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Principal/Instructional Leader Support for Teachers Through Mastery Experiences: A Mixed Methods Study of Teacher Self- Efficacy

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To the Graduate Council:

I am submitting herewith a dissertation written by Larry S. Calahan entitled "Principal/ Instructional Leader Support for Teachers Through Mastery Experiences: A Mixed Methods Study of Teacher Self-Efficacy." I have examined the final electronic copy of this dissertation for form and content and recommend that it be accepted in partial fulfillment of the requirements for the degree of Doctor of Philosophy, with a major in Education.

Pamela Angelle, Major Professor

We have read this dissertation and recommend its acceptance:

Mary Lynne Derrington, Sonya Hayes, Jo Ann Cady

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Vice Provost and Dean of the Graduate School

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Principal/Instructional Leader Support for Teachers Through Mastery Experiences:
A Mixed Methods Study of Teacher Self-Efficacy

A Dissertation Presented for the
Doctor of Philosophy
Degree
The University of Tennessee, Knoxville

Larry S. Calahan
May 2019

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DEDICATION

This dissertation is dedicated to my God and wonderful family

...to my amazingly patient and beautiful wife, McGhie. You've always encouraged me to be big and supported me when it wasn't always easy. Thank you for staying by my side in good times and bad, in sickness and in health, for richer or poorer. You are my best friend and I am forever grateful you chose me.

...to my beautiful children, Gracie, Sutton, and Julius. This has been a long and difficult process on everyone and I have done my best not to sacrifice time with you. Thank you for being an inspiration to persevere and finish. I am so proud to be your father and look forward to watching each of you accomplish great things.

...to my mom and dad, Larry and Debbie Calahan. Your example, guidance, and love have always been the cornerstone of everything I've endeavored. Dad, you taught me to "do the job right" and "never quit". Both lessons have been invaluable throughout this process. Mom, you taught me to be kind, compassionate, and forgiving. Without these remarkable traits, I would have never survived this journey.

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These words are inadequate in expressing my true gratitude for all the love and support I have received throughout the writing of this dissertation. Truly, no one has touched this document save Dr. Pamela Angelle and myself, but each of you have given me the strength, courage, perseverance, encouragement, and humility to finish and for that you deserve all of the credit.

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ABSTRACT

This mixed method study examined the influence of mastery experience opportunities as principal support from teachers' perceptions of their teacher efficacy. This study examined whether mastery experiences, provided through teacher support, influences teacher efficacy, providing a picture of how efficacy is developed and supported by instructional leaders and guided by Bandura's (1995, 1997) theory. This study was executed in a small rural southeastern United States school district in three phases. Phase 1 included the administration of the *Teacher Self-efficacy Survey* (Woolfolk-Hoy & Tschanen-Moran's, 2001) at three sites, as baseline data. Phase 2 included the pre-intervention *Teacher Self-efficacy Survey* (Woolfolk-Hoy & Tschanen-Moran's, 2001) administered to teachers (N = 5) volunteering to participate in the mastery experience opportunity. After completing the mastery experience, teachers were interviewed and given a post-intervention *Teacher Self-efficacy Survey* (Woolfolk-Hoy & Tschanen-Moran's, 2001) for phase 3 of the study.

Data analysis yielded elements that suggested the mastery experience opportunity had a positive impact on teacher responses to the TSES as well as a perceived influence on teacher efficacy through interview responses and observation. The findings of this research study support Bandura's (1997) theory that mastery experiences are influential to the development of efficacy beliefs. The teachers participating in the mastery opportunity experience expressed that the immediate feedback, positive and constructive feedback, and feedback in the classroom setting were specific elements of the mastery experience that influenced their perception of teacher efficacy. This also supports Bandura's (1997) theory that mastery experiences are most influential on self-efficacy. Moreover, increased efficacy provided needed perseverance and

resiliency to the individual when developing or improving a new skill. Finally, a model for mastery experience opportunity was provided that could be utilized to support instructional leaders as they assist teachers in ways that improve teacher efficacy.

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CHAPTER 1

INTRODUCTION TO THE STUDY

In classrooms and schools across the world, teachers are influencing student achievement. Research has shown that teachers possessing specific behaviors or characteristics, such as student-time-on-task, research-based practices, and differentiated instruction can increase student achievement (Hanushek, 1986; Rivers & Sanders, 2002; Rockoff, 2003) and play a major role in the success or lack of success in their students. Studies have also stressed the importance of principal's influence on teachers (Hart, 1992; Sergiovanni & Starratt, 1979) through supports provided to the teacher (Goldring, Huff, May, & Camburn, 2008). Leithwood, Seashore Louis, Anderson, and Wahlstrom (2004) emphasized this by noting that, "The principal is second only to the teacher in terms of impact on student learning" (p. 5).

Coaching opportunities, or specific events in which a principal helps a teacher develop teaching skills, have been identified as contributing to the success of teacher growth (Danielson & McGreal, 2000; Darling-Hammond, 2013; Marzano & Toth, 2013; Noland & Hoover, 2011; Sullivan & Glanz, 2005). Closely tying feedback from observation to coaching opportunities where teachers develop the deficient skill(s) provides potential growth in the teacher's self-efficacy through successful execution of the skill, also called mastery experiences (Bandura, 1993, 1997; Woolfolk-Hoy, 2000).

A factor in the improvement of skills is the level of self-efficacy with which the individual attributes to the specific skill. In other words, a person's level of self-efficacy, or the belief one has in oneself for completing a specific task or goal (Bandura, 1977a), will influence their motivation to take on difficult tasks (such as improving a specific teaching strategy), set

goals towards completing the task, and approach the task with the necessary resiliency when faced with setbacks encountered during the task (Bandura, 1997).

Mastery experiences, an essential component for positive self-efficacy (Bandura, 1993, 1997; Woolfolk-Hoy, 2000) are opportunities for an individual to practice, refine, and correct skills necessary to realize a specific outcome. By embedding mastery experiences throughout instructional coaching where the teacher can develop and master skills needed to be effective in the classroom, teachers' self-efficacy will be influenced (Bandura, 1977; Bandura, 1997; Darling-Hammond, Wise, & Pease, 1983; Gawande, 2011, Joyce & Showers, 2002). Because teaching is a profession that requires an array of skill acquisition (Danielson, 2007; Danielson & McGreal, 2000; Darling-Hammond, 2013), a teacher's level of self-efficacy is important for both acquiring and refining necessary pedagogical skills (Bandura, 1977b, 1995, 1997). Bandura (1997) stated, "People also need to master the specialized technical skills of their chosen occupation... vital to the fulfillment of one's occupational role and management of one's career" (p. 440).

Statement of the Problem

Teachers directly impact student achievement through pedagogical (Rockoff, 2003) and social interactions. Principals directly impact teachers through professional and personal interactions (DuFour, 2015; Tschannen-Moran, 2014). One area of research that has demonstrated an impact on teacher performance and student achievement is teacher efficacy (Armor, Conry-Oseguera, Cox, King, McDonnell, Pascal, Pauly, & Zellmen, 1976; Ashton & Webb, 1986; Bandura, 1997; Tschannen-Moran & Barr, 2004). Principals have the ability to impact individual and collective teacher efficacy through strong leadership, listening to teachers,

and promoting innovative teaching (Newman, Rutter, & Smith, 1989). Conclusions of Ebmeier's (2003) study suggested "the behaviors of the school principal play important roles in the development of teacher efficacy" (p. 140). Supportive principal behaviors address the role of school climate supervisor by creating a positive school culture as well as the role of instructional leader by increasing teacher efficacy (Hipp & Bredeson, 1995; Hoy & Woolfolk, 1993). Coldarci (1992) found that strong instructional leadership by the principal increases teachers' instructional efficacy. Findings from Ebmeier (2003) indicated an "indirect linkage between supervision and personal teaching efficacy" (p. 140).

If teacher efficacy helps teachers attempt, persevere, and improve new teaching strategies (Bandura, 1977; 1997) that could help improve their pedagogical skills to impact student learning and achievement (Danielson, 1997; Danielson & McGreal, 2000; Darling-Hammond, 2013), then further research that provides an understanding of the influence principals as instructional leaders have on teacher self-efficacy is needed (Ebmeier, 2003; Tschannen-Moran, Woolfolk-Hoy, & Hoy, 1998). Hoy and Woolfolk (1993) said of the need for further research, "Given the apparent value of teachers' sense of efficacy, it is surprising that little is known about how to develop or support efficacy" (p. 356). Principals, as instructional leaders, can provide instructional supports to teachers for skill improvement. Research has called for additional studies to investigate which principal supports have the greatest influence on teacher efficacy (Ellett & Teddlie, 2003). Tschannen-Moran, Woolfolk-Hoy, and Hoy (1998) used Bandura's four factors influencing self-efficacy in their study of influences on teacher self-efficacy and called for further research on "what kind of feedback is effective in altering self-efficacy for teaching" (p. 239). These researchers also requested additional research into "the role of social

support in developing and modifying teacher efficacy, and how does this factor fit into Bandura's four-sources-of-efficacy scheme” (p. 240).

Tschannen-Moran, Woolfolk-Hoy, and Hoy (1998) also called for more teacher self- efficacy research to include differing methodologies when they posited, “Qualitative studies of teacher efficacy are overwhelmingly neglected” (p. 242). They also expressed the value of utilizing methodologically different approaches to teacher self- efficacy research when they stated, “Qualitative research could explore what events and influences teachers attribute to the development of their efficacy beliefs” and “Interviews and observational data can provide a thick, rich description of the growth of teacher efficacy” (p. 242). They also explained the need for “interpretive case studies and qualitative investigations... to refine our understanding of the process of developing efficacy” (p. 242).

Henson (2001) requested further study into “the advancement of teacher efficacy” and more research “into the next stage of its developmental life” to “be fostered by empirical evaluation of the sources of efficacy building information” (p. 32). As Klassen, Tze, Betts, and Gordon (2011) observed, “insufficient attention has been paid to the sources of teacher’s self- efficacy and our understanding of teacher efficacy has suffered as a result” (p. 39). Recent research conducted by Tschannen-Moran and McMaster (2009) only weakly supported the effects of the hypothesized sources on teachers' self- efficacy beliefs (affective states, verbal persuasion, vicarious learning, and mastery experiences) and further research in the area is clearly needed.

As the principal’s supportive role of teachers plays a greater factor in teacher efficacy, Tschannen-Moran and Woolfolk-Hoy (2001) suggested further research on “What leadership

behaviors on the part of the principal make a difference [in the development of teacher efficacy]” and “what structural features and supports make a difference in the formation of efficacy beliefs” (p. 802). More specifically, Tschannen-Moran and Woolfolk-Hoy (2006) requested, “More research into important sources of efficacy information that would tap the relative weight of vicarious experiences, verbal persuasion, mastery experiences, physiological arousal and contextual factors would be of great value as we attempt to learn how to better train and equip teachers for their complex tasks” (p. 954).

As evidenced by the call for further research, the influence of mastery experiences presented to teachers as a support for teacher efficacy needs more investigation. The intent of this study is to answer the call for further research from Tschannen-Moran and Woolfolk-Hoy and to add to the base of knowledge in teacher self-efficacy currently established.

Purpose of the Study

The purpose of this study was to investigate the influence of the inclusion of mastery experience by principals as a form of support for teachers and teacher efficacy through a mixed methods study. Current research validates the importance of mastery experiences to teacher efficacy (Tschannen-Moran & Woolfolk-Hoy, 2006). More specifically, this study sought to understand teachers’ perceived influence on their efficacy from mastery experiences provided by principals through instructional support.

Research Questions

The following questions will guide this study:

1. Do mastery experiences, as supported by instructional leaders, influence teacher efficacy (Quantitative)?

2. How do teachers' perceive that mastery experiences provided by an instructional leader influence their teacher efficacy (Qualitative)?

Significance of the Study

Because principals are charged with so many responsibilities, principal's support of teachers through instructional leadership is paramount. By examining whether mastery experiences provided as teacher support influences teacher efficacy, a picture of how efficacy is developed and supported by instructional leaders might be provided. By garnering teachers' perspectives of mastery experiences, this study may add a rich description of efficacy development and how mastery experiences influence teacher efficacy. Current research is limited by a lack of practical application of mastery experiences in teaching scenarios that might be used to provide researchers with better understanding of the factors impacting the development of teacher efficacy.

A clearer understanding of the factors impacting the development of teacher efficacy might provide insight to state, local, and building administrators on enhanced teacher supports that impact teacher productivity. Understanding how mastery experiences influence the development of teacher efficacy could assist in knowing where to best allocate resources or provide professional development to instructional leaders to make teacher supports more efficient. Also, identifying the influence mastery experiences have on teacher efficacy might allow for a more efficient or effective model of evaluation where instructional leaders might couple evaluation data with mastery experiences for improved instructional practices.

Definition of Terms

This section will define those terms specific to fully understanding the scope of the proposed study. Some terms and concepts have multiple meanings; I will define these terms as they pertain specifically to this study. The following terms and concepts have been chosen for the use in this study.

1. *Self-Efficacy*: Self-efficacy is a fluid concept of one's belief in one's ability to accomplish a specific task or goal. Self-efficacy is fluid in the aspect that self-efficacy does not always transcend events (Bandura, 1997).
2. *Teacher Efficacy*: Teacher efficacy is derived from, but separate from, self-efficacy. Ashton (1985) defines teacher efficacy as "teachers belief in their ability to have a positive effect on student learning" (p. 142). Guskey and Passaro (1994) believe it is the "belief or conviction" that a teacher can influence even the difficult students to learn (p. 628). For the purpose of this study, teacher efficacy and teacher self-efficacy will be used synonymously.
3. *Principal*: The principal is the individual placed in the position of management and supervision of a school. The principal may have many responsibilities, one of which could be instructional leader. Other administrators may also be considered the principal (e.g. assistant principal, lead teacher, master teacher, instructional supervisor).
4. *Instructional Leader*: The individual(s) in a school/ system charged with improving the instructional practices of teachers under their charge, but not necessarily the principal.

Delimitations

Simon (2011) defines delimitations as those characteristics of the study set by the researcher that limits or sets boundaries for the study. The following delimitations set the boundaries for this study. First, the study will be limited to high schools in rural school districts located in one southeastern US state, using a mixed methods approach (see Chapter 3, Methodology). The findings of this study should not be generalized to the middle and elementary schools because of the unique nature of pedagogy at the various levels. The findings may only be generalizable to teachers and schools with similar socioeconomic and other demographic factors. The small sample size of this study prevents the research findings from being generalized to larger schools not within the demographic parameters of the participating site schools. Also, the selection process for the school districts and high schools is limited to accessibility and conditional to permission from system directors. Finally, the role of instructional leader will be limited to the principal of the school.

Conclusion

Chapter 1 introduced this study with the statement of the problem of the perceived impact of mastery experiences on teachers' self-efficacy as well as explaining the purpose of the study, understanding the perceptions of teacher self-efficacy associated with the influence of mastery experiences on improving teacher instruction at 3 high schools in a rural school systems of East Tennessee. Chapter 1 also provided the research questions guiding this study that point to the significance of the study which is providing opportunities for state, local, and building level personnel to evaluate the teacher supports employed in their schools for discernment of teacher

efficacy. The delimitations of this study were outlined as well as key terms defined in reference to their use in this study.

Organization of the Study

Chapter 2 will discuss, in more detail, principal supports and the development of self-efficacy as an applied theory in social science. Chapter 2 will provide an in-depth review of pertinent literature as it relates to principal supports and self-efficacy. Chapter 3 will explain the methodology and procedures used in this mixed methods study. Chapter 4 will contain a presentation of the findings. In Chapter 5, the study will conclude with a discussion of the findings and implications of the findings for future research.

CHAPTER 2

REVIEW OF THE LITERATURE

This research addressed the extent to which teacher self-efficacy is influenced by principal supports, specifically mastery experiences. The research was guided by the following research questions:

1. Do mastery experiences, as supported by instructional leaders, influence teacher efficacy (Quantitative)?
2. How do teachers' perceive that mastery experiences provided by an instructional leader influence their teacher efficacy (Qualitative)?

This chapter begins with a summation of the search process in this review of literature. The literature review will give an historical perspective of the principalship and responsibilities of a principal. Next, the literature review will provide a background of the theoretical framework by describing Bandura's theory of self-efficacy as well as the development of self-efficacy and teacher efficacy over time and conclude with a review of empirical literature of principal supports and teacher efficacy.

The Search Process

Search for the literature used for this review began with a broad search of multiple databases in The University of Tennessee library using the key words *efficacy*, *self-efficacy*, *teacher efficacy*, and *principal roles as teacher support*. These searches were limited to peer-reviewed articles and books. As articles were read, common citations were discovered and more specific searches for the articles cited in the same databases were conducted. Seminal pieces of literature pertaining to self-efficacy were found using similar database searches. Another search

was conducted using Google Scholar for authors and researchers common to citations in multiple articles associated with these key words. Finally, for the most current article releases associated with self-efficacy, teacher self-efficacy, and principal roles an alert was created on Google Scholar to send citations of recently released peer-reviewed articles on teacher evaluation and teacher self-efficacy.

The literature review process began with identified peer-reviewed articles and books relating to teacher supports, teacher professional development through evaluation, self-efficacy, teacher efficacy, and teacher motivation. As articles and books were read, annotations related to Bandura's (1977, 1995, 1997) four influential factors on self-efficacy were placed in a separate word document. Notes and highlights of articles were summarized in the word document for extraction while writing the literature review. Common phrases from the articles were collected and used as headings in the review. These phrases also aided in the review and collection of more current articles found through a Google Scholar alert on principal roles as teacher supports and teacher efficacy.

Principal Support

An important role undertaken by principals is that of teacher support (Gaines, 2011). Levels of principal support are linked to teacher burnout (Gaines, 2011), motivation (Ulriksen, 1996), retention, and effectiveness in the classroom. Principal supports can include teacher development through instructional support, emotional support, and managerial support (Drake & Roe, 1999). Other studies indicated principals have an indirect effect on student achievement by influencing supports of school culture, teacher work conditions, organizational or management conditions, and instructional quality (Marzano, Waters, McNulty, 2005; Supovitz, Sirinides, &

May, 2010; Wahlstrom & Louis, 2008). Principal instructional supports might affect teacher instructional quality whereas principals emotional support of teachers might affect teacher working conditions and the overall school culture. Also, principal support of teachers through managerial responsibilities might impact the organization and management conditions of the school having an indirect effect on student and teacher achievement. Hallam, Smith, Hite, Hite, and Wilcoc (2015) said teachers and school leaders have a greater chance for success if “creating and supporting high-quality teaching is their utmost priority” (p. 193). A primary role of the principals is to create and support high-quality teaching instructionally, managerially, and emotionally (Drake & Roe, 1999).

Teacher Development through Instructional Support

Principal supports have been linked to high-quality teaching through teacher growth and professional development (Blase, 1987; Littrell, Billingsley, & Cross, 1994). High-quality teaching has been empirically linked to student achievement (Darling-Hammond, 1999; Harris & Sass, 2011). Principals may support teacher development by recognizing and meeting the instructional needs of individual teachers (Sergiovanni & Starratt, 1979). Instructional support was defined by Littrell, Billingsley, and Cross (1994) as, “useful information that they [teachers] can use to improve classroom practice” (p. 298) such as in-service opportunities, pedagogical suggestions, and classroom management advice. For example, a principal may observe a teacher with students who are unruly or inattentive. Because the students are not receiving instruction from the teacher due to poor classroom management strategies, the principal may then provide specific professional development in classroom management to help that teacher become more effective with those students. Instructional supports come in a variety of formats. One

commonly used instructional support is teacher evaluation (Ellett & Teddlie, 2003; Nolan, Jr. & Hoover, 2011; Sullivan & Glanz, 2005). According to Cosner, Kimball, Barkowski, Carl, and Jones (2015) the principal has been and continues to lead and oversee the evaluation of teachers in the school. The evaluation process can be used to identify areas of instruction that might, if improved, allow the teacher to be more effective. Conversely, the evaluation process might also identify and reinforce an instructional strategy already utilized by the teacher that allows them to be effective (Darling-Hammond, Wise, & Pease, 1983; Ellett, 1985, 1987; Millman & Darling-Hammond, 1990; Nolan, Jr. & Hoover, 2011; Scriven, 1988; Sullivan & Glanz, 2005).

Another aspect of instructional support that principals provide teacher is the opportunity for self-reflection and self-evaluation. Ubben, Hughes, and Norris (2007) believed that principals were responsible for ensuring the conditions conducive to teachers viewing their careers individually and intrinsically. The researchers stated, “Principals must recognize and encourage teacher potential and provide opportunities for growth and self-discovery” (p. 181). Principals who consistently communicate with teachers help those teachers become more willing to take the necessary risks that support growth and change in teaching practices while helping them to become more reflective educators (Blase & Blase, 2000; Brezicha, Bergmark, & Mitra, 2015). Instructional supports can be greatly enhanced or negatively affected by managerial or organizational supports.

Managerial Support

Principals can provide teachers with managerial or organizational supports. Littrell, Billingsley, and Cross (1994) identified managerial supports as principal support of teachers through logistical and managerial aspects of schooling such as necessary materials, space,

resources, and time. Managerial supports could include master scheduling where content areas or grade-levels are given common planning times, providing access to necessary materials and resources through purchases and budgeting, as well as information regarding district and school policies and procedures. Though these supports may not directly impact instruction, managerial supports allow schools to run more efficiently allowing teachers and students more instructional time. For example, scheduling common planning time allows collaborative work between teachers that can result in more efficient lessons and shared responsibilities including development of formative assessments that provide valuable data about student progress. Failure to provide managerial supports can lead to a chaotic and stressful learning environment and school culture where both student and teacher experience emotional distress.

Emotional Support

Another area where principals provide teachers support is emotionally. House (1981) characterized support in four categories of behavior: emotional, appraisal, instrumental, and informational. Littrell, Billingsley, and Cross (1994) supplemented House's behavioral support characteristics to fit a school setting. The researchers defined emotional support as a principal's display of respect, trust, and recognition to teachers through open, two-way communication that is considerate of the ideas and work of the teachers. Hallam et al. (2015) explained that one of the paramount roles of the principal is to develop trust with individual teachers as well as throughout the entire faculty. Hoy and Tschannen-Moran (1999) defined trust as, "one party's willingness to be vulnerable to another party based on the confidence that the latter party is (a) benevolent, (b) reliable, (c) competent, (d) honest, and (e) open" (p. 204). Hallam, Hite, Hite, and Mugimu (2009) found that principals who spent more time with teachers in social and

unscheduled interaction improved trust within the school. A teacher's perceived influence, leadership success, and professionalism affect trust and are influenced by the principal's behavior (Hoy, Hoy, & Kurz, 2008; Moye et al., 2005; Tschannen-Moran, 2009). Teacher emotional support by principals may also influence teacher self-efficacy.

Teacher self-efficacy has been linked empirically and theoretically to the teacher's perception of principal support (Egyed & Short, 2006; Fives et al., 2007; Skaalvik & Skaalvik, 2007). Principals who are able to help improve teacher self-efficacy are more likely to employ teachers with higher levels of job satisfaction (Denzie & Anderson, 1999; Lee, Dedrick, & Smith, 1991; Somech & Drach-Zahavy, 2000). Principal supports which improve teacher self-efficacy influences teachers' instructional practices (Chacón, 2005; Graham, Harris, Fink, & McArthur, 2001; Rubie-Davies, Flint, & McDonald 2012) as well as a teacher's willingness to use innovative practices in the classroom (Anderman, Patrick, Hruda, & Linnenbrink, 2002; Rubie-Davies, 2008). Shoulders and Krei (2015) said of principal supports that influence teacher self-efficacy, "While the specific contributors to high levels of self-efficacy in teachers are yet to be fully identified, and the supports necessary to foster positive beliefs in teachers may not be fully understood, the impact of highly-efficacious teachers is sufficiently important to merit continued investigation" (p. 59).

Self-Efficacy

This study will utilize Bandura's factors of self-efficacy as a theoretical framework. Bandura (1996) believed affective state, social persuasion, vicarious learning, and mastery experiences are the factors influencing self-efficacy. This study seeks to garner teachers' perception of mastery experiences and mastery experiences influence on their self-efficacy. The

research questions for this study are predicated on the understanding that mastery experiences are the most influential factor influencing self-efficacy according to Bandura (1996). However, Bandura was not the only researcher interested in self-efficacy.

The construct of self-efficacy began from two strands of research. Rotter (1966) believed individuals' behavioral choices stemmed from the perceived cause-effect relationship of that behavior. This belief centered on an internal locus of control, where an individual controls the outcomes of a decision, versus an external locus of control, where the outcomes of decisions are dependent upon outside factors. In other words, a teacher with strong internal locus of control believes their actions have an impact on student achievement, whereas a teacher dependent on an external locus of control believes factors like home environment, socio-economic status, and community environment have a greater impact on student achievement.

The other strand originated with Bandura's theory of self-efficacy. Self-efficacy is a psychological construct derived from an individual's belief that he/she can "successfully execute the behavior required to produce the outcomes" (Bandura, 1977, p. 79). One's level of self-efficacy plays a role in one's desire to attempt new tasks, the drive to execute the task, as well as the resiliency to overcome obstacles that might arise during the execution of the task (Bandura, 1977, 1995, 1997). Self-efficacy is an important construct for teachers during times of change similar to the current climate of educational reform outlined in No Child Left Behind Act of 2001 (U.S. Department of Education, 2003) and the Race To The Top Act of 2010 (U. S. Department of Education, 2010a). Many of the reform efforts from the Race To The Top Act, especially the requirement for states to develop a teacher accountability system relying on teacher evaluation and student achievement (U. S. Department of Education, 2010b), have

personal and social repercussions that require teachers to be self-regulating agents. The ability for self-regulation is a core feature of human agency in social cognitive theory and self-efficacy (Bandura, 1999, 2001). Self-regulatory skills provide one the foresight to adjust thought and action to circumstances and environmental factors. As Bandura and colleagues (2003) noted, “It is one thing to possess self-regulatory skills but another to be able to adhere to them in taxing and perturbing situations” (p. 770). A hardy sense of self-efficacy is needed to overcome subversive emotional and psychosocial self-regulative efforts that can occur during times of change (Bandura, 1997; Zimmerman, Bandura, & Martinez-Pons, 1992). Individuals who feel they have some control over their emotional life are more successful in their self-regulatory efforts than individuals who feel they are controlled by their emotional states (Bandura, 1997, 1999). Bandura (1995) explained that for people to develop problem-solving skills “it requires a strong sense of efficacy to remain task oriented in the face of pressing situational demands, failures, and setbacks that can have significant personal and social repercussions” (p. 6).

Self-efficacy not only influences problem-solving skills, but personal motivation as well (Bandura, 1977, 1995, 1997). A highly efficacious person is more likely to attempt a new task or skill whereas someone less efficacious will not. Bandura pointed out that “People who regard themselves as highly efficacious attribute their failures to insufficient effort or adverse situational conditions, whereas those who regard themselves as inefficacious tend to attribute their failures to low ability (p. 7). One’s level of self-efficacy also influences the difficulty of goals that individuals set for themselves. Self-efficacy is theorized to influence performance accomplishments by influencing one’s level of goal setting (Bandura & Wood, 1989; Wood & Bandura, 1989). Zimmerman, Bandura, and Martinez-Pons (1992) studied students and posited

that self-regulated learners (similar to what teachers are asked to be in professional development and evaluative scenarios) who exuded a high sense of self-efficacy influenced the goal levels they set for themselves and the commitment to fulfilling these challenges. Thus, when individuals are placed in situations where they must make vast skill adaptations or improvements, as teachers have been, their level of self-efficacy can greatly improve chances of setting high goals of accomplishment and successfully making necessary skill improvements (Bandura, 1997).

One factor impacting a person's skill improvement or new skill acquisition is outcome expectancies, or "the results one expects from a specific situation" (Bandura, 1997, p. 21). According to Bandura (1997), "Human behavior and affective states would be best predicted by the combined influence of efficacy beliefs and the types of performance outcomes expected within a given social system" (p. 20). In other words, a person with high efficacy beliefs and high outcome expectancies will be more likely to exhibit productive engagement, personal satisfaction, and aspirations; whereas, a person with low efficacy beliefs and low outcome expectancies will most likely exhibit apathy and resignation from the task. Outcome expectancies differ from and are independent of self-efficacy in that self-efficacy is the belief in one's ability to "organize and execute given types of performances" whereas outcome expectancies are the belief in the possible repercussions that the performances executed will produce (Bandura, 1997, p. 21).

Much like outcome expectancies, self-efficacy is not a constant construct, but one that ever is changing and dependent upon circumstance and situation (Bandura, 1977, 1995, 1997; Klassen, Durksen, & Tze, 2014). Bandura (1997) suggested that though efficacy is situation

specific, the transfer of efficacy judgments is possible as he stated, “the level of generality of the efficacy items within a given domain of functioning varies depending on the degree of situational resemblance and foreseeability of task demands” (p. 13). For example, an individual may be highly efficacious when writing a summary of a golf match, but have very low self-efficacy if asked to play in a golf match. The task with which efficacy is high for this person centers on the activity of writing about golf rather than playing golf. This same person may be asked to write about tennis or some other sport and retain a higher level of self-efficacy because the new activity (writing about tennis) closely resembles the activity (writing about golf) that produced the initial sense of efficacy. Bandura (1986) argued that, “perceived self-efficacy results from diverse sources of information conveyed vicariously and through social evaluation, as well as through direct experience” (p. 411). In other words, self-efficacy is developed through observing of others (vicarious learning) and personal experiences (mastery experiences). Furthermore, these sources of self-efficacy “must be processed and weighed through self-referent thought” (p. 21). One’s sense of self-efficacy is dependent upon factors like experience with the task, relationship of the task being performed to tasks in which levels of self-efficacy have already been determined, and/or perceived difficulty of the task (Bandura, 1997).

According to Bandura (1977, 1995, 1997) there are four major contributors that influence self-efficacy. Each contributor has varying degrees of impact on self-efficacy and depends upon the presence of additional self-efficacy factors. Bandura (1997) also suggested that the way individuals interpret and weigh efficacy-relevant information may be *additive* (the more sources of efficacy information available, the more efficacy beliefs are impacted), *relative* (one source of efficacy is stronger than another), *multiplicative* (two or more efficacy sources interacting

together to impact the individual's efficacy belief), or *configurative* (the strength of one efficacy source depends on the presence of other efficacy sources). Bandura et al. (2003) stated, "Self-efficacy beliefs are developed and strengthened by mastery experiences, social modeling, and persuasive forms of social influences" (p. 769).

Affective States

Also known as physiological and emotional states, affective states are one's somatic, or physical responses to stressors as well as one's level of anxiety experienced due to a stressor (Bandura, 1995, 1997). This is the least influential factor influencing self-efficacy, but important to understand nonetheless. Anxiety, stress, fatigue, and mood are examples of emotional and physiological states individuals experience that impact self-efficacy. Individuals learn to analyze and interpret their physiological arousal as a measure of their competence as they experience emotions related to their performance under differing conditions (Usher & Pajares, 2008). Because people read these indicators as signs and predictors of performance, affective states impact levels of self-efficacy, "especially in domains that involve physical accomplishments, health functioning, and coping with stressors" (Bandura, 1997, p. 106). Strong emotional responses to certain tasks can elicit certain expectations of success or failure in the individual (Bandura, 1997; Usher & Pajares, 2008). Bandura (1997) suggested that individuals function optimally when their emotional or psychological arousal is neither too high nor too low. When one senses their affective state is highly anxious or they begin sweating without control, one's performance may be inhibited due to the stress reaction reducing the belief that a specific result for that task might be reached.

In some instances, these affective states impact effort. For example, Dweck (2006) explained that individuals with a 'fixed mindset' believe that if they experience nervousness before or during a task, then the affective state would indicate the individual's ineffectiveness at completing that task, prompting them to put forth limited effort. In other words, anxiety would indicate that one is not as good at the task as once believed, therefore why try.

Verbal Persuasion

Verbal persuasion incorporates verbal input from individuals like colleagues, administrators, and supervisors that strengthens one's belief in accomplishing a specific task at a specific level of performance (Bandura, 1997; Tschannen-Moran & McMaster, 2009). Bandura (1997) stated that, "it is easier to sustain a sense of efficacy, especially in times of difficulty, if significant others express faith in one's capabilities than if they convey doubts" (p. 101). Verbal persuasion is not the most powerful source of self-efficacy and may not create lasting levels of self-efficacy, but can affect change in individuals when coupled with other sources of self-efficacy or if used to improve effort that enhances skill acquisition which can lead to a stronger sense of self-efficacy (Bandura, 1997; Tschannen-Moran & McMaster, 2009). Some verbal persuasion comes from administrators or supervisors in the form of professional development and feedback from evaluations. Still other modes of verbal persuasion come from peers and supervisors in the form of encouragement designed to convince one that their efforts will be successful. Individuals who receive encouragement from trusted peers can boost the individual's confidence in their abilities to perform a task (Bandura, 1997; Usher & Pajares, 2008).

Vicarious Experiences

Another source of self-efficacy is vicarious experiences. Vicarious experiences are gained through one's observation of another execution of a skill or specific activity (Bandura, 1997). Usher and Pajares (2008) believed a powerful source of self-efficacy development comes from social models perceived to have similar characteristics (e.g. age, gender, ethnicity). Social models are not only powerful due to perceived similarities. Bandura (1997) stated, "people are not about to discard information that makes them more efficacious just because it comes from a dissimilar source" (p. 101).

Bandura (1997) explained the impact of the vicarious experience on self-efficacy is only as strong as the connection of the observer to two aspects of the scenario, the activity and the person executing the activity. In other words, one may realize a greater impact on self-efficacy if the activity being observed closely relates to the skill that is to be executed by the observer. Also, if the individual carrying out the task is perceived to have a similar skill level as the observer, then the observer might realize an increase of self-efficacy. Tschannen-Moran and McMaster (2009) posited, "The greater the assumed similarities between the observer and the model, the more persuasive will be the belief that one possesses the capabilities to master comparable activities" (p. 230). Bandura (1997) explained that because teaching lacks definitive measures of adequacy, teachers must compare their abilities relative to the abilities of others in similar scenarios. Ross (1992) and Tschannen-Moran and McMaster (2009) found that vicarious experiences like those provided in certain professional development opportunities like coaching had moderate positive impact on teacher self-efficacy. Tschannen-Moran and McMaster (2009)

stated, “As part of a comprehensive developmental experience, observing a proficient performance of the skill to be learned can provide valuable information and insight” (p. 230).

Mastery Experiences

The strongest and most influential source of self-efficacy is gained through mastery experiences (Bandura, 1997). Mastery experiences are events where an individual can safely perform new skills or concepts without fear of reprisal (Bandura, 1997). Tschannen-Moran and McMaster noted, “Successes build a robust belief in one’s efficacy, especially when success is achieved early in learning with few setbacks” (p. 230). Usher and Pajares (2008) noted gradual skill development over time while performing specific tasks lead to increased self-efficacy beliefs. Bandura (1997) believed mastery experiences become more powerful in boosting self-efficacy when individuals overcome obstacles or succeed on challenging tasks. A stronger call for embedding mastery experiences into principals role as an instructional leader comes from Gawande (2011) who stated, “No matter how well trained people are... few can sustain their best performance on their own. That’s where coaching comes in” (p. 1). Mastery experiences are coaching opportunities and must be executed correctly to assist in the growth of teacher self-efficacy (Gawande, 2011). Tschannen-Moran and McMaster (2009) posited the cyclical nature of teacher self-efficacy. When new skills are mastered and new mastery experiences created, outcomes of the new experiences either support or disrupt existing beliefs of self-efficacy. In other words, improved efficacy breeds more mastery experience opportunities where the outcomes improves or diminish self-efficacy beliefs.

Joyce and Showers (2002) found that coaching helped teachers transfer training to the classroom because coached teacher practiced new strategies more frequently and developed

greater skill, used their newly learned strategies more appropriately, exhibited greater long-term retention of knowledge about and skills with coached strategies, were more likely to explain new models of teaching to their students, and exhibited clearer cognitions with regards to the purposes and uses of the new strategies. In terms of high quality professional development opportunities, mastery experiences allow for the professional development to be “connected to the teachers’ work with children, organized around real problems of practice, intensive, sustained, and continuous over time, and supported by coaching, modeling, observing, and feedback” (Darling-Hammond, 2013, p. 99).

Teacher Self-Efficacy

Teacher self-efficacy is a teacher’s belief in his/her abilities to achieve a desired result of student engagement and learning regardless of the ability and motivation of the student (Armour et al, 1976; Bandura, 1977; Tschannen-Moran & Woolfolk-Hoy, 2001). Teacher self-efficacy has been linked to student outcomes such as achievement (Armour et al., 1976; Ashton & Webb, 1986). Teachers with a greater sense of self-efficacy tend to be less critical of students when the student errs (Ashton & Webb, 1986) and are more persistent when working with struggling students (Gibson & Dembo, 1984). Woolfolk and Hoy (1990) stated, “researchers have found few consistent relationships between characteristics of teachers and the behavior or learning of students. Teachers’ sense of efficacy... is an exception to this general rule” (p. 81).

Bandura (1993) determined teachers’ personal self-efficacy influences their motivation and how they think, feel, and behave. He also ascribed teachers’ setting of and commitment to attaining goals as relational to their self-efficacy levels. In other words, the higher a teacher’s level of self-efficacy, the more ambitiously goals are set and the harder they work to achieve

their goals. “People’s beliefs in their self-efficacy influence the types of anticipatory scenarios they construct and rehearse. Those who have high sense of self-efficacy visualize success scenarios that provide positive guides and supports for performance” (p. 118). Bandura (1993) and Dweck (2006) posit that human ability is a non-static attribute that can be influenced and changed by one’s skill acquisition and efficacy beliefs to utilize those skills. Human motivation relies on proactive control and reactive feedback control. People establish challenging goals that upset the homeostatic balance and then actively endeavor to accomplish these goals with skill and effort. Bandura (1993) explained, “The task of creating environments conducive to learning rests heavily on the talents and self-efficacy of teachers. Evidence indicates that classroom atmospheres are partly determined by teachers’ beliefs in their instructional efficacy” (p. 140). Gibson and Dembo (1984) understood that teachers with a high sense of instructional efficacy maintain a classroom environment focused on instruction and academic learning, provide struggling students with the instructional support needed to improve the student’s success, and praise them for their successes. Therefore, teachers with higher instructional efficacy beliefs help foster students with higher self-efficacy beliefs by providing their students with mastery experiences. Bandura (1993) stated, “Teachers who believe strongly in their instructional efficacy create mastery experiences for their students. Those [teachers] beset by self-doubts construct classroom environments that are likely to undermine students’ sense of efficacy and cognitive development” (p. 140). This study hopes to help strengthen the link between teacher evaluations and teacher self-efficacy and demonstrate how developing mastery experience for teachers impacts the teacher’s sense of instructional efficacy.

Empirical Studies and Measures of Teacher Self-Efficacy

The measure of teacher self-efficacy has evolved from early attempts (e.g. Armour, Conroy-Oseguera, Cox, King, McDonnell, Pascal, Pauly, & Zellman, 1976; Gibson & Dembo, 1984) to measure the construct. Some studies were designed to create better instruments for measuring teacher self-efficacy and determined that school behaviors like professional development and evaluation could have a greater impact on teacher self-efficacy. Tschannen-Moran and Woolfolk-Hoy (2001) worked to create a more versatile definition of teacher efficacy by developing a better measure and found a greater need for research to find “what structural features and supports make a difference in the formation of efficacy beliefs” and “what leadership behaviors on the part of the principal make a difference [on teacher efficacy]” (p. 802). To have a greater impact on teacher efficacy they posited, “The professional development of teachers would be structured as powerful mastery experiences with an eye toward helping teachers garner evidence of improved learning on the part of their students in order to reap the efficacy pay-off that would result” (p. 803).

Henson’s study of the measurement dilemma of teacher efficacy (2001) called for more investigation into the factors that might influence efficacy. Henson (2001) argued that research examining the validity and potential impact of mastery experiences, vicarious learning, verbal persuasion, and affective state on teacher efficacy is “practically non-existent” and “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. 17).

Hoy and Woolfolk's (1993) study looked at the connective factors between teacher efficacy and school climate. By considering the RAND items (Armour, et al., 1976) and the Gibson and Dembo (1984) measurement, Hoy and Woolfolk (1993) developed two teacher efficacy dimensions, general teaching efficacy (GTE) and personal teaching efficacy (PTE). General teaching efficacy refers to the "general belief about the power of teaching to reach difficult children and has more in common with teachers' conservative/liberal attitudes towards education" (Hoy & Woolfolk, 1993, p. 357). A more specific belief held by teachers about how their actions impact student achievement in the classroom is personal teacher efficacy, or PTE (Hoy & Woolfolk, 1993). Fuller, Wood, Rapport, and Dornbush (1982) distinguished between organizational efficacy and performance efficacy (similar to personal teaching efficacy) and suggested several aspects of school structure that could influence these two kinds of efficacy. Fuller et al. (1982) determined that a teacher's belief in a sound evaluative method as well as varied criteria being applied to the evaluative process have an impact on teacher efficacy. Hoy and Woolfolk (1993) explained, "In brief, teachers' performance efficacy is supported when teachers are clear about their responsibilities and the means to accomplish them, have access to the resources that they need, and are evaluated based on outcomes that seem important to them" (p. 359). Hoy and Woolfolk (1993) called for further research of "teacher evaluation procedures to measures of school health in predicting teacher efficacy" (p. 370).

In Tschannen-Moran and McMaster's (2009) quasi-experimental study of embedded self-efficacy sources in professional development for reading instruction, the researchers found significant growth in self-efficacy in the teacher groups provided social persuasion as well as social persuasion combined with vicarious learning and mastery experiences, whereas the groups

receiving only social persuasion and only vicarious learning did not see significant growth in self-efficacy beliefs. These findings are contrary to Bandura's model in that two groups did not see significant growth in their self-efficacy beliefs. However, these findings were attributed to the teachers' sudden awareness of their reading instructional skill deficit forcing the teachers to reassess their own self-efficacy beliefs against the standard of the professional development presented. Tschannen-Moran and McMaster (2009) stated, "Without coaching to assist teachers in the implementation of the new skill, a significant proportion of teachers were left feeling more inadequate than they had before" (p. 241). Those teachers in the group provided mastery experiences combined with coaching (a powerful form of mastery experience) saw significant growth in self-efficacy belief for reading instruction. Haney, Wang, Keil, and Zoffel (2007) had similar results in their study that found interventions designed to address teachers' self-efficacy beliefs as they experienced new instructional strategies raised teachers' self-efficacy and their implementation of the new instructional strategy in science.

Conversely, Usher and Pajares (2008) discussed the need for future qualitative research as a means for better understanding the relationship of mastery experiences and self-efficacy as they stated, "People interpret the results of their actions and the actions of others. Consequently, it is unwise to use actual performance measures as an assessment of mastery experience" (p. 782). They continued, "An appropriate assessment of mastery experiences as a source of self-efficacy belief requires items that reflect how 'individuals' make meaning of the efficacy-building information that comes their way" (p. 782). A performance measure (e.g. a grade on a paper) cannot capture how individuals make the meaning of self-efficacy sources. They suggested more in-depth questioning to better capture these meanings.

Also, Timperley and Phillips (2003), through their study of self-efficacy beliefs and conditions required to affect change in reading instructional strategies found a complex relationship between change and external factors existed. They proposed that, “the change process is likely to be iterative rather than a sequential one, where changes in beliefs, actions or outcomes are both shaped by, and built on, each other” (p. 630). The findings in their study led Timperley and Phillips to contend that professional development for teachers needs to simultaneously address improvement in teaching skills as well as teachers’ beliefs. Timperley and Phillips’ findings were supported by an efficacy-based change model of in-service teachers that was tested by McKinney, Sexton, & Meyerson (1999), which found participants with lower self-efficacy beliefs experienced issues characteristic of those individuals in early stage change scenarios, in which the focus was on how the change would affect them. Contrary, participants with higher self-efficacy beliefs focused attentions on how the change would affect their students and school as well as how to refine the new strategies to best fit their teaching context. Those with the highest self-efficacy beliefs viewed the new strategies as both important and possible.

Conclusion

Principals take on many roles as leaders of their buildings, primarily as instructional leader, helping teachers grow in their teaching skills and strategies is an integral part of being an instructional leader. According to Bandura (1993; 1996) levels of self-efficacy influences motivation to, perseverance in, and behavior towards improved skills. Mastery experiences have been found to be the most influential source of self-efficacy (Bandura, 1996) and when coupled with teacher professional development can have an impact on teacher self-efficacy (Gawande, 2011).

CHAPTER 3

METHODOLOGY

The purpose of this study was to investigate the influence of mastery experience as a form of support for teachers and teacher efficacy through a mixed methods study. Moreover, this study sought to understand teachers' perceived influence on their efficacy from mastery experiences provided by principals through instructional support. This chapter begins with an overview of the research design and rationale for this design. The role of the researcher will be described to enhance the transparency of the research. Procedures for analyzing quantitative and qualitative data will follow the collection procedures of the data. The chapter will conclude with a section explaining the methods of data verification.

Research Design

This study utilized a mixed methods design (see Figure 1). Teddlie and Tashakkori (2009) defined mixed methods research as “research in which the investigator collects and analyzes data, integrates the findings, and draws inferences using both qualitative and quantitative approaches or methods in a single study or program of inquiry” (p. 7). Creswell (2009) outlined six mixed methods designs: sequential explanatory, sequential exploratory, sequential transformative, concurrent triangulation, concurrent embedded, and concurrent transformative. These designs are predicated on four procedural factors: timing, weighting, mixing, and theorizing.

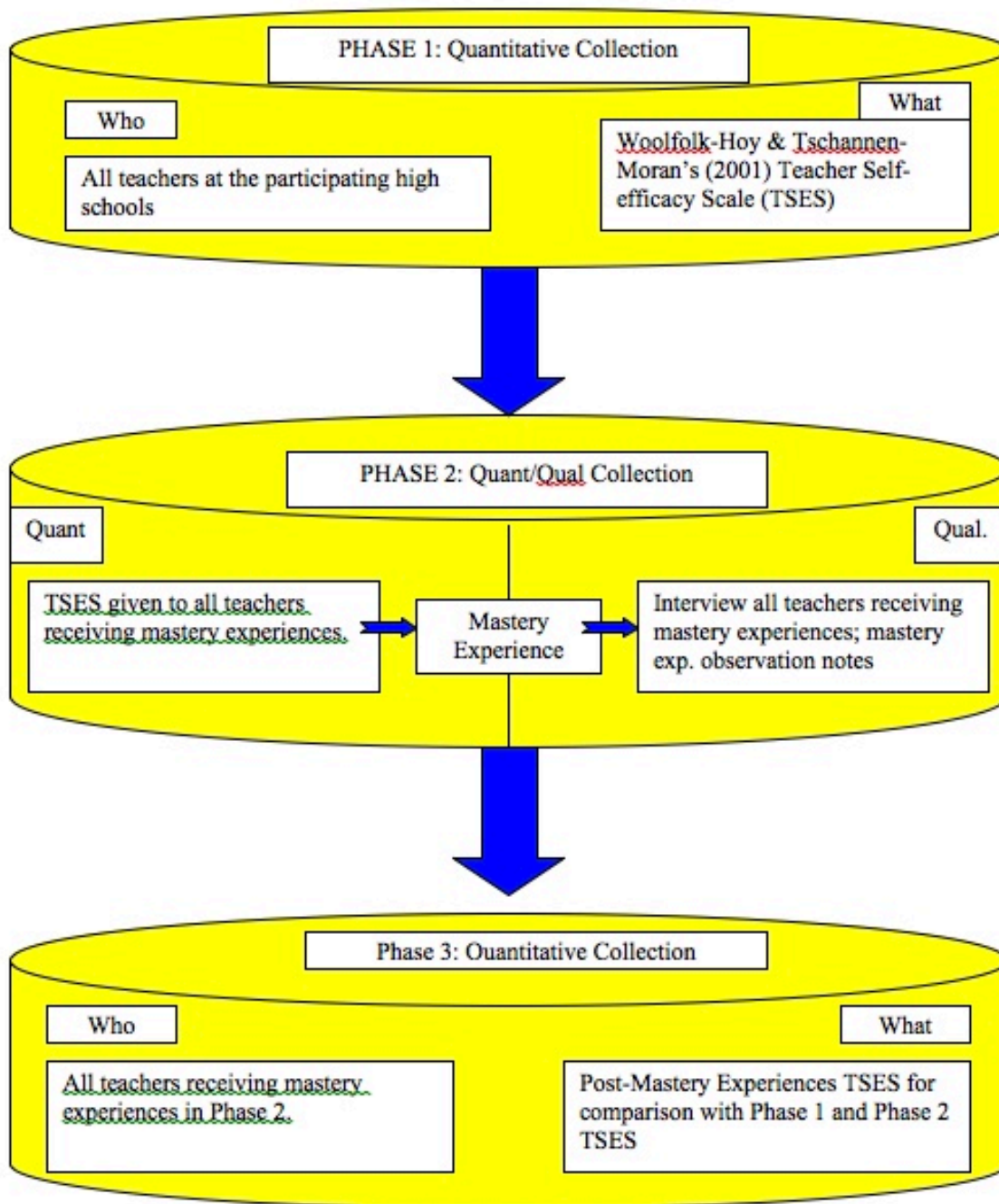


Figure 1: Research Design Flow Chart

The research design of this study will follow a concurrent approach weighted towards qualitative integrated data collection and analysis focused by Bandura's (1997) factors that influence self-efficacy (see Table 1). Specifically, the proposed study followed a pretest/ post-test design that utilizes mastery experiences as the intervention. Woolfolk-Hoy and Tschannen-Moran's (2001) Teachers' Sense of Efficacy Scale (TSES) will be administered followed by the mastery experience intervention given by participating principals and the post-test TSES, which will allow the researcher to evaluate any difference in the pre/post tests.

This study was executed in 3 phases. Phase 1 volunteers were given the TSES survey for baseline analysis as the experimental control. Phase 2 participants were asked to submit a lesson plan prior to a scheduled coaching meeting with teacher. The TSES was administered to the phase 2 participants as a pre-intervention measure. The teacher chose an area of instructional focus to improve upon during the mastery experience opportunity. During the coaching meeting the researcher asked the teacher for strategies currently utilized for the area of focus. The researcher suggested strategies to utilize during the mastery experience for improve the area of focus. The teacher executed the lesson plan utilizing suggested strategies and during natural breaks in the lesson was given feedback from the researcher on the strategies used as well as suggestions of other instructional strategies to improve the area of focus. Following the mastery experience opportunity, the teacher was administered the TSES for the post-intervention measure. A time convenient for the teacher was established for a post-intervention interview with the researcher.

Table 1:

Research Design

Timing	Weighting	Mixing	Theorizing
Concurrent	qual/Quan	Integrating	Explicit- Bandura's Factors Influencing Self-efficacy

Rationale for Research Design

Creswell (2009) stated, “The problems addressed by social and health science researchers are complex, and the use of either quantitative or qualitative approaches by themselves is inadequate to address this complexity” (p. 203). Philosophically, mixed methods predominately utilizes pragmatism (Johnson & Onwuegbuzie, 2004; Teddlie & Tashakkori, 2009). According to Teddlie and Tashakkori (2009), “Pragmatism rejects the either/or choices associated with the paradigm wars, advocates for the use of mixed methods in research, and acknowledges that the values of the researcher play a large role in the interpretation of results” (p. 8). Of the potential use of mixed methods research Creswell (2009) posited, “There is more insight to be gained from the combination of both qualitative and quantitative research than either form by itself. Their combined use provides an expanded understanding of research problems” (p. 203). The methods used in this study are based on the following research questions: do mastery experiences, as supported by principals, influence teacher efficacy (quantitative) and how do teachers’ perceive mastery experiences influence their teacher efficacy (Qualitative)?

The first question is situated in the quantitative method (area E- see *Figure 3*) of the QUAL-MM-QUAN Continuum (Teddlie & Tashakkori, 2009, p. 28) due to the need for only quantitative measures to explore the question. Question one is aligned with the postpositivism paradigm of quantitative methodology that posits the “need to identify and assess the causes that influence outcomes” (Teddlie & Tashakkori, 2009, p. 28). Quantitative research is most often used as the research method (area E) when testing the boundaries of theories like that of Bandura’s mastery experiences having the greatest influence on self-efficacy (Bandura, 1995; 1997). The final question garners the perceptions of the teachers who will undergo mastery experience opportunities, which falls to the qualitative end of the continuum (area A). Because this question sought to understand teachers’ perception of the addition of mastery experiences as an instructional support, qualitative data collection and analysis allowed for the deeper inquiry of a more complex phenomenon (Teddlie & Tashakkori, 2009). By utilizing both quantitative and qualitative methodologies, with more weight given to qualitative data, this study sought to garner the strengths of both methodologies (area C) to gain insight into the use of mastery experiences and the perceived impact on teacher self-efficacy.

Role of the Researcher

In qualitative research, the role of the researcher should enhance the study (Maxwell, 2005). Merriam (2009) said of qualitative research, “The researcher is the primary instrument for data collection and analysis” (p. 15), but must guard against allowing personal biases from impacting the study. Maxwell (2005) explained that researchers who ignore or try to discount their background entering a qualitative study can lose credibility with the reader as the researcher is striving for a deeper of understanding of such complex phenomena.

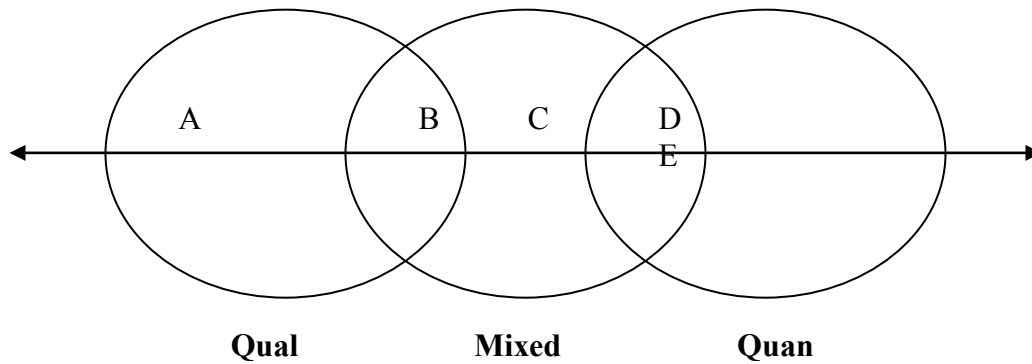


Figure 2: The QUAL-MM-QUAN Continuum (Teddlie & Tashakkori, 2009, p. 28). Reprinted with permission.

Merriam stated, “Rather than trying to eliminate these biases or ‘subjectivities’, it is important to identify them and monitor them as to how they may be shaping the collection and interpretation of data” (p. 15). Maxwell (2005) added, “Separating your research from other aspects of your life cuts you off from a major source of insights, hypotheses, and validity checks” (p. 38).

As the researcher it is important that data is reported fairly and accurately as well as having enough background knowledge to ask interesting questions that elicit valuable data (Rubin & Rubin, 2012). As the researcher, I am currently an administrator of a school that utilizes the Teacher Accelerator Evaluation Model (TEAM) in a small rural school of approximately 350 students, 23 fulltime teachers, and 2 part time teachers. I feel my experience as an administrator, specifically an instructional leader, provided a knowledge base that allowed me to ask interesting questions to elicit valuable data. To overcome this bias I will conducted member checks throughout the collection of interview data to ensure I accurately interpreted the

research subject's perspective. As a school administrator who uses various instructional leadership strategies, I brought an understanding of the process and methods used to support teacher instructional growth. My goal through this study was to examine the impact of including mastery experiences as a form of principal support for teacher instruction so that state and local officials might garner information that will help add to the current knowledge base of principals' role as instructional leaders. I believe that the best way to impact student outcomes is through effective instruction (Sanders & Rivers, 1996) and the best way to impact effective instruction is through effective feedback from high quality professional development that begins as an awareness by instructional leaders of their influence on teachers' pedagogical growth (Danielson, 2009; Danielson & McGreal, 2000; DuFour, 2015; Nolan & Hoover, 2011; Sullivan & Glanz, 2005). To protect the participants of the mastery experience opportunity from fears related to their building administrator's evaluative role, all interview and observational data was collected by myself.

I subscribe to Bandura's (1997) theory of self-efficacy and believe that mastery experiences helps to improve self-efficacy, but by identifying the preconception of mastery experiences influence on self-efficacy I was able monitor this bias through audit trails and member checks. Another factor embedded in the research design of this study to offset researcher bias was the collection of observation notes by the researcher intended for data integration. Also, to provide transparency of my research decisions to the readers, I provided detailed notes from a "researchers identity memo" (Maxwell, 2005, p. 39) that outlines assumptions and experiential knowledge of the research topic.

Sites and Participants

The sites selected for this study include two high schools (grades 9-12) in a rural school district in a southeastern state. The school district is comprised of five high schools with a collective student population of 60% economically disadvantaged with 17% of students with disabilities (Tennessee Department of Education, 2016). The specific high schools for this study were selected because they are in the same district under the same policies and procedures receiving the same resources for professional development as well as being involved in the same teacher evaluation model allowing for reliability and environmental control in the study.

Moreover, the sites were selected because the principals leading these schools served as gatekeepers, or individuals who have the authority to allow or disallow research at the research site (Creswell, 2009) and will play an important role in the execution of this study. Therefore, the professional relationship I have with these principals was integral for the trust needed to ensure teacher participation in the mastery experience opportunity.

The participants for this three-phase study consisted of teachers of the schools described. All participants were selected on a voluntary basis. Each participant could have withdrawn from any phase of the study without fear of reprisal or consequence. Phase 1 participants consisted of volunteer teachers taking Woolfolk-Hoy and Tschannen-Moran's (2001) TSES administered by the researcher. Phase 1 participants were used as the control for this study. The mean scores from the control group's (also referred to as Phase 1 participants synonymously) TSES survey were utilized for comparative analysis with the phase 2 and phase 3 TSES survey mean scores. Phase 1 participants provided important insight to the participants of phase 2 and 3 relative to the norm. For example, the TSES survey item mean scores from phase 1 were compared to the item

mean scores of the Phase 2 pre-intervention group to determine if Phase 2 participants were outliers or representative of the control group.

Phase 2 and 3 participants consisted of teachers volunteering to take a pre and post mastery experience TSES, participate in the pre-mastery experience coaching conversation and mastery experience opportunity, and be willing participants in the post-mastery experience interview. The participating teachers were active licensed high school classroom teachers of any content area. To protect the professional safety of the teachers, the participants of all phases will be selected on a voluntary basis without input from administrators. In other words, there was no pressure to participate in this study by either the researcher or the building administrator.

Quantitative Sampling

The first phase of quantitative sampling of this mixed methods study employed convenience sampling. Creswell (2009) stated convenience sampling is sometimes necessary “because the investigator must use naturally formed groups or volunteers” (p. 155). This study required that participants were licensed teachers supported by licensed administrators where all participants were willing volunteers making convenience sampling necessary. Woolfolk-Hoy and Tschannen-Moran’s (2001) TSES was administered to all volunteering teachers at the selected sites for the purpose of providing a comparative baseline for the sample of the following phases. Teddlie and Tashakkori (2009) expounded on convenience sampling as they described volunteer sampