However, administrators often assign PD with very little input from teachers (Hamre & Pianta, 2001).

According to Guskey and Sparks (1996), PD that is chosen for teachers without their input, does not allow teachers to reflect on the value of what they have learned. PD that is not designed with an eye toward how the teachers will apply what they learned to their students is of little value. PD that teachers choose to participate in and allow them time to reflect on how they can apply what they learned to their students can bolster teachers' self-efficacy beliefs and improve practitioner knowledge (DeMulder & Rigsby, 2003; Schon, 1983).

Professional Development and Teachers' Self-Efficacy Beliefs

While there are few studies that examine how PD increases teachers' self-efficacy beliefs, Fine, Zygouris-Coe, Senokossoff, and Fang (2013) reported that PD increased teachers' self-efficacy beliefs in the importance of reading to all content areas. In their study, these researchers found that reading played a key role in content area success. Fine et al. indicated that after participating in PD based on training teachers to implement reading into all content areas of the curriculum, the teachers in their research showed an increased self-efficacy beliefs in content area literacy. The teachers reported a determination to create a school culture that embraced reading across the curriculum content areas.

Bandura (1986) argued that self-efficacy perceptions result from many sources of training both vicariously and through social evaluation. Bandura also noted that these sources of training could also come through direct experience. These sources must be processed and weighed through thought that allows a teacher to think back to the activities they accomplished during the day. Bandura (1986, 1997) recommended that there were four sources of efficacy building information: mastery experiences, vicarious experiences, social persuasion, and physiological or emotional arousal. Tschannen-Moran et al. (1998) echoed these ideas in their theoretical model of teacher efficacy. They found mastery experiences, such as those experienced through PD, the most powerful influence on teachers' self-efficacy beliefs because they provide direct feedback regarding capabilities.

Guskey (1988) described the evolution of teachers' beliefs from the beginning of PD to the end of PD as a "temporal sequence of events." PD that failed to increase teachers' self-efficacy beliefs most likely will fail in producing the desired outcome of the training. Tschannen-Moran and Hoy (2001) agreed with Guskey and described teachers' self-efficacy beliefs as an integral part of any PD. Much like the current study, Ross and Bruce (2007) examined the effect PD had on teachers' self-efficacy beliefs and found PD that pays attention to teacher self-efficacy beliefs to be essential for teachers in skill acquisition. PD that increased teachers' self-efficacy beliefs created confident teachers.

Other researchers have tied outcomes of PD to the increase of teachers' self-efficacy beliefs. For instance, Albinon (1999) found that teachers' self-efficacy beliefs were a measure that could be used to predict the use of technology in teachers'

classrooms. Postareff, Lindblom-Ylanne, and Nevgi (2007) reported that PD for teachers increased teachers' attitude in implementing new skills with their students.

Summary of Related Literature

This review of related literature reveals that students in special education continue to be educated in general education classrooms with teachers who feel unprepared to implement CCSS with their students in special education. The creators of the CCSS intend to hold all students to the same standards (Editorial Projects in Education Research Center, 2013; Fuchs et al., 2010; International Center for Leadership in Education, 2011) In researching the effectiveness of the instrument in this study, Dellinger (2001) found that the four domains of the TEBS-S were positively correlated with PD that included mastery experiences and peer demonstrations from other teachers. Teachers' self-efficacy beliefs are important for implementing pedagogical reform and school improvement. PD that required teachers to be self-reflective on their practice enabled teachers to better assess their capabilities and implement educational reforms (DeMulder & Rigsby, 2003). Self-efficacy beliefs increase as teachers reflect on their learning and how it relates to their practice (Pajares, 1992).

Explanation of Theoretical Underpinnings

In order to self-regulate their behavior to produce accomplishments, teachers create beliefs called self-efficacy beliefs about what they perceive they can accomplish. Humans set goals and continuously look forward to the consequences of actions leading to the fulfillment of those goals (Bandura, 1997). Bandura believed that behaviors

produce outcomes and how humans choose to behave determines the outcome humans will experience (Bandura, 1997; Dellinger, 2001).

According to Bandura (1997), an individual's outcome expectation is the result of a relationship among the beliefs a person has, what those beliefs lead an individual to believe they can accomplish (self-efficacy), and outcome expectancies. Bandura called this triadic reciprocal causation. Reciprocal causation is a multi-directional model that describes future behavior as a function of three forces: environmental influences, behavior, and internal personal factors such as cognitive, affective, and biological processes. These internal factors lead to self-efficacy concerning a course of action that is expected to produce a successful outcome. Outcomes result from positive or negative physical, social, and self-evaluative effects.

Definitions

4cPD: Abbreviation for professional development provided through a grant from Mississippi Institutions of Higher Learning through the NCLB Teacher Quality Program entitled: 4-C: Common Core Literacy Curriculum Connections.

Accommodating individual differences: When a teacher delivers to an individual student the conditions necessary for that student to learn.

Common Core State Standards (CCSS): Set of academic standards adopted by a majority of states and protectorates of the United States that raise expectations of what a student should know and do by the end of an academic year to be ready for college or career.

Managing learning routines: Reducing the mental demands of the learning environment so that learning focuses more on the acquisition of knowledge and practicing skills than thinking about classroom procedures.

Pragmatism: The thinking of problems in a way that is free from theory and practice in order to examine possible solutions that fit specific circumstances in a logical manner.

Positive classroom climate: The teacher creates an environment where learning takes place for students of diverse skill levels and backgrounds, and all students feel comfortable, accepted, and capable of mastering the content.

Professional Development (PD): Teacher learning that enables the learner to gain the knowledge and skills necessary to improve the process of learning.

Teachers'self-efficacy beliefs: A teacher's belief in his or her ability to perform the behaviors necessary to produce a desired outcome in a specific context.

Universal Design for Learning (UDL): A teacher's purposeful plan for instruction and assessment that allows the learner to access the content of the lesson or the assessment.

Differentiated instruction: A teacher's instructional material, activities, and methods that allow students with diverse needs to gain access to the content presented

CHAPTER III

METHODOLOGY OF THE STUDY

Description of the Research Design

This study examines the effect PD on implementing the CCSS has on teachers' self-efficacy beliefs, and the experiences during and after PD that had an effect on these teachers' self-efficacy beliefs in implementing the CCSS with students in special education. This study employs a concurrent embedded mixed method design. Mixed method designs use both an inductive and deductive approach. Multiple strands of data were collected at the same time and have been analyzed using both quantitative and qualitative procedures to make final inferences (Creswell & Garret, 2008).

The methodology in this study has been framed by the pragmatic perspective. Both Creswell and Plano Clark (2007) and Onwuegbuzie and Leech (2006) cite pragmatism as a frequently chosen theoretical model in mixed method research because this mental model provides a basis for a practical research philosophy that is both flexible and multi-perspective. In keeping with the pragmatic tradition, this study uses an empirical support base for research and stresses the importance of qualitative analysis of daily reflections and semi-structured interview data to provide evidence for the conclusions drawn from quantitative analysis. The quantitative analysis of the data examines the outcome of participating in PD about implementing the CCSS; the

quantitative analysis is compared with the qualitative analysis of data to support or contradict the findings of the statistical analysis.

According to De Lisle (2011), "typologies are classification schemes used to describe various mixed method designs, and are important to good practice because they include implicit rules, procedures, and criteria for mixing" (p. 93). Of the typologies found in the literature, the typology of Creswell and Plano Clark (2007) fit the current inquiry best. According to Creswell and Garrett (2008), an embedded mixed method research model uses quantitative statistics to examine the outcome of an experiment while using qualitative data analysis to examine the process that produces the outcome through the experiences of the participants. Data are collected concurrently; one of the methods may be considered primary, or both may receive equal weighting. Both methods will receive equal weighting in this study to determine how specific training for implementing the CCSS for students in special education increases teachers' self-efficacy beliefs.

Understanding the experiences before and during PD that have an effect on teachers' self-efficacy beliefs in implementing the CCSS with students in special education is a complex topic. Tashakkori and Teddlie (1998) described a need for both quantitative and qualitative designs to be utilized with complex topics because neither of the methods alone provides adequate explanation for topics of complexity. An embedded mixed method design was chosen to provide a more holistic understanding of the complexity of how PD changes teachers' self-efficacy beliefs and the experiences of the participants that shape the change.

Research Questions

Question One: Does 4cPD have an effect on general education teachers' self-efficacy beliefs in implementing CCSS with students in special education?

Question Two: What are the experiences during and after 4cPD that have an effect on general education teachers' self-efficacy beliefs in implementing the CCSS with students in special education?

Participants

This study used a single group of participants from a convenience sample, meaning the same individuals provided the data so that it could be more easily compared, evaluated, and interpreted. This study follows the guidelines provided by Creswell and Garrett (2008) for concurrent embedded mixed method data collection. Creswell and Garrett explained that data collection in a concurrent embedded mixed method design occurs at the same time, typically in single or multiple strains. The researcher collected data from both the TEBS-S survey and the participants were asked to reflect daily on how they will implement what they learned with their students. After the PD, data were collected through semi-structured interviews. The participants chosen for interviews were based on a subset of the participants in the study.

Participants (N=21) in this study were middle school general education teachers from a large municipal school district in the Southeastern United States. The teachers received training on implementing the CCSS as part of a grant from a joint federal and state program. The participants were paid from a grant offering 20 days of professional development workshops called the 4C Institute. The participants' ages were from 24 to 63, all African American or white females.

The 4C Institute was a 20-day PD provided by a grant from the Mississippi Institute of Higher Learning that received funds from the federal NCLB Teacher Quality Program to train teachers in implementing the CCSS. It was designed to engage participants in unpacking Common Core Literacy, applying inquiry-based thinking to Common Core, discovering best adolescent pedagogical strategies, and networking in a collegial environment. The 4cPD was a PD opportunity to improve teaching and learning literacy, training teachers to help students meet the higher standards of the CCSS.

The 4cPD aligned to Hord and Sommers (2008) characteristics of implementing standards-based PD. The Hord and Sommers characteristics are as follows: (a) the PD will invest in quality opportunities to grow individually and collaboratively; (b) it will enhance job-related skills; (c) it will allow teachers to acquire new knowledge; and (d) it will provide opportunities for teachers to share expertise and insights. Table 1 will compare the Hord and Sommers characteristics the 4cPD.

Table 1

4cPD alignment with Hord and Sommers (2008)

Hord and Sommers	4cPD
Quality growth for collaboration	Networking in a collegial environment
Enhance job related skills	Provide enhanced knowledge of literacy instruction
Allow teachers to acquire new knowledge	Teaching Content-based literacy for Common Core
Provide opportunities for teachers to share insights	Networking in a collegial environment

The objectives used during the 4cPD served to instruct the participants in implementing the CCSS. One of the objectives was to improve literacy content knowledge. The teachers in the institute were shown how to utilize creative instructional strategies, implement the CCSS through effective methods of teaching and learning for core subjects, and use research driven literacy strategies to deepen expertise in the content areas. Technology was key in helping participants implement the standards by using computer-related technology to enhance instruction. Instructional planning was emphasize to intentionally implement rigorous and deep learning experiences. The design and utilization of formative assessment was demonstrated to the participant to help with student learning retention and the ability to apply what the students learned. The participants were also shown how to create a learning environment that fosters deep

thinking, engagement of students, integration of subject areas, and problem based learning experiences. Finally, the participants were shown how to analyze and use a variety of data to drive instructional practice.

Instrument

Developed by Dellinger et al. (2001, 2008), the TEBS-S was chosen to measure the effect PD has on teachers' self-efficacy beliefs, and examined the effect participating in PD had on teachers' self-efficacy beliefs in implementing the CCSS with students in special education (See Appendix C). The areas of the TEBS-S used in this study: accommodating individual differences (AID), maintaining a positive classroom climate (PCC), monitoring and managing learning routines (MLR) are based on Bandura's (1986) precursors of self-efficacy.

The TEBS-S asks teachers to make judgments regarding the strength of their personal beliefs in their abilities to organize and successfully deliver instruction. This study used the TEBS-S to examine the effect PD has on teachers' self-efficacy beliefs and teachers' self-efficacy beliefs in implementing the CCSS with students in special education. The TEBS-S has 31 item responses on a 4-point scale (1=weak beliefs in my ability, 2=somewhat strong beliefs in my ability, 3=strong beliefs in my ability, and 4=very strong beliefs in my ability).

Procedures for Data Collection

This study uses a concurrent embedded mixed method design to examine the effect PD on implementing the CCSS has on teachers' self-efficacy beliefs, and the

experiences during and after PD that have an effect on the participants' beliefs in implementing the CCSS for students in special education.

The Mississippi State University Institutional Review Board (IRB) for the Protection of Human Subjects in Research approved the application to conduct research at MSU-Meridian. Participants were asked to sign acknowledgement statements advising them of their rights. Individuals who helped transcribe or review data were asked to sign non-disclosure statements. All data, records, and field notes remained safeguarded to prevent public disclosure of survey and interview responses (see Appendix A).

The participants were teachers who participated in the 4cPD, and they were paid a daily stipend to attend the training. The training lasted 20 days. On day 10, participants took part in an 8-hour session focusing on implementing the CCSS for students in special education (see appendix D for a list of all training sessions). The topics covered were specific to implementing the CCSS for students in special education and centered on designing lesson plans according to the principles of UDL. The first topic was an introduction to UDL. The next topic was unpacking the CCSS where one of the anchor standards of the English Language Arts portion of the CCSS was broken into behavioral objectives that students must be able to perform before the anchor standard can said to have been met. The third topic was using the principles of UDL to design instruction of the unpacked standards so that all students have an opportunity to demonstrate learning of the standard. Finally, UDL was used to demonstrate how to teachers can create instructional units made up of unpacked standards that prepare students for the PARCC assessment.

The overall strategy that was used in the 4cPD enlisted instructors at the university level who have researched the CCSS to demonstrate research-based practices to implement the CCSS. A secondary strategy was to train teachers to differentiate instruction for all students, designing lessons based on the CCSS using the principles of UDL. An additional strategy had the teachers practice self-reflection at the end of each day of the 4cPD to consider how what they learned in that day's PD may be used with their students. The corresponding area of the TEBS-S that relates to this dimension of the 4cPD was AID. Additionally, the 4cPD introduced teachers to different ways they could create an "I can" climate in their own classroom. This study examines how teachers' self-efficacy is affected along this dimension after PD. The corresponding area of the TEBS-S that relates to this dimension of the 4cPD is maintaining a positive classroom climate (PCC).

Finally, feelings of nervousness, stress, and anxiety often occur in teachers as they implement changes in policy that directly affect their classroom instruction. The 4cPD addresses this indirectly by demonstrating how to implement the CCSS effectively with their students. The 4cPD also covered how to incorporate the arts to ensure better student understanding of lessons based on the CCSS, and have teachers work collaboratively to create lessons based on the CCSS that help students both in general and special education demonstrate the outcomes specified in the CCSS. The corresponding TEBS-S area that is related to this dimension of the 4cPD was managing learning routines (MLR).

Pre-test/post-test

This study used a pre-test/post-test design to examine whether or not teachers' self-efficacy beliefs change as a result of participating in PD. A pretest measure of the

predicted outcome and the same test after intervention yielded a one-group pretest-posttest design. Shadish, Cook and Campbell (2002) noted that in a pretest/posttest design, pretest observation (O1) is taken on a group of respondents, treatment occurs (X), and a posttest (O2) on the same group follows:

O1 X O2

Sacket (1979) identified several threats to validity inherent in the pretest-posttest design. Threats to internal validity, such as maturation may affect changes from pretest to follow-up. History is a threat because other factors may provide an explanation of the outcome. Testing is a threat because pretest results may inform teachers' of what they need to improve, regardless of the intervention occurring. Attrition may also affect the study because the sample size begins small and will be further affected by those participants who drop out. Construct validity of the outcome measures may also be an issue in the current study because the same persons who will administer the intervention will also analyze the outcome, and may inadvertently make the results look favorable to the intervention. However, in answering the research question, Dimitrov and Rumrill (2003) suggest that using a pretest post-test design is an adequate way to measure the change of one group individuals where change in perceptions, learning, or other attributes shared by the group is the outcome.

Daily Reflection

Beginning on the first day of the 4cPD and concluding on the last day of the 20 PD sessions, participants were asked to reflect on how they would implement what they learned in that day's session with their students. Each day's question was guided by a

single question on a lined 8.5 x 11 sheet of paper that was worded as follows: "How would you implement what you learned today with your students?"

Interviews

In addition to the daily reflection, eight semi-structured interviews were conducted. Eight interviewees were selected from among the participants. The interviews were recorded using an audio recording device (with written consent of the interviewees). Interviewees were asked questions that extend from survey items on the TEBS-S. Other interview questions extended from the 4cPD were developed and reviewed by the researcher. The semi-structured interview included the same questions to all participants so there were no differences in interview outcomes. Additional questions were added during interviews based on responses received from the teachers (see Appendix E for a list of open-ended interview topics). The interviews took place shortly after the participants returned to the schools to implement what they learned in the 4cPD.

Procedures for Data Analysis

For this embedded, mixed methods study, data were collected using quantitative and qualitative methods simultaneously. The purpose of using the qualitative collection methods of daily open-ended questions and interviews was to provide further examination and support for the quantitative findings. In addition, qualitative analysis provided an in-depth understanding of the participants' knowledge of the topics covered each day during the 4cPD and reflected upon by the participants. The qualitative analysis of the data was considered along with the quantitative outcomes to make meta-inferences. The meta-inferences provided an understanding of how PD on implementing the CCSS

has an effect on teachers' self-efficacy beliefs and how their experiences during and after PD affect teachers' self-efficacy beliefs in implementing CCSS with students in special education.

Statistical Analysis

Statistical analysis was used for question one: Does 4cPD have an effect on general education teachers' self-efficacy beliefs in implementing CCSS with students in special education? This question examined the effect PD has on teachers' self-efficacy beliefs. For situations involving either matched items or repeated measurements of the same item, the nonparametric Wilcoxon signed-ranks test for the median difference can be used when the t test for the mean difference assumptions cannot be met.

The Wilcoxon signed-ranks procedure has two assumptions. The first assumption is that data from the dependent variable is either ordinal, as in a Likert scale, or ordinal data where a number represents a score. Second, the same group is measured more than once to determine change in scores from one fixed point in time to a future fixed point in time. The Wilcoxon signed-ranks procedure has equal or greater power in detecting significant differences compared to t-tests when assumptions aren't met (Iman, 1974). Significant differences are reported as positive ranks or negative ranks.

The data collected from the TEBS-S in this study were ordinal, measuring the difference between scores at a point in time before training and a point in time after training. The independent variable was the repeating measures, meaning the repeated administration of the instrument before and after PD. The data for this study fit into both assumptions for the test. The Wilcoxon signed ranks test simply showed an increase or a decrease above or below a hypothesized median. Once data were collected, the

hypothesized median was set at M=2.10 so there would be no ties in the scores. This study assumed an increase in scores, and the values were calculated by hand for each area of TEBS-S being studied. It should also be noted that in keeping with the pragmatic mental model of this study, any and all analyses that allowed the question to be examined were considered during data analysis.

Qualitative Analysis

Interviews and daily reflections were analyzed to examine question one: Does professional development on implementing common core state standards have an effect on general education teachers' self-efficacy beliefs? The statistical results were analyzed through the lens of qualitative analysis of data to further examine the question. The statistics were further explained by data that supported the statistical analysis or contradicted the statistical analysis. Tashakkori and Teddlie (1998) recommended mixing both quantitative and qualitative methods after all data has been collected in an embedded mixed method design. In this study, coded data were charted along with aggregated scores from three of the four categories of the TEBS-S to create a meta-inference.

Qualitative analysis was also used to examine the results of Question Two: What are the experiences during and after the 4cPD that have an effect on general education teachers' self-efficacy beliefs in implementing the CCSS with students in special education? This question examined the process by which the 4cPD has an effect on Teachers' self-efficacy beliefs in implementing the CCSS with students in special education. This study used triangulated data through collection methods in the form of open-ended interviews with eight participants, questions for reflection collected after each day's training from each participant, and field notes from the interviews.

Accurate transcriptions were done after each interview session. The transcripts were analyzed and coded using quantitative analysis of data. Wolcott (1994) advised throughout his writings that three of anything major seems an elegant quantity for reporting qualitative work. The collected data were taken from the point of view of the participant to the greatest extent possible. A researcher could run the risk of damaging rapport between researcher and participant if the participant feels their own views and ideas are less valued than the researcher's objective in collecting data (Wolcott, 1994). Most importantly, the conversational type of interviews that were conducted in this project allowed teachers, who often feel insignificant against the outside forces controlling their classroom, an opportunity to have a voice.

The procedure for coding the data for qualitative analysis included step-by-step analysis of the reflections, open-ended interviews, and field notes. First, data were recorded and transcripts prepared. Second, memos were created as connections were made from analyzing the transcripts. The memos were combined with the rough notes from interviews and written statements collected from the reflection questions. Memos and rough notes provided access to rich data that often emerged during interaction with interview participants and the data. They also provided extended insight and novel themes. In the absence of this data the true voice of the teachers in this study would not have been revealed (Jackson, 2013).

Content analysis techniques were used to analyze the data produced through qualitative measures. To conduct a content analysis on the text from the reflections, open-ended interview questions, and field notes, the data were coded into categories related to three categories of the TEBS-S chosen for this study. This included breaking the textual

data collected into codes comprised of words and sentences. The data divided into these categories were further analyzed to identify emerging themes. These codes were examined to determine existing relationships between the responses of the participants and the three categories from the TEBS-S examined in this study that lead to teachers' self-efficacy.

Delinger et al. (2008) reported that categories of the TEBS-S could be identified by segmenting certain areas of the TEBS-S survey questions into categories. The categories of interest for this study were AID, MLR, and PCC. These categories were used to identify the teachers' cognitive process and were matched to the data from the daily reflections, interview questions, and field notes. These categories were used to code transcript sections where teachers discuss concepts and practices related to these areas. The transcript sections were further coded EFF when the teacher expresses strong self-efficacy beliefs in related concepts and practices, or NEFF when the teacher expresses when the teacher expresses nervousness, stress, or anxiety in implementing related concepts and practices.

Table 2

Codes, Interview Topics, and Transcript Sections

Codes	Interview Topics	Transcript Sections to be Coded
AID	Topic # 1, 2, 3, 8, and 10	Where teacher discusses planning or content that aids students in special education
MLR	Topic # 1, 3, 4, 7, 9, and 11	Where teacher discusses monitoring leaning and providing feedback for learning or formative assessment
PCC	Topic # 1, 2, 6, and 9	Where teacher discusses classroom management, structure, schedules, or PBIS
EFF	All	Where teacher expresses confidence or efficacy in related concept or practice.
NEFF	All	Where teacher expresses nervousness, stress, or anxiety in related concept or practice.

As indicated in Table 2, the codes were matched to the specific questions on the TEBS-S, the interview topics, and then the sections of the transcripts were identified where data were coded. Sections of transcript where the interviewees discussed planning using differentiated instruction, UDL, or other techniques and designs for delivering content that aided students in special education were coded AID. Sections of the transcripts where participants expressed ideas related to managing the learning environment through formative assessment to include feedback from students that informed the teacher of what to teach next were coded MLR. Sections of the transcripts where teachers discussed classroom climate, treating students equally, or where

participants discussed enabling student learning and thinking were coded PCC. All sections of transcripts were coded EFF when teachers expressed efficacy in implementing related concepts and practices. Further, all sections of transcripts were coded NEFF when teachers express nervousness, stress, or anxiety in implementing related concepts and practices.

Delimitations

This concurrent mixed-method study incorporated both open-ended interviews, an open-ended question that asks teachers to reflect upon what they learned during each day's training, and a survey (TEBS-S) to determine the effect PD has the participant's self-efficacy beliefs. The results acknowledged certain methodological limitations of the research: (a) the small sample size (n=21), (b) the researcher delivered the day of PD focused on implementing the CCSS for students with special needs, which was a component of the 4cPD examined in this study, (c) the participants in the study may have differed in some regards to other populations of middle school teachers, and (d) the data collection methodology. Additionally, in regards to the survey instrument, only three of the areas of the TEBS-S were chosen for analysis. This study chose to focus on those areas of teachers' self-efficacy beliefs that are impacted by the 4cPD during and shortly after the 4cPD.

CHAPTER IV

RESULTS OF THE STUDY

The purpose of this concurrent embedded mixed-methods study was to examine the effect PD about implementing CCSS has on teachers' self-efficacy beliefs, and their experiences during and after PD that have an effect on their teachers' self-efficacy beliefs while implementing CCSS wit5h students in special education. Hand-written reflections collected daily, pretest/posttest surveys collected before and after the 4cPD, and interviews along with field notes were collected in the school environment with participants after PD. The data were analyzed for the purpose of determining the effect the 4cPD had on teachers' self-efficacy beliefs and identifying themes that emerged during and after the 4cPD.

The participants in this study (N=21) were teachers taking part in a 20-day summer workshop based on implementing CCSS for all students in their schools. The participants were middle school teachers from a large school district in the southeastern United States. Participants were teachers taking part in the workshop.

Data were subject to both statistical and qualitative analysis in this study. Pretest/posttest data was collected for statistical analysis. The independent variables were repeated measurements of the participants before and after the 4cPD using the TEBS-S (Dellinger, et al, 2008). The dependent variables were sections of the TEB-S; respectively: AID, MFL, and PCC (previously described in Chapters II and III). The

Wilcoxon test of signed ranks was used to determine changes over the course of the 4cPD. For the data used in the qualitative analysis, the method of content analysis was applied to participants' written daily reflections, interview transcriptions and field notes collected after the 4cPD. Data for qualitative analysis were defined and categorized into themes for the purpose of understanding and viewing changes in the three sections of the TEBS-S after the 4cPD.

Descriptive Statistics

The age of participants ranged from 24 to 63 (M = 35.3, SD = 13.9). All participants were female. Of the participants, 57% were non-Hispanic White (n = 12), and 43% were African American (n = 9). All participants had at least a bachelor's degree; 28% (n= 6) had above a bachelor's degree. The average years of experience ranged from 2 years to 31(M = 6.9). Of the participants, 13 (62%) felt very confident in teaching students with disabilities, 4 (19%) felt confident in their ability to teach students with disabilities, and 4 (19%) felt somewhat confident.

Research Question One

Quantitative and qualitative measures were used to answer question one: Does 4cPD have an effect on general education teachers' self-efficacy beliefs in implementing CCSS with students in special education? This question examines the effect the PD had on teachers' self-efficacy beliefs. This question was examined using an embedded mixed method design. The statistical results will be presented, followed by qualitative analysis of data that support the statistical results and then the qualitative analysis of data that contradicted the statistics.

Statistics

Using the Wilcoxon test of signed ranks requires that a hypothesis of positive or negative results be made before analyzing data (Iman, 1974). This study set a hypothesized M = 2.10 for a 4-point Likert scale to ensure there were no ties in the differences across pairs. This study hypothesized that PD would result in a positive, or an increase in teachers' self-efficacy beliefs for each section of the TEBS-S used in the study: AID, MLR, and PCC. This study used nonparametric testing to answer the quantitative part of question one. Nonparametric statistical tests were considered appropriate because of the small sample size, and the use of repeated measures of the same group. While the TEBS-S is based on a Likert scale, the statistical analysis determined whether or not a significant change in the form of an increase or decrease happened from pretest to posttest. All tests were one-tailed, since the study assumed an increase which is a directional hypothesis at an alpha significance level of at least .05. The data met all of the assumptions for performing the Wilcoxon test of signed ranks. The accuracy of the p value was maintained with a sample size of 21 pairs. There were no ties in the difference scores across pairs.

Accommodating Individual Differences. According to Dellinger (2001), teachers who scored high on the AID subscale of the TEBS-S rated their ability to teach students with "low ability" reading and math very high. The belief that a teacher can impact each student is an important factor in teachers believing they can implement new and sweeping change with students. In this study the hypothesis was that there would be an increase in the scores of the TEBS-S AID subscale from the pretest administration to posttest. Mean scores for the AID section which consisted of survey question # 1, 2, 12,

13, and 27 of the TEBS-S increased from M = 2.47 to M =3.13 from pretest to posttest. The change was significant, Z = .09991, p < .001 (see Table 3). The null hypothesis Hl(l)0 was rejected.

Managing Learning Routines. In this study, results indicated support for the hypothesis that there would be an increase in the scores of the TEBS-S measuring MLR from the pretest administration to posttest. Mean scores for the MLR section which consisted of survey question # 16, 17, 19, 22, and 23 of the TEBS-S increased significantly from M = 2.89 to M = 3.03 from pretest to posttest. The change was significant, Z = .09987, p < .001 (see Table 3). The null hypothesis Hl(2)o was rejected.

Positive Classroom Climate. Statistical results did not indicate support for the hypothesis that there would be an increase in the scores of the TEBS-S measuring PCC from the pretest administration to posttest. Mean scores for the PCC section which consisted of survey question # 8,9, and 31of the TEBS-S decreased significantly from M = 3.37 to 2.93 from pretest to posttest. The change was significant, Z = .09982, p < .001. This analysis of data failed to reject the null hypothesis, Hl(3)o. There was no increase in scores on the TEBS-S in the PCC section from pretest administration to posttest.

Table 3

Summary of Statistical Results

Area	Pre	Post	Z score	*p*
AID	2.47	3.13	.0991	.01
MLR	2.89	3.03	.09987	.01
PCC	3.37	2.93	.09982	.01

Qualitative Results

Interviews and daily reflections were analyzed to examine the experiences during and after professional development that have an effect on teachers' self-efficacy beliefs for general education teachers in implementing the CCSS with students in special education. Themes were documented by qualitative techniques. Interviews, daily reflections by each participant after each day's PD, and field notes recorded in a notebook by the researcher during interviews and content analysis. The researcher in this study identified themes based on content (e.g., statements that supported statistical findings or statements that contradicted statistical findings). The thoughts and feelings expressed by the participants were transcribed exactly as they were voiced by the interviewees. At times the participants spoke in dialect. Interviews were transcribed word for word so that no meaning from the teacher response was lost by adding, deleting, or changing words. This gave the responses a richness, depth, and clarity consistent with the spirit of qualitative research preserved the participants voice (Rubin & Rubin, 2011).

The results for question one are explained by dividing the results into the categories of AID, MLR, and PCC. The statistical analysis is explained. The question is

further examined through qualitative results divided into two sections: qualitative results that supported the statistical findings and the qualitative results that contradicted the statistical findings.

AID: Qualitative Results That Support Statistics. The participants in this study made several statements that related the PD to improvement in their knowledge in the area of AID. The teachers in this study indicated that accommodating students in special education was important, but the practice was not clearly understood. One participant said: "I knew that would help, but didn't really understand it." After the participants went through the PD, they indicated that they could implement individual accommodations easier and with more purpose. For instance, another participant commented:

> We all try very hard to work on an individual level with our SPED students. Learning more about how the arts helps us reach our students and improve their writing and it seems to me that using the arts in our classes and with common core that we'll be able to help our SPED kids more with more ideas.

Training teachers to accommodate individual differences is not something often covered in most PD. According to Florian (2012), the practice of AID is an important skill for all teachers to have if we are to create an inclusive society. The practice has moved past being a function of special education and into the general practice of teaching. The participants in this study understood the importance of accommodating individual learners before the 4cPD, they were not confident in their skills to carry out the practice. This was supported by one teacher who noted "It seems like the Common Core individualizes reading for all students, like we've done for special students." In Florian's view, all teachers must be trained in AID to the point that the practice is automatic and

not something that is debated. The statistics support the assumption that the 4cPD improved the participants' beliefs in the area of AID, and the teachers reported that they considered AID an important function in implementing CCSS.

The participants' statements supported the statistics where they equated the CCSS with implementing more individualized instruction for general education students as well as students in special education. This supports the idea that the 4cPD improved the participants' self-efficacy beliefs in the area of AID. The teachers reported that they considered AID an important function in implementing the CCSS. The 4cPD seemed to equip the teachers to have a better understanding of accommodating individual students to help them reach the higher standards.

AID: Qualitative Results That Contradict Statistics. While the 4cPD seemed to support teachers in understanding how to better conceptualize AID, the difficulty of implementing the CCSS upon returning to campus after PD seemed to keep them from proficient practice. While the statistics supported an increase in teachers' self-efficacy beliefs during the 4cPD in the area of AID, participants did not report confidence in the practice after the 4cPD. They would suggest that it had something to do with the students: "It's harder than I thought. These kids are all over the place in skills." Some blamed the principals for their inability to individually accommodate students and equated accommodating individuals to preparing them for the test: "The only training we've gotten so far was from the workshops we did during the summer. We have been training still on the old test and don't know anything about the new test."

After the PD that is the subject of this project, the teachers faced a dilemma imposed on them by the State of Mississippi. While the district was to implement CCSS

during the school year following the 4cPD, the schools were also to administer the end of the year tests based not on CCSS, but the old Mississippi Framework. This confusion in policy had an effect on some of the participants' self-efficacy beliefs. Another participant described the situation: "At first we were trying to do both, but after the first round of common assessments, the principals made us go back to teaching the framework and didn't want us doing the common core." The policies put into place after the 4cPD impacted the teachers confidence in their beliefs to implement the CCSS.

AID: Summary. The statistics showed an increase in teachers' self-efficacy beliefs in AID during PD. Some participants were very positive about what they learned concerning accommodating individuals after they returned to their school following the 4cPD. The participants were able to equate what they learned in the 4cPD with the CCSS making learning more individualized for all students. Responses from the participants that contradicted the statistics cited either the students as a problem or the principals as a problem that kept them from practicing what they learned after the 4cPD in their classrooms.

MLR: Qualitative Results that Support Statistics. The participants in this study reported that the PD helped them understand what learning routines were and their connection to CCSS. "Teaching students to interact with the new content was scary at first, but the techniques we discussed in workshops on literacy really helped me focus on how to get students reading material closely. I didn't have to worry about showing them where the learning was, it helped me to know they could show me." The 4cPD built awareness in the participants that MLR goes beyond simple classroom management. For example, another participant expressed her excitement over using Project Based Learning

to implement the standards when she said, “The other teachers and I finally got to do some of the things the elementary teachers do and our students acted like they liked it too.” The 4cPD prepared the teachers to engage the students on a level where they were motivated to learn. They were able to manage routines that produced learning rather simply managed mundane classroom tasks.

Teachers manage different aspects of learning routines that extend beyond classroom management. Ball, Bass, and Hill (2004) described teachers who were successful at MLR as being able to meet the needs of diverse learners by reducing mental capacity spent on tasks that were not necessary to the learning process so that students could access higher-levels of necessary content. The participants referenced the 4cPD for helping them to better understand how to create a learning routine that benefited all students and connected them to the CCSS.

MLR: Qualitative Results that Contradict Statistics. Several participants reported difficulty in MLR for students in special education. The participants reported difficulty integrating literacy skills with students in special education and had an effect on their teachers’ self-efficacy beliefs. “I don’t see the creativity in them that I do the other kids. They do what they can when we ask them to do things, but I don’t think they understand why we’re asking them to do it.” This participant related frustration with trying to bring out creativity in students that do not explicitly demonstrate creativity in academic subjects. Another participant commented: “The workshops gave us great ideas, some students are better able to participate in literacy projects more than others.” To successfully meet the CCSS, students read informational texts and responded to those texts after reading and rereading. This is an important learning routine in CCSS. Teachers

are expected to guide students in close reading of text, and teach them to use integrated literacy skills.

Haager and Vaughn (2013) noted the importance of training in the preparation of general education teachers to help students in special education to achieve higher standards. The participants in this study related their frustration with using project based learning with students in special education. In order to integrate the different standards, projects tend to have multiple steps and require the integration of knowledge of other subjects as well as the skill of beginning and ending a task. Haager and Vaughn also noted that the CCSS requires teachers to teach more connected skills, and students in special education may not be used to employing multiple skills taught and practiced at the same time. These participants also reported that while the PD gave them ideas about MLR, putting the ideas into practice with students in special education presented challenges after the 4cPD.

MLR: Summary. The statistics revealed an increase in teachers' self-efficacy beliefs during the 4cPD. Some participants reported that they were able to carry over ideas that produced a higher level of motivation in their students. Other participants found challenges when they tried to use the new techniques. They cited the difficulties the students had in understanding the multiple-step projects and their own frustration in implementing them

PCC: Qualitative Data That Supports Statistics. Some of the participants in this study discussed the difficulty in maintaining PCC at their school. This could be that their district had been the recent target of an investigation from the United States

Department of Justice concerning the discipline of African American students. Some of the workshop participants may have been so concerned about the climate of the classrooms due to the investigation, that they felt like there was little that could be done to change it. That seemed to be the feeling of one participant who commented: "The students know we're under the microscope about discipline, or at least they hear about it from students at the high school. They think we can't touch them."

PCC: Qualitative Data That Contradicts Statistics. Statements made by the participants also supported the idea that the 4cPD increased their self-efficacy beliefs concerning PCC. For instance, a participant shared the following experience:

> We have had a student here last year who failed twice and moved up this year and the student is special education. He's never done more than what the special education teachers made him do. Most of the time he sleeps because he's on medicine, and when he's off he does anything but work. When we started using some the ideas about using art to teach common core, he came alive. He loved to draw and the art that we were using that day had bright, vibrant colors. He actually paid attention and made others quiet down when things got loud so he could hear what we were doing next.

Teachers in this project really felt that having hands on projects and tying those projects to the art made a difference in their classroom. Another participant said that she enjoyed the projects as much as the students. "I really enjoy this type of teaching. I love using arts and crafts in class." Using the arts in the classroom is supported by Edgar (2014) who reported that students who had access to art in the classroom would use that art to add the middle. Many times teachers give students the beginning of a problem and

show them how to end it, but art provides the middle. The middle of the problem is where students find they must use critical thinking skills.

PCC: Summary. There was no significant increase in the area of PCC for the participants during the 4cPD. A few of the participants were able to discuss why there was no change in their teachers' self-efficacy beliefs during the 4cPD. However, there were also a few participants who brought back ideas about improving PCC in their classrooms. They were able to implement those ideas and their self-efficacy beliefs improved in the area of PCC. There were extraneous forces such as a United States Department of Justice probing into the disciplinary practices of the district. The participant who provided the data alluded to the probe as one possible reason. This also supports Dellinger's (2001) view that the measurement of teachers' self-efficacy beliefs is a very sensitive measurement and perhaps more of a strong predictor of teachers' self-efficacy.

Summary of Question One

Teachers' self-efficacy beliefs in areas of AID and MLR significantly increased. Qualitative results were given that both supported and contradicted the findings in question one. The fact that the 4cPD failed to produce an increase in PCC was an unexpected result. Qualitative analysis of data revealed that the 4cPD did have a positive effect on the implementation of the CCSS in PCC with some participants. This conflict is consistent with the findings of Hadar and Brody (2013) who discussed the dynamic of group vs individual change in PD. These researchers noted that PD increases pedagogic

change in groups, individual change often occurs at varying rates within the group. That situation may have also been revealed in this study.

During the 4cPD, the teachers believed themselves capable of implementing the CCSS in the areas of AID and MLR. Some of those teachers were able to exit the 4cPD and carry forward their self-efficacy beliefs into the beginning of the school year. Others immediately had their teachers' self-efficacy beliefs diminish, mostly because of situations beyond their control. Where the teachers collectively said they didn't believe themselves capable in the area of PCC during the 4cPD, some teachers were able to utilize ideas from the 4cPD. The ones that brought the ideas from the 4cPD back to the classroom demonstrated an increase in their teachers' self-efficacy beliefs in PCC.

Research Question Two

Qualitative analysis was used to answer Question Two: What are the experiences during and after 4cPD that have an effect on general education teachers' self-efficacy beliefs in implementing the CCSS with students in special education? In coding the data, the voice of the teacher was paramount in any consideration of whether the practice was effective or ineffective. The daily reflections were taken word for word. However, the writing in the daily reflections was more formal than what was recorded in the interviews. Items written in the field notes captured the facial expressions and body language of the participant as well as the thoughts and ideas revealed in the interviews. In cases where the participant did not explicitly say the practice was effective or ineffective, a judgment was made to describe the practice as effective or ineffective. Field notes were incorporated as additional data in the study. When saturation was achieved, the themes were considered complete. Results were tallied and sorted according to the three

categories used in the TEBS-S. The data was then color coded as being effective for practice or ineffective for practice. For example, when the teachers expressed ideas consistent with strong self-efficacy beliefs in the areas of AID, MLR, or PCC, or the reverse was true, the data was coded as being effective or ineffective. Each category, AID, MLR, or PCC, revealed its own set of themes.

Accommodating Individual Differences

Participants responded to questions related to the following topics: 1. Beliefs about abilities to implement common core state standards for students with special needs before the workshops; 2. Experiences teaching children with special needs in the classroom; 3. Implementing CCSS for students with special needs experiences. 4. Thoughts about the day on special needs during the 4cPD; and . 5. Key ideas the workshop emphasized about students with special needs. A theme was considered to exist if more than three participants described similar beliefs, thoughts, or perspectives. The themes and the percentage of the overall category they represented included: (a) support from administrators, (b) support from faculty, and (c) technology. Themes will be discussed in following section.

Support from Administrators. Support from administrators is important for teachers' self-efficacy beliefs. These ideas were uncovered in this study where twenty-one responses in the AID category concerned the lack of support from administrators. The self-efficacy beliefs of the teachers to implement CCSS were diminished policies put in place at their local schools. Statements concerning support from administrators included the following where teacher reported that they felt isolated from administrators

in shared goals and objectives: “The principal don’t care whether the students learn.” Another teacher said, “It’s not easy right now with all of the pressure we’re all under.” The participants left the clinical and reinforcing environment of the 4cPD, and returned to the reality of the classroom. The statements of these participants were in response to questions centered on accommodating individual students.

Tschannen-Moran and Hoy (2001) found that teachers’ self-efficacy beliefs increased when principals provided support in the form of providing adequate materials for the classroom. Teachers also had higher self-efficacy beliefs when principals supported teachers by minimizing distractions that interfered with teaching. In addition principal leadership that allowed teachers to take part in decision making tended to increase teachers’ self-efficacy beliefs. Another participant complained concerning the lack of administrator support: “They don’t believe we will ever have to do CCSS.” The teachers in this study felt that principals did not fully believe in the CCSS.

When questioned about accommodating individual learners, the teachers referred back to the actions of administrators. The effect administrator actions had on the teachers’ self-efficacy beliefs was clear, but the understanding of the teachers’ responsibility to accommodate was not immediately understood. One participant put it this way:

> I do that as much as I can, but I don’t think they want us doing it too much. Not now anyway. They don’t make up their mind to tell us until they want us to do. What they come tell us to do. I don’t know if they would notice if I worked more with a SPED kid or a one of our other children that are behind.

Administrator actions was a recurring theme among some of the participants when they were directly asked about accommodating individual differences among students. The air filled with tension, there would be a pause and the response from the participant would be a negative comment about administrators. It was almost as if they were insinuating that they would accommodate individual students if principals would allow it. This is not an unheard of situation in research. Skaalvik and Skaalvik (2010) found similar concerns from administrators to teachers. These researchers reported that a lack of administrator support lead to a decrease in teachers' self-efficacy and contributed to teacher isolation, leading to teacher burnout.

McLaughlin and Overturf (2013) reported that the implementation of CCSS is ultimately the responsibility of the school. In order for teachers to believe that they are able to implement the CCSS, principals must show that they support the teachers in their efforts to implement CCSS. This theme emerged from teachers reporting a clear disconnect between what their principals expect for implementing CCSS. The mostly ineffective practices of principals seemed to diminish the teachers' self-efficacy beliefs when attempting to implement CCSS with students in special education.

Support from Faculty. The major idea that emerged in the Support from Faculty theme was a lack of faculty support for students in special education. Teacher collaboration and support appears often in studies of teachers' self-efficacy beliefs. Skaalvik and Skaalvik (2010) noted that teacher's self-efficacy beliefs were higher in schools where teachers shared advice and talked each other through difficult situations. The teachers in this project reported a lack of support among the faculty for students in special education which was ineffective for implementing CCSS for students in special

education. A recurring theme in literature concerns the way special education interacts with general education in American public schools. Tomlinson (2014) discussed the group dynamic within schools where teachers lack a fundamental understanding of each other's roles and job duties. This carries over into teacher interactions within a school's culture, but also within the relationships of students in special education with general education teachers.

The majority of responses related to this theme were demonstrated by this quote: "The students can't do this work, and the teachers won't help them." The participants in this study related their frustration with faculty who were indifferent to students in special education. For the participants, this affected their ability to implement the CCSS. "We can't be the only ones responsible for teaching them. We need others to help. "

Often in schools where faculty fail to work together and share accountability students fall behind. Santos et al. (2012) revealed that if teachers were to be successful in implementing the CCSS with students that have special needs, they must work in small learning communities toward shared goals and accountability. Teachers work together in these small communities to create assignments they believe will help the students meet the standards, collect the students' work, and come back to the table to discuss what works and what doesn't. The data in this study indicates that lack of support among teachers results in lowered expectations for students in special education. The lack of support seemed to lower the expectations the participants had after they returned from the 4cPD.

Teachers who have a strong beliefs that they can implement the standards for students in special education find those beliefs diminished by other faculty. While those

with strong self-efficacy beliefs believe they can implement the standards, interactions with other faculty who fail to help, and don't believe their help would benefit the student, had a negative effect on teachers who had strong self-efficacy beliefs during the 4cPD.

Another participant described the lack of support for teachers in this way: "Special education students can't do this, they're too far behind and the teachers don't know how to get them caught up. " The teachers that participated in the 4cPD brought back with them an increased arsenal of tools to teach all students. Many of the teachers that did not participate in the PD may have seemed archaic to those who had a better understanding of implementing the CCSS.

Students in special education often show behaviors like lower language skills that make them seem less intelligent than their peers. Teachers with higher self-efficacy beliefs may feel more confident to deal with the deficits, but may feel less confident in employing those tools where they aren't supported by colleagues (Ashton & Webb, 1986; Stephens & Braun, 1990). Bunch (2013) wrote that students with language deficits have to be conceived differently in an era of higher and clearer standards. The teachers in this study reported diminished self-efficacy beliefs after the 4cPD due to colleagues who did not support students in special education. In order for teachers to successfully implement CCSS, Bunch noted that general education teachers needed to have significant shifts in the way they think of students with insufficient language ability. These shifts must take place if students are to interact deeply with text as the CCSS suggest, and teachers who believe they can implement the standards report they face increased opposition from colleagues who feel that students in special education are too far behind to even begin.

Teachers should have shared goals and accountability, supporting each other and in turn supporting students who may have difficulty with the higher standards of the CCSS (Santos et al., 2012). In that vein, other responses under this theme dealt with teachers who don't desire to give support. For instance, one participant said: "Who thinks these teachers, who don't work with what we give them now, will do more work that's harder?" These responses seemed to make the ideas the participants may have been able to use effectively were made ineffective through the practice of others like fellow teachers and administrators. These problems surfaced once participants returned from the 4cPD and began implementing the standards.

Caprara et al. (2006) found that teachers' self-efficacy beliefs were higher in teachers that recognized the contribution of all stakeholders in the effective functioning of a school. The participants in this study seemed to have their teachers' self-efficacy beliefs diminish after the 4cPD. Other colleagues that did not participate in the training seemed to have an effect on those who did. Also, teachers that did not share their same desire to have students in special education succeed in the new standards seemed to weigh on the teachers that received training.

Some responses related to teachers who need further training with students with special needs. For example, one teacher said: "Teachers don't know how to help students who have something wrong." The participant again noted the lack of expertise of her colleagues. Evers, Browers, and Tomic (2002) studied teachers' self-efficacy beliefs in implementing new educational innovations in the Netherlands. These researchers agreed with Hora and Ferrare (2012) who reported that teachers who feel highly trained exhibited much higher levels of teachers' self-efficacy beliefs than those who feel their

training was deficient. In this study, the teachers who participated in the 4cPD did not report on their own lack of training had an effect, but cited their colleagues' lack of training as having an effect on their own sense of teachers' self-efficacy beliefs.

Technology. The responses coded into this theme revealed a concern with the need for more technology in good working order. Little exists in the literature concerning the effect of technology on teachers' self-efficacy beliefs to implement new initiatives. However, technology became a recurring theme with the participants in this study as they attempted to implement the CCSS with students in special education.

In this study, six responses indicated that students in special education performed better when they could use technology: "Those kids do work when they can use their computer or telephone to complete work needed on the Internet." The participants indicated that the lack of special education students' access to technology affected the teachers' self-efficacy beliefs in implementing the CCSS. If students had access to technology, the teachers would have a greater belief in their own ability to implement the standards. Wenglinsky (2005) reported that student achievement increases when students use technology to complete their assignments, but teachers and schools do not do enough to ensure they have access to the technology they need.

Three statements also supported the difference in reading ability among students in special education when they interacted with technology: "They read fine when they're on the computer. They seem to understand what is written on that flat screen, and they can find anything." The participants cited the use of technology as a way means to implement the standards and felt very confident in using technology. This comment supported Wenglisky's (2005) idea that technology increased student achievement. The

concept of increased student achievement is also supported by Eden, Shamir, and Fershtman (2013) who studied a laptop immersion program and reported that students with laptops achieved more, had fewer discipline problems, and were more motivated learn. Student motivation was mentioned by one participant: “They won’t study what we give them on this level. Why would that change with harder work?” This participant seemed to relate the idea that none of her students in special education were sufficiently motivated to learn. This might also indicate that the 4cPD was not sufficient in improving the self-efficacy beliefs of all of the participants.

Another problem mentioned by the participants was technology that went unused in the school due to disrepair. Two responses concerned technology that did not work: “If they’d fix the computers we have, the students would be able to complete their work.” Another comment concerned the time it takes to help students with technology when technology wasn’t working. “You spend half the time trying to find which computers will boot and which ones won’t boot. Kids are standing around or begin horsing around and then you have to spend more time getting them quiet. How we going to get these kids ready for Common Core, or the SPED [special education] kids, when we can’t even get to computers that work the same way every day?” The participants returning from the 4cPD with excitement about how to implement the CCSS might have felt less confident because the environment they returned to was less than ideal. Bandura (1997) noted that the environment in which self-efficacy beliefs are potentially practiced will influence those self-efficacy beliefs.

Summary of AID for Question Two. The participants discussed the difficulty of implementing the CCSS and employing the new ideas they learned about in the 4cPD.

The environment they returned to seemed to diminish their self-efficacy beliefs. The lack of support from administrators and colleagues affected their beliefs in their abilities to implement the new standards with students in special education. Technology seemed to be a duplicitous aid in implementing the standards. When the technology worked, it was a help in implementing the standards. When the technology malfunctioned or was not adequate for their goals, technology diminished the teachers' self-efficacy beliefs. Teaching students in special education was a challenge for general education teachers before the CCSS. The higher standards may accentuate those challenges and will require teachers who have confidence in their training. That training will have to do more to increase those self-efficacy beliefs.

Managing Learning Routines

Participants were asked questions related to the following topics: 1. Describe experiences teaching children with special needs in the classroom; 2. Implementing CCSS for students with special needs experiences; 3. Monitoring feedback for learning in the classroom; 4. Classroom structure; and 5. The ways the 4cPD influenced the teacher's practice. Themes were developed from coded responses both of answers to the interview question and written answers on the daily reflections submitted by the participants after each day of training. Ideas representing similar beliefs, thoughts, or perspectives were designated as themes. A theme was considered to exist if more than three participants described similar beliefs, thoughts, or perspectives. Themes included: (a) classroom discipline, (b) formative and summative assessment, (c) reading instruction. Themes will be discussed in following section.

Classroom Discipline. Of all of the responses in this category, the theme of classroom discipline was mentioned most by the participants and had an effect on their teachers' self-efficacy beliefs. The majority of the responses in this theme concerned the implementation of project based learning in the classroom: "I was able understand how to plan projects better after the workshops, and my students in SPED seem more engaged." The teachers in this study reported that project based learning improved the motivation of students in special education. The practice was effective in increasing the teachers' self-efficacy beliefs with students in special education because the participants could see the practice impact the students. Bell (2010) further described project based learning as improving students' social skills in addition to responsibility, discipline and independence.

The next set of responses in the theme of classroom discipline concerned organizing the classroom for social learning. The response best representative of this theme: "My classroom is a diverse class of students from very smart to students who are several grade levels behind. I had to get the class set up for the new way of teaching." Organizing the classroom for the participants and planning ahead for social learning activities was an effective practice and improved the teachers' self-efficacy beliefs. Several statements related to this theme noted how preparing the classroom for social learning made them feel like they were taking positive steps toward implementation of the CCSS. Hagelskamp, Brackett, Rivers, and Salovey (2013) found that classrooms organized for social learning improved emotional support for students and instructional support for teachers.

Formative and Summative Assessment. The statement best representative of this theme: "The think-pair-share and other things we went over help the SPED [special education] students probably the most out of all of them. They want to talk more in class about what the rest of the students are doing." This was considered to be an effective practice for increasing teachers' self-efficacy beliefs. This is consistent with Shute and Kim (2014) who found that formative assessment encourages and supports the learning process and provides immediate feedback to teachers. When the students in the teachers' classrooms are engaged and interested in the learning activities of their peers, teachers are better able to relate key concepts and ideas to students.

However, several teachers reported trouble with implementing formative assessment. "I can ask them questions to find out where they are, but doing it in a planned way is messy." The teachers in this theme also reported classroom difficulty with maintaining the topic when students were asked to respond to what they knew and understood. The teachers further explained that students would ridicule one another, particularly if a student answered a question that facilitated more discussion. There are many different techniques for formative assessment, and not all require social learning or question-response (Shute & Kim, 2013). However, the majority of statements included the effective use of formative assessment, though the practice may have held unforeseen consequences for the teachers. While overall the practice of formative assessment improved teachers' self-efficacy beliefs by helping their inclusion students become more engaged, the teacher may have implemented the wrong method of formative assessment for her class.

Summative assessment was also included in this theme, and implementing summative assessment had a mostly negative effect on teachers' self-efficacy beliefs. The statements best representing this theme: "I feel I'm being judged every month now, instead of the end of the year when I've had time to teach. I mean, the new tests are supposed to be better than the old ones, even though we're still doing both." The constant summative assessment of students and the pressure the assessments put on teachers diminished the teachers' self-efficacy beliefs in implementing CCSS with students in special education. The teachers reported listlessness during testing with the students in inclusion who the teachers claimed to be overwhelmed by all the testing all the time. Segool, Carlson, Goforth, Von Der Embse, and Barterian (2013) reported that fatigue and anxiety associated with testing had an impact on test scores for students in elementary school. The students experienced cognitive and physiological stress from repeated testing. These researchers also noted that teachers responded to the tests with anxiety. Increased teacher anxiety resulted in classroom activities changing to an increased focus on test preparation, further heightening the anxiety of the students.

Reading Instruction. In contrast to summative assessment and its negative influence on teachers' self-efficacy beliefs in implementing CCSS with students in special education, the participants reported that training in reading instruction had a positive effect on teachers' self-efficacy beliefs. The CCSS suggestion of deeper reading of non-fiction material received many positive statements from the participants. The comment most reflective of this theme: "My inclusion kids get it when we read over again several times. They don't answer written questions much better, but they discuss what we're reading faster and understand better." The sentiments of this participant are

consistent with the findings of Morrow, Gambrell, and Duke (2011). These authors noted that PD related to implementing CCSS will need to prepare teachers of students from diverse life circumstances for an era of higher standards. The CCSS emphasizes students reading a wide variety of texts that become more complex as grade levels increase (Haager & Vaughn, 2013). Reading closely and thoroughly through texts chosen by teachers through the lens of CCSS text complexity guidelines help raise the interest and achievement of low achieving students in a social learning classroom.

The next set of responses related to teaching reading and raising the rigor of reading instruction. The participants reported that raising the rigor increased their teacher self-efficacy beliefs. A common response here was: "I had to learn myself what deep thinking meant because, Lord help, I don't remember that I knew! Our inclusion students get it just as fast as the others. Some of them faster." Students who receive instruction from teachers with high levels of teachers' self-efficacy beliefs achieve more (Ashton & Web, 1986; Caprara et al., 2006; Stephens & Braun, 1990). This becomes even more important in an era of higher standards. The participants reported that a better understanding of what higher order thinking skills actually meant, helped them implement them in the classroom. The participants reported the knowledge they gained concerning thinking skills during PD with effective for helping them put those skills into practice.

The final set of responses in this theme related to the general education teachers teaching reading to students in special education. These responses dealt with teaching reading to students who were several grade levels behind their peers. The representative response was: "I know there's not many actually at grade level, but one thing I learned in

the workshops was that you have to use several different ways when you're helping poor readers learn to break words down." This comment is very similar to the systematic teaching of phonics suggested by the National Reading Panel (National Institute of Child Health and Human Development, 2000). Other researchers also suggest using several different methods to teach phonemic awareness and decoding (Morrow et al., 2011). The PD was effective in increasing the teachers' self-efficacy beliefs for implementing CCSS with students in special education by helping teachers meet the higher literacy standards.

Summary of MLR in Question Two. While the majority of responses in MLR related to the theme of classroom management, the PD also seemed to inspire the participants to think past classroom management and think about assessment and reading instruction. The participants, like most teachers, put managing behavior in the classroom and learning behaviors that facilitated classroom management as important. They also reported that the 4cPD helped them better understand and improved their teachers' self-efficacy beliefs in formative and summative assessment. They also revealed that they gained a better understanding of how to manage reading instruction so that students in special education were better able to demonstrate the higher standards of CCSS.

Positive Classroom Climate

Participants were asked questions related to the following topics: 1. Beliefs about implementing CCSS before the workshop; 2. Experiences teaching children with special needs in the classroom; 3. Classroom structure; and 4. The days in the workshop where teacher learned about implementing CCSS for students with special needs. Themes were developed from coded responses both of answers to the interview questions and written

answers on the daily reflections submitted by the participants after each day of training. Ideas representing similar beliefs, thoughts, or perspectives were designated as themes. A theme was considered to exist if more than three participants described similar beliefs, thoughts, or perspectives. Themes included: (a) using the arts and music and (b) treating all learners the same. Themes will be discussed in following section.

Using the arts and music. Using the arts and music was a cornerstone of the participants' experience in the 20-day 4cPD. The participants reported an increased level of excitement and interest in incorporating the arts with learning for their students. One participant commented: "Even our special education students love music and love drawing." Another participant went further in her description of using the arts and music she learned through the 4cPD: "Some of our students might be in special ed, but they are very, very talented children. They like to draw and they sing and play music in their church." This participant recognized an important aspect of students in special education not often recognized. Special education is a designation used in schools, primarily K-12 public schools. This participant was acknowledging that a student may struggle with academic endeavors, but that is not their label in life outside of the schoolhouse doors.

Using the arts and music with students in special education is a way to improve the climate of classrooms where special education students learn. The arts and music in has been shown to improve PCC. Eerola and Eerola (2014) found that using music in the classroom improved the classroom environment, improved relationships between individual students, and increased students' helpful behavior. Ewing (2011) reported that using the arts in the classroom had a systematic effect on classroom philosophy, pedagogy, and practice.

Treating all learners the same. In a room that contains children of so many different backgrounds and abilities, teachers have a difficult time leveling the playing field so that all learners are treated the same (Tomlinson, 2014). The ability to maintain PCC is an important measure of teachers' self-efficacy beliefs (Delinger, 2001; Delinger et al., 2008). The participants in this study differed in their beliefs during and after the 4cPD concerning the importance of treating all learners the same. For instance, one participant stated, "They're not the same. It's not realistic to think that we should treat them all the same. I don't think that's good. How could you help anybody if they were all the same?" Another participant reported that she treated all of her students exactly the same: "I treat all my students as if they were my own children. I've never cared if they were black or white. That goes for the special ed. kids, too." Tomlinson (2014) describes learners as having differing levels of ability. Teachers have a duty to ensure that all students master important subject content, and not all learners will master the content in a similar way. This view would support the teaching of each student as an individual and not as an equal member of a classroom.

Summary of PCC for Question Two. The participants reported that their experiences using music and arts in the classroom had a positive effect on their teachers' self-efficacy beliefs. Arts and music motivated the students in special education to produce stronger learning behaviors in the classroom. The teachers felt more confident in this area as their students participated at a higher level. The teachers seemed to be divided over their self-efficacy beliefs in trying to treat all of the students the same. Some equated equal treatment to more of a social justice ideal, while others suggested that to try to treat students the same was not fair.

Summary of Question Two

Content analysis of the data created conflicting results. Some of the themes revealed in the qualitative analysis in Question Two showed very effective practices for implementing the CCSS with students in special education. Themes such as formative assessment, properly working technology, and using the arts and music were covered in the 4cPD and were effective for implementing the CCSS with students in special education. Other practices were not effective. Practices such as poorly working technology, summative assessment, and treating all students the same.

An interesting finding was that some practices associated with AID may have been more effective, but support from administrators and faculty that did not participate in the 4cPD rendered promising practices ineffective. Another effective practice was several components of MLR. It was revealed that ideas the teachers took away from the P4cD concerning reading instruction and formative assessment were effective. The district's use of summative assessment, which was not included in the 4cPD but an important part of implementing CCSS for students in special education, was not effective. For PCC, the use of arts and music in classroom was effective, while treating all students the same was not very effective. The teachers were very conscious of how the 4cPD helped them during the opening days of a very difficult year of change. None of the teachers seemed to cite the 4cPD for any shortcomings in their ability to implement the CCSS with students in special education.

CHAPTER V

FINDINGS

Summary

The purpose of this study was to examine the effect PD has on teacher self-efficacy beliefs, and the experiences of general education teachers during and after PD that have an effect on teachers' self-efficacy beliefs in implementing the CCSS with students in special education. This study addressed the problems teachers have reported in believing themselves capable to implement the standards with students in special education (Editorial Projects in Education Research Center, 2013).

According to the Editorial Projects in Education Research Center (2013), the training teachers report to have received for implementing the standards is through PD. This study examined a 20-day PD for teachers based on implementing the CCSS. Particularly, how PD prepared general education teachers to implement the CCSS for students in special education, and the experiences during and after PD had an effect on the teachers' self-efficacy beliefs. Twenty-one teachers participated in a 20-day workshop on implementing CCSS. The teachers in this study completed daily reflections after each day of the workshop. The participants also completed the TEBS-S survey on the first day of the 4cPD and again on day 20 of the 4cPD. The change in scores was analyzed using the Wilcoxon test of signed ranks. In addition to the survey, the teachers

were asked to complete a daily reflection concerning what they learned each day in the 4cPD.

Shortly after the participants returned to the schools to implement what they learned in the 4cPD, eight of the participants gave interviews that discussed the practices learned in the workshop and the effect they had on implementing CCSS with students in special education. The daily reflections from the teachers, the interviews, and field notes of the researcher were used during qualitative analysis. The Statistical results and the qualitative analysis of data were used to examine question one. Question two was examined exclusively using the qualitative analysis of data.

The first research question in this study looked at the change in self-efficacy beliefs during the 4cPD, and how those changes were supported or contradicted after the participants began implementing the ideas. The second question examined the experiences of the general education teachers during and after the 4cPD as they implemented CCSS. In this section, the data from these two questions will be summarized and discussed.

Question One

Does 4cPD have an effect on general education teachers' self-efficacy beliefs in implementing CCSS with students in special education? This question was examined using both statistical and qualitative analysis. The statistical results were measured using three of the four subscales of the TEBS-S.

The Wilcoxon Test of Signed Ranks was used to compare the scores from the first administration of the TEBS-S to the second administration. Qualitative analysis of data helped explain the statistical analysis concerning the ways in which the 4cPD had an

effect on teachers' self-efficacy beliefs in implementing the CCSS for students in special education.

Statistical Analysis. Statistical analysis revealed an increase between the two administrations of TEBS-S in both AID and MLR. The self-efficacy beliefs of the teachers' were strengthened in these areas during the course of the PD. There was no statistically significant increase in the results for PCC.

Qualitative Analysis. The qualitative analysis of data revealed support for the statistical increase in teachers' self-efficacy beliefs in the area of AID, and contradictions to the statistics. Teachers were able to conceptualize the tie between individualizing instruction to implement the CCSS and helping students in special education reach the higher standards. Some participants, however, failed to see how the CCSS helped to individualize instruction for students and diverted the discussion to policies made by administrators or the practices of other faculty members.

In the area of MLR, the qualitative analysis of data supported the statistical data and also revealed contradictions. The data revealed that some participants were able to move past learning routines as merely a way to help with managing behavior and turn in papers in the classroom. Some of the participants credited the 4cPD with teaching the students learning routines that allowed the students to show the teacher where learning occurred in a given activity. Other participants felt that the students in special education couldn't follow the routines that lead to higher level thinking about content. The teachers felt project based learning that used learning routines that required integrating knowledge and skills too difficult for students in special education.

In the area of PCC, it was clear that some teachers brought back ideas that indeed demonstrated that the participants held a high level of teachers' self-efficacy belief in this area. Where the statistical results during the 4cPD showed no increase in teachers' self-efficacy beliefs, these teachers contradicted the statistics. Other teachers supported the statistics, and once again the environment surrounding the teachers at the school were a factor. Due to the circumstances surrounding a United States Department of Justice investigation, some participants felt as if they would not be able to improve PCC in their classrooms.

Question Two

What are the experiences during and after 4cPD that have an effect on general education teachers' self-efficacy beliefs in implementing the CCSS with students in special education? The participants found it difficult to return to school and implement the CCSS. Many of the teachers revealed that decisions and behaviors of colleagues and administrators made implementing the standards challenging, particularly with students in special education. Influences from outside the district such the decisions made by the Mississippi Department of Education and the United States Department of Justice also played a role in implementing the CCSS with students in special education. The higher standards seemed to cause anxiety for the teachers as they attempted to use Project Based Learning. The teachers did report success in using technology in AID, reading instruction and formative instruction in MLR, and using the arts and music to create PCC.

Accommodating individual differences. The environment the participants returned to, along with the seemingly unfamiliar practice of accommodating individual

learners diminished their self-efficacy beliefs in this area. The lack of support from administrators and colleagues were reported by the participants as being the most challenging barrier to implementing the new standards with students in special education. When the teachers had adequate access to working technology they reported much higher beliefs in their ability to accommodate individual students.

Managing learning routines. The participants reported that the 4cPD helped them to look past classroom management as the only useful employment of MLR. The 4cPD helped them understand the usefulness of formative assessment. The ideas they brought back from the 4cPD concerning reading instruction also helped their teachers' self-efficacy beliefs in implementing the CCSS with students in special education. Where the teachers reported that the 4cPD improved their teachers' self-efficacy beliefs in this area, outside influences again conspired to diminish those beliefs. The participants reported difficulty practicing many ideas from the 4cPD due to the district's repeated use of common assessments and the necessity of preparing students to take them.

Positive classroom climate. Using music and arts in the classroom had a positive effect on their teachers' self-efficacy beliefs. The students in special education were motivated by their use in the classroom. The increased participation and excitement of the student had an effect on their teachers' self-efficacy beliefs. The teachers' reported differing degrees of self-efficacy beliefs in treating all students the same. While several teachers' mentioned they were able to do it well, other's questioned whether treating all students the same was in the students' best interest.

Conclusions

The participants in this study reported positive teachers' self-efficacy beliefs during their interviews and on the TEBS-S in the areas of AID and MLR. The qualitative analysis of data confirmed the statistical results. The 4cPD gave them tools to help the participants implement the CCSS with students in special education. Some of the teachers were very confident in different areas of implementing the standards. There was no participant who reported having an overall strong confidence in their ability to implement the standards with students in special education. However, some participants described their instructional approach changing with students in special education as a result of implementing the CCSS.

The tools they were given for reading instruction really had an impact according to the participants. The teachers were able to put into practice the techniques that enabled students to read non-fiction passages closely for deep understanding. Teachers' self-efficacy beliefs were strengthened with the incorporation of the arts and music in their classrooms. Working technology also increased their self-efficacy beliefs, even though technology that wasn't in working order diminished those beliefs to a degree. Other factors also diminished teachers' self-efficacy beliefs for the participants.

The CCSS is a new initiative and the first of its kind in the United States (National Governors Association Center for Best Practices and Council of Chief State School Officers, 2010). The duplicity of administrators can be a death nail to new initiatives (Lunenburg, 2010). The support of administrators would seemingly need to be very positive if teachers are implementing new initiatives with challenging populations like special education. The participants in this study regarded the policies of others as one

of the greatest factors in diminishing their teachers' self-efficacy beliefs. Responses included: "They say they will do whatever we need them to, until you need them to do something." Another participant described administrators as blame-shifters: "They just blame it on central office when they say they can't do it." Some teachers stated a similar complain when they reported: "Central office blames the principal and the principal blames them." Lunenburg (2010) noted that employees exert more energy on the job and have increased performance when their self-efficacy beliefs are bolstered by their supervisors. The opposite was true for the teachers in this study. Participants looked exasperated and confused as they commented on a lack of support from administration for the CCSS. However, this also seemed to be convenient for the teachers.

Many of the participants did not report that they practiced individualizing instruction for students in special education. Fuchs et al. (2010) decried the disappearance of individualized instruction for students in special education. However, the CCSS supports individualized instruction through general education for students in special education within its framework (Browder et al., 2014). Many participants would bring up the behavior of administrators or other colleagues as reasons why they didn't practice individualized instruction. There was also some confusion among the participants about what the practice of individualized instruction for students in special education looked like. This would support the idea that further training within the CCSS framework should happen in a format similar to the training provided to the participants for implementing the CCSS.

More also needs to be done by the Mississippi Department of Education and other government agencies in the State of Mississippi to fully support teachers as they

implement the CCSS. At the time of this study, the teachers were to implement the CCSS and simultaneously test the students on the old Mississippi Curriculum Test. This forced a reaction from administrators of the participants to ensure test scores for the schools were maintained. This in many ways affected the teachers' self-efficacy beliefs in implementing the CCSS.

Limitations

Some of the results and conclusions from this study are based on daily reflections, interviews, and field notes collected from a group of teachers participating in a 20 day PD that took place as a set of daily workshops during summer break. Some of the results and conclusions presented in this study were based on interpretations made from data collected by the researcher. The results and conclusions may not generalize to other populations. The study consisted of a small number of teacher participants. The richness of descriptions on the implementation of the CCSS, the teachers' self-efficacy beliefs, and their responses may also have been limited by the small sample size.

Several extraneous circumstances were also present during the time of this study. The assessment that measured the schools' performance on the CCSS was not yet implemented. The Mississippi Curriculum Test was still in effect during the year this study was conducted, even though this was the first year the district was implementing CCSS.

Another limitation of this study was the length of the study. The data collected for qualitative analysis occurred shortly after the teachers returned to the classroom from the PD. A study that took data for qualitative analysis several times over the course of the year may have led to richer data. Also, direct observations of teachers and teaching

practices may have led to better generalizations concerning the lasting effect of the 4cPD on implementing the CCSS with students in special education.

Suggestions for Future Research

This study contributes to the body of literature on implementing new initiatives in education and the consideration of students in special education in regard to those changes. Further research on how changes in school policies and the curriculum has an effect on students in special education. Particularly, how those initiatives like the CCSS affect students' IEPs.

Research on implementing the CCSS in other districts can also contribute to the emerging literature on this new and sweeping change. In addition, research on PD, teachers' self-efficacy beliefs, and the impact these two factors have on student learning in special education will be needed as more and more students are educated by general education teachers in general education settings, specifically, how those student perform on assessments aligned to the CCSS.

REFERENCES

Albion, P. (1999). Self-efficacy beliefs as an indicator of teachers' preparedness for teaching with technology. In *Proceedings of the 10th International Conference of the Society for Information Technology & Teacher Education (SITE 1999)*. Toowoomba, Australia: Association for the Advancement of Computing in Education.

Allinder, R. (1994). The relationship between efficacy and the instructional practices of special education teachers and consultants. *Teacher Education and Special Education*, *17*, 86-95.

Ashton, P. , & Webb, R. (1986). *Teacher efficacy and student achievement*. New York, NY: Longman.

Bales, B. L. (2006). Teacher education policies in the United States: The accountability shift since 1980. *Teaching and Teacher Education*, *22*(4), 395-407.

Ball, D., Bass, H., & Hill, H. (2004, January). Knowing and using mathematical knowledge in teaching: Learning what matters. In *Proceedings for the 12th Annual Conference of the South African Association for Research in Mathematics, Science and Technology Education.* Durban, South Africa: SAARMSTE.

Bandura, A. (1986). *Social foundations of thought and action: A social cognitive theory*. Englewood Cliffs, NJ: Prentice Hall. Retrieved from http://www.loc.gov/search/?q=+Social+foundations+of+thought+and+action%3A+A+social+cognitive+Theory.+Englewood+Cliffs%2C+NJ%3A+Prentice+Hall

Bandura, A. (1995). *Self-efficacy in changing societies*. New York, NY: Cambridge University Press.

Bandura, A. (1997). *Self-efficacy: The exercise of control*. New York, NY: W. H. Freeman.

Bell, S. (2010). Project-based learning for the 21st Century: Skills for the future. *The Clearing House*, *83*(2), 39-43. doi: 10.1080/00098650903505415

Berkeley, S., Bender, W. N., Peaster, L.G., & Saunders, L. (2009). Implementation of response to intervention: A snapshot of progress. *Journal of Learning Disabilities, 42*(1), 85-95.

Browder, D., Mims, P. J., Spooner, F., Ahlgrim-Delzell, L, & Lee, A. (2009). Teaching elementary students with multiple disabilities to participate in shared stories. *Research & Practice for Persons with Severe Disabilities*, *33*(1-2), 3-12.

Bunch, G. C. (2013). Pedagogical language knowledge preparing mainstream teachers for English learners in the new standards era. *Review of Research in Education*, *37*(1), 298-341.

Caprara, G. V., Barbaranelli, C., Borgogni, L., & Steca, P. (2003). Efficacy beliefs as determinants of teachers' job satisfaction. *Journal of Educational Psychology*, *95*(4), 821.

Caprara, G. V., Barbaranelli, C., Steca, P. , & Malone, P. S. (2006). Teachers' self-efficacy beliefs as determinants of job satisfaction and students' academic achievement: A study at the school level. *Journal of School Psychology, 44*(6), 473-490.

Chatterji, M. (2002). Models and methods for examining standards-based reforms and accountability initiatives: Have the tools of inquiry answered pressing questions on improving schools? *Review of Educational Research, 72*(3), 345-386.

Cody, C., & Guskey, T. R. (1997). Professional development. In J. C. Lindle, J. M. Petrosko, & R. S. Pankratz (Eds.), *1996 Review of research on the Kentucky Education Reform Act (191-209).* Frankfort, KY: The Kentucky Institute for Education Research. Retrieved from http://www.lrc.ky.gov/lrcpubs/research_reports.htm

Creswell, J., & Garrett, A. (2008). The "movement" of mixed methods research and the role of educators. *South African Journal of Education, 28*(3), 321–333.

Creswell, J., & Plano Clark, V. (2007). *Designing and conducting mixed methods research*. Thousand Oaks, CA: Sage.

Denscombe, M. (2007). *Good research guide*. New York, NY: Open University Press.

Dellinger, A. (2001). *A study of the measurement and sources of teachers' self and collective efficacy beliefs in professional learning environments.* (Doctoral dissertation). Available from ProQuest Dissertation and Theses database. (UMI No. 3221424)

Dellinger, A. B., Bobbett, J. J., Olivier, D. F., & Ellett, C. D. (2008). Measuring teachers' self-efficacy beliefs: Development and use of the TEBS-Self. *Teaching and Teacher Education, 24*(3), 751-766. doi:10.1016/j.tate.2007.02.010

Darling-Hammond, L. (2000). Reforming teacher preparation and licensing: Debating the evidence. *Teachers College Record, 102(1*), 28.

De Lisle, J. (2011). The benefits and challenges of mixing methods and methodologies: Lessons learnt from implementing qualitatively led mixed methods research designs in trinidad and tobago. *Caribbean Curriculum, 18,* 87-120.

Demulder, E. K., & Rigsby, L. C. (2003). Teachers' voices on reflective practice. *Reflective Practice*, *4*(3), 267-290.

Dimitrov, D., & Rumrill, P. (2003) Pretest-posttest designs and measurement of change. *Work, 20*, 159-165.

Eden, S., Shamir, A., & Fershtman, M. (2013). Making a difference: Using laptops as a support for spelling improvement among students with learning disability. In A. Shamir & O. Korat (Eds.), *Technology as a support for literacy achievements for children at risk* (pp. 199-209). Dordrecht, The Netherlands: Springer Publishing.

Edgar, L. (2014). *How do the benefits of arts education manifest and develop? a case study of teachers who have completed the ACE: Arts and Culture course at the University of the Witwatersrand's School of Education* (Doctoral dissertation). Retrieved from http://hdl.handle.net10539/13340

Editorial Projects in Education Research Center. (2013). *Findings from a national survey of teacher perspectives on the common core.* Bethesda, MD: Author. Retrieved from http://www.edweek.org/media/epe_survey_teacher_perspctives_common_core_2013.pdf

Eerola, P. S., & Eerola, T. (2014). Extended music education enhances the quality of school life. *Music Education Research*, *16*(1), 88-104. Retrieved from http://www.tandfonline.com.proxy.library.msstate.edu/doi/pdf/10.1080/14613808.2013.829428

Ehren, B., Blosser, J., Roth, F., Paul, D., & Nelson, N. (2012, April 3). Core Commitment. *The ASHA Leader*. Retrieved from http://www.asha.org/Publications/leader/2012/120403/Core-Commitment/

Etscheidt, S. (2012). Complacency with access and the aggregate? Affirming an individual determination of educational benefit under the individuals with disabilities education act. *Journal of Disability Policy Studies, 22*(4), 195-207. doi: 10.1177/1044207311410423

Evers, W. J., Brouwers, A., & Tomic, W. (2002). Burnout and self-efficacy: A study on teachers' beliefs when implementing an innovative educational system in the Netherlands. *British Journal of Educational Psychology*, *72*(2), 227-243.

Ewing, R. (2011). *The arts and Australian education: Realising potential*. Retrieved from http://research.acer.edu.au/aer/11/

Fine, J., Zygouris-Coe, V., Senokossoff, G., & Fang, Z. (2011). *Secondary teachers' knowledge, beliefs, and self-efficacy to teach reading in the content areas: Voices following professional development*. Paper presented at the Proceedings of the Tenth Annual College of Education and GSN Research Conference, Miami. Retrieved from: http://scholar.google.com/scholar?hl=en&q=Fine%2C+J.%2C+Zygouris-Coe%2C+V.%2C+Senokossoff%2C+G.%2C+%26+Fang%2C+Z.+%282011%29.+&btnG=&as_sdt=1%2C25&as_sdtp=

Fisher, D., Frey, N., & Alfaro, A. (2013). *The path to get there: A common core road map for higher student achievement across the disciplines.* New York, NY: Teacher College Press. Retrieved from http://books.google.com/books?hl=en&lr=&id=lTpW9XGccdcC&oi=fnd&pg=PR5&dq=Fisher,+D.,+Frey,+N.,+%26+Alfaro,+A.+(2013).+The+path+to+get+there&ots=IqNsbc-rFn&sig=VhezlwdpDSTp7WR2N5zZxzFNWmM#v=onepage&q&f=false

Florian, L. (2012). Preparing teachers to work in inclusive classrooms key lessons for the professional development of teacher educators from scotland's inclusive practice project. *Journal of Teacher Education, 63*(4), 275-285.

Fuchs, L., Fuchs, D., Compton, D., Powell, S., Seethaler, P., Capizzi, A. M., & Fletcher, P. (2006). The cognitive correlates of third-grade skill in arithmetic, algorithmic computation, and arithmetic word problems. *Journal of Educational Psychology, 98*(1), 29–43

Fuchs, D., Fuchs, L., & Stecker, P. (2010). The blurring of special education in a new continuum of general education placements. *Exceptional Children, 76*(3), 301-323.

Gentry, M. (1999). *Promoting student achievement and exemplary classroom practices through cluster grouping*: *A research-based alternative to heterogeneous elementary classrooms*. Storrs, CT: National Research Center on the Gifted and Talented.

Gibson, S., & Dembo, M. H. (1984). Teacher efficacy: A construct validation. *Journal of Educational Psychology, 76* (4), 569-582. Retrieved from: http://dx.doi.org/10.1037/0022-0663.76.4.569

Gist, M. E., & Mitchell, T. R. (1992). Self-efficacy: A theoretical analysis of its determinants and malleability. *Academy of Management Review, 17*, 183–211. doi:10.2307/258770

Graham, S., McKeown, D.; Kiuhara, S.,& Harris, K. (2012). A meta-analysis of writing instruction for students in the elementary grades. *Journal of Educational Psychology, 104*(4), 879-896. doi:10.1037/a0029185

Guskey, T. R. (1988). Teacher efficacy, self-concept, and attitudes toward the implementation of instructional innovation. *Teaching and Teacher Education, 4*, 63-69.

Guskey, T. R., & Passaro, P. (1994). Teacher efficacy: A study of construct dimensions. *American Educational Research Journal, 31*, 627-643. doi:10.2307/1163230

Guskey, T. R., & Sparks, D. (1996). Exploring the relationship between staff development and improvements in student learning. *Journal of Staff Development, 17*(4), 34-38.

Haager, D., & Vaughn, S. (2013). Common core state standards and students with learning disabilities: Introduction to the special issue. *Learning Disabilities Research & Practice, 28*, 1-4. doi:10.1111/ldrp.12000

Hadar, L. L., & Brody, D. L. (2013). The interaction between group processes and personal professional trajectories in a professional development community for teacher educators. *Journal of Teacher Education*, *64*(2), 145-161. doi:10.1177/0022487112466898

Hagelskamp, C., Brackett, M. A., Rivers, S. E., & Salovey, P. (2013). Improving classroom quality with the ruler approach to social and emotional learning: Proximal and distal outcomes. *American Journal of Community Psychology*, *51*(3-4), 530-543. doi: 10.1007/s10464-013-9570-x

Hamre, B., & Pianta, R.C. (2001). Early teacher-child relationships and trajectory of school outcomes through eighth grade. *Child Development, 72,* 625-638.

Henson, R. K. (2001). *Teacher self-efficacy: Substantive implications and measurement dilemmas.* ERIC Clearinghouse. Retrieved from http://www.uky.edu/~eushe2/Pajares/EREkeynote.PDF

Hirsh, S., & Killion, J. (2008). *The learning educator*. Oxford, OH: National Staff Development Council. Retrieved from http://books.google.com/books?id=FyEsS7yD2gIC&pg=PA163&dq=Hirsh,+S.+%26+Killion,+J.+(2008).+The+learning+educator.+Oxford,+OH:+National+Staff&hl=en&sa=X&ei=gbOSUcyl

Hora, M., & Ferrare, J. (2012). *Investigating the antecedents to instructors' self-efficacy for teaching: Implications for pedagogical reform* (WCER Working Paper No. 2012-1). Retrieved from University of Wisconsin–Madison, Wisconsin Center for Education Research website: http://www.wcer.wisc.edu/publications/workingPapers/papers.php

Hord, S., & Sommers, W. (2008). *Leading professional learning communities: Voices from research and practice.* Thousand Oaks, CA: Corwin and Oxford, OH: National Staff Development Council.

Hoy, W., & Woolfolk, A. (1993). Teachers' sense of efficacy and the organizational health of schools. *Elementary School Journal*, *93*, 356-372.

Iman, R. (1974). Use of a t-statistic as an approximation to the exact distribution of the Wilcoxon signed ranks test statistic. *Communications in Statistics, 3*(8), 795-806. doi:10.1080/03610927408827178

Individuals With Disabilities Education Act, 20 U.S.C. § 1400 (2004).

International Center for Leadership in Education (2011). *Fewer, clearer, higher common core state standards: Implications for students receiving special education services*. Rexford, NY: Author. Retrieved from http://www.leadered.com/pdf/Special%20Ed%20&%20CCSS%20white%20paper.pdf

Jackson, L. (2013). *Public housing relocation of older adults in atlanta: Challenging the aging in place concept*. (Thesis, Georgia State University) Retrieved from http://scholarworks.gsu.edu/sociology_theses/44/

Katsiyannis, A., Yell, M., & Bradley, R. (2001). Reflections on the 25th anniversary of the individuals with disabilities education act. *Remedial and Special Education, 22*, 324-334.

Kavale, K., & Spaulding, L. (2009). Is response to intervention good policy for specific learning disability? *Learning Disabilities Research and Practice, 23*, 169-179.

Lee, J. (2012). College for all: Gaps between desirable and actual p-12 math achievement trajectories for college readiness. *Educational Researcher, 41*(2), 43-55. doi:10.3102/0013189X11432746

Loucks-Horsely, S. & Sparks, D. (1989). Five models of staff development for teachers. *Journal of Staff Development,10*, 40-57.

Lunenburg, F. C. (2011). Self-Efficacy in the workplace: implications for motivation and performance. *International Journal of Management, Business, and Administration*, *14*(1), 1-6.

McLaughlin, M., & Overturf, B. J. (2013). *The Common Core: Teaching students in Grades 6-12 to meet the reading standards*. Newark, DE: International Reading Assoc. Retrieved from http://books.google.com/books?hl=en&lr=&id=MGhFs9wa-AIC&oi=fnd&pg=PR9&dq=McLaughlin,+M.,+%26+Overturf,+B.+J.+(2013).+The+Common+Core:+Teaching+students+in+Grades+6-12+to+meet+the+reading+standards&ots=Cw7OBtego-&sig=vvyOW5mRpuAHs5SOheEOsUfQcUU#v=onepage&q&f=false

Morrow, L. M., Gambrell, L. B., & Duke, N. K. (Eds.). (2011). *Best practices in literacy instruction*. New York: Guilford Press. Retrieved from http://books.google.com/books?id=SN-mpUVgvx4C&pg=PA62&dq=Morrow,+L.+M.,+Gambrell,+L.+B.,+%26+Duke,+N.+K.+(Eds.).+(2011).+Best+practices+in+literacy&hl=en&sa=X&ei=j0hRVIOMHoaBsQSdkoDQDQ&ved=0CCgQ6AEwAA#v=onepage&q=Morrow%2C%20L.%20M.%2C%20Gambrell%2C%20L.%20B.%2C%20%26%20Duke%2C%20N.%20K.%20(Eds.).%20(2011).%20Best%20practices%20in%20literacy

National Governors Association Center for Best Practices & Council of Chief State School Officers. (2010). Common Core State Standards: English language arts. Washington, DC: Author. Retrieved from http://www.corestandards.org/assets/CommonCoreReport_6.10.pdf

National Reading Panel (US), National Institute of Child Health, & Human Development (US). (2000). *Report of the national reading panel: Teaching children to read: An evidence-based assessment of the scientific research literature on reading and its implications for reading instruction: Reports of the subgroups.* Washington, D.C.: Author. Retrieved from: http://scholar.google.com.proxy.library.msstate.edu/scholar?q=Teaching+Children+to+Read+the+National+Reading+Panel+Report&hl=en&as_sdt=0,25

No Child Left Behind (NCLB) Act of 2001, Pub. L. No. 107-110, § 115, Stat. 1425 (2002).

Ohanian, S. (1999). *One size fits few: The folly of educational standards*. Portsmouth, NH: Heinemann.

Onwuegbuzie, A., & Leech, N. (2006). Enhancing the interpretation ofsignificant findings: The role of mixed methods research. *The Qualitative Report, 9*(4), 770–792.

Pacheco, M. (2010). English-language learners' reading achievement: Dialectical relationships between policy and practices in meaning-making opportunities. *Reading Research Quarterly, 45*, 292–317.

Pajares, F. (1992). Teachers' beliefs and education research: Cleaning up a messy construct. *Review of Educational Research, 62*, 307-332. doi:10.2307/1170741

Pajares, F. (1996). Self-efficacy beliefs in academic settings. *American Education Research Association, 66,* 543-578. doi:10.2307/1170653

Pajares, F. (1997). Current directions in self-efficacy research. In L. Maehr and P. Pintrich (Eds.), *Advances in motivation and achievement* (1-49). New York, NY: JAI Press. Retrieved from http://books.google.com/books/about/Advances_in_Motivation_and_Achievement.html?id=InhRAAAAYAAJ

Parpart, M. (1995). C*luster grouping students in the regular classroom: Barriers to success.* Charlottesville, NC: Prufrock Press.

Perry, T., & Manery, R. (201 1). *Supporting students in a time of core standards*. Urbana, IL: National Council of Teachers of English.

Quigney, T. A. (2009). The status of special education teachers at the secondary level: Effects of the "highly qualified teacher" standard. *American Secondary Education, 37*(2), 49-61.

Ross, J., & Bruce, C. (2007). Professional development effects on teacher efficacy: Results of randomized field trial. *The Journal of Educational Research, 101*, 50-60.

Rubin, H. J., & Rubin, I. S. (2011). *Qualitative interviewing: The art of hearing data*. Thousand Oaks, CA: Sage.

Sackett, D. L. (1979). Bias in analytic research. *Journal of Chronic Diseases*, *32*(1), 51-63.

Santos, M., Darling-Hammond, L., & Cheuk, T. (2012). *Teacher development to support English language learners in the context of common core state standards*. Palo Alto, CA: Stanford University. Retrieved from http://ell.stanford.edu/sites/default/files/pdf/academic-papers/10-Santos%20LDH%20Teacher%20Development%20FINAL.pdf

Skaalvik, E. M., & Skaalvik, S. (2010). Teacher self-efficacy and teacher burnout: A study of relations. *Teaching and Teacher Education*, *26*(4), 1059-1069.

Schon, D. A. (1983). *The reflective practitioner: How professionals think in action*. New York: Basic Books.

Segool, N., Carlson, J., Goforth, A., Von Der Embse, N., & Barterian, J. (2013). Heightened test anxiety among young children: Elementary school students' anxious responses to high-stakes testing. *Psychology in the Schools*, *50*(5), 489-499. doi: 10.1002/pits.21689

Shadish, W., Cook, T., Campbell, D. (2002). *Experimental and quasi-experimental designs for generalized causal inference,* (2nd ed.). Sydney, NSW, Australia: Cengage Learning.

Shute, V. J., & Kim, Y. J. (2014). Formative and stealth assessment. In *Handbook of research on educational communications and technology* (pp. 311-321). New York: Springer. Retrieved from http://scholar.google.com/scholar?hl=en&q=Shute%2C+V.+J.%2C+%26+Kim%2C+Y.+J.+%282014%29.+Formative+and+stealth+assessment&btnG=&as_sdt=1%2C25&as_sdtp=

Skaalvik, E. M., & Skaalvik, S. (2010). Teacher self-efficacy and teacher burnout: A study of relations. *Teaching and Teacher Education*, *26*(4), 1059-1069.

Stephens, T., & Braun, J. (1990). Measures of regular classroom teachers' attitudes toward handicapped children. *Exceptional Children, 46*, 292-294.

Tashakkori, A., & Teddlie, C. (1998). *Mixed methodology: Combining qualitative and quantitative approaches*. Thousand Oaks, CA: Sage.

Tomlinson, C.A., & McTighe, J.A. (2006). *Integrating differentiated instruction and understanding by design: Connecting content and kids*. Alexandria, VA: Association for Supervision and Curriculum Development.

Tomlinson, C. A. (2014). *Differentiated classroom: Responding to the needs of all learners*. Alexandria, VA: ASCD. Retrieved from http://books.google.com/books?hl=en&lr=&id=CLigAwAAQBAJ&oi=fnd&pg=PP1&dq=positive+classroom+climate+and+the+arts+and+music+and+special+education&ots=AekjqJndrt&sig=HtXfn0pXu3dHhsnTuuvODkswUMc#v=onepage&q&f=false

Tomlinson, S. (2010). *A Sociology of Special Education.* London: Routledge. Retrieved from http://scholar.google.com/scholar?q=Tomlinson%2C+S.+%282010%29.+A+Sociology+of+Special+Education+RLE+edu+m&btnG=&hl=en&as_sdt=0%2C25&as_ylo=2010

Tschannen-Moran, M., & Johnson, D. (2011). Exploring literacy teachers' self-efficacy beliefs: Potential sources at play. *Teaching and Teacher Education, 27*(4), 751-761.

Tschannen-Moran, M., Woolfolk-Hoy, A., & Hoy, W. (1998). Teacher efficacy: Its meaning and measure. *Review of Educational Research, 68*, 202–248.

Tschannen-Moran, M., & Hoy, A. W. (2001). Teacher efficacy: Capturing an elusive construct. *Teaching and Teacher Education, 17*(7), 783-805.

Wagner, T. (2004). The challenge of change leadership. *Education Week*, 24(9), 40-41.

Watters, J. J., & Ginns, I. S. (1997). *Impact of course and program design features on the preparation of preservice elementary science teachers*. Paper presented at the Annual Meeting of the National Association of Research in Science Teaching, Chicago. Retrieved from ERIC database (ED408267)

Wenglinsky, H. (2005). Technology and achievement: The bottom line. *Educational Leadership*, *63*(4), 29. Retrieved from http://imoberg.com/files/Technology_and_Achievement_--_The_Bottom_Line_Wenglinsky_H._.pdf

Wolcott, H. F. (1994). *Transforming qualitative data: Description, analysis, and interpretation*. Thousand Oaks, CA: Sage.

Woolfolk, A. E., & Hoy, W. K. (1990). Prospective teachers' sense of efficacy and beliefs about control. *Journal of Educational Psychology*, *82*(1), 81.

Zygouris-Coe, V. (2012). Disciplinary literacy and the common core state standards. *Top Language Disorders, 32,* 35-50.

APPENDIX A

IRB APPROVAL

Jon Cash
169 Bolivar Trail
Saltillo, MS 38866

RE: HRPP Study #13-164: Middle School Teachers Self-efficacy Beliefs in Implementing Common Core State Standards for Students with Special Needs

Dear Mr. Cash:

This email serves as official documentation that the above referenced project was reviewed and approved via administrative review on 6/11/2013 in accordance with 45 CFR 46.101(b)(1). Continuing review is not necessary for this project. However, in accordance with SOP 01-03 Administrative Review of Applications, a new application must be submitted if the study is ongoing after 5 years from the date of approval. Additionally, any modification to the project must be reviewed and approved by the HRPP prior to implementation. Any failure to adhere to the approved protocol could result in suspension or termination of your project. The HRPP reserves the right, at anytime during the project period, to observe you and ! the additional researchers on this project.

Please note that the MSU HRPP is in the process of seeking accreditation for our human subjects protection program. One of these changes is the implementation of an approval stamp for consent forms. The approval stamp will assist in ensuring the HRPP approved version of the consent form is used in the actual conduct of research. Your stamped consent form will be attached in a separate email. **You must use copies of the stamped consent form for obtaining consent from participants.**

Please refer to your HRPP number (#13-164) when contacting our office regarding this application.

Thank you for your cooperation and good luck to you in conducting this research project. If you have questions or concerns, please contact me at nmorse@research.msstate.edu or call 662-325-3994.

Finally, we would greatly appreciate your feedback on the HRPP approval process. Please take a few minutes to complete ou! r survey at http://www.surveymonkey.com/s/YZC7QQD.

Sincerely,

Nicole Morse, CIP
Assistant Compliance Administrator

7684Na89

APPENDIX B

PERMISSION TO USE THE TEBS-S

Hello Jon,

I give permission for you to use the TES-S for your work. I would like to know more about it. Since your 'tasks' are going to be specific to common core standards, then you may need to do some adaptation to the instrument. If you have something, like a proposal, already written, I'd like to read it.

Amy

Owner and Principal Consultant

D.A.T.A., LLC

APPENDIX C

THE TEBS-S

TEBS-Self (Dellinger, 2008, p. 764) Response scale Item Right now in my present teaching situation, the strength of my personal beliefs in my capabilities to 1 2 3 4:

1. Weak beliefs in my capabilities
2. Moderate beliefs in my capabilities
3. Strong beliefs in my capabilities
4. Very strong beliefs in my capabilities

1. plan activities that accommodate the range of individual differences among my students 1 2 3 4
2. plan evaluation procedures that accommodate individual differences among my students 1 2 3 4
3. use allocated time for activities that maximize learning 1 2 3 4
4. Effectively manage routines and procedures for learning tasks 1 2 3 4
5. clarify directions for learning routines 1 2 3 4
6. maintain high levels of student engagement in learning tasks 1 2 3 4
7. redirect students who are persistently off task 1 2 3 4
8. maintain a classroom climate of courtesy and respect 1 2 3 4
9. maintain a classroom climate that is fair and impartial 1 2 3 4
10. communicate to students the specific learning outcomes of the lesson 1 2 3 4
11. communicate to students the purpose and/or importance of learning tasks 1 2 3 4
12. implement teaching methods at an appropriate pace to accommodate differences among my students 1 2 3 4

13. utilize teaching aids and learning materials that accommodate individual differences among my students 1 2 3 4

14. provide students with opportunities to learn at more than one cognitive and/or performance level 1 2 3 4

15. communicate to students content knowledge that is accurate and logical 1 2 3 4

16. clarify student misunderstandings or difficulties in learning 1 2 3 4

17. provide students with specific feedback about their learning 1 2 3 4

18. provide students with suggestions for improving learning 1 2 3 4

19. actively involve students in developing concepts 1 2 3 4

20. solicit a variety of questions throughout the lesson that enable higher order thinking 1 2 3 4

21. actively involve students in critical analysis and/or problem solving 1 2 3 4

22. monitor students' involvement during learning tasks 1 2 3 4

23. adjust teaching and learning activities as needed 1 2 3 4

24. manage student discipline/behavior 1 2 3 4

25. involve students in developing higher order thinking skills 1 2 3 4

26. motivate students to perform to their fullest potential 1 2 3 4

27. provide a learning environment that accommodates students with special needs 1 2 3 4

28. improve the academic performance of students, including those with learning disabilities 1 2 3 4

29. provide a positive influence on the academic development of students 1 2 3 4

30. maintain a classroom environment in which students work cooperatively 1 2 3 4

31. successfully maintain a positive classroom climate 1 2 3 4

APPENDIX D

4C INSTITUTE TOPICS EACH DAY

Day	Topic
1	Overview of the Professional Community
2	Conscious Discipline: Getting the brain ready for learning
3	Cooperation/Collaboration: The Basis of CC
4	ELA Common Core Overview
5	Curriculum Mapping
6	Teaching Literacy with Common Core Standards
7	Middle School Reading and Common Core
8	Common Core and Writing
9	Common Core: Math and Literacy
10	CCSS and Students with Special Needs
11	Common Core Content Connections and the Arts
12	ELA/literacy Connections to Social Studies
13	Assessment with Common Core
14	Common Core Make and Take

15	Technology and ELA/literacy connections
16	Whole School Institute- The Arts
17	Whole School Institute- The Arts
18	Whole School Institute- The Arts
19	Implementing Common Core Across the Curriculum
20	Wrapping Up the Institute

APPENDIX E

LIST OF INTERVIEW TOPICS

Topics for Open-ended Interviews

1. Beliefs about abilities to implement common core state standards for students with special needs before the workshops.
2. Describe experiences teaching children with special needs in the classroom.
3. Implementing CCSS for students with special needs experiences.
4. Monitoring feedback for students in the classroom.
5. Accommodating individual differences in the classroom.
6. Classroom structure.
7. How the professional development will influence practice.
8. Thoughts about our day on special needs.
9. The days in the workshop where the teacher learned about implementing CCSS for students with special needs
10. Key ideas the workshop emphasized about students with special needs
11. Describe experiences with a special needs student in the past to learn in the content areas. How would work with that student change now. Explain what changed thinking.
12. Describe the self-efficacy beliefs survey, what it gathers, and why that might be important.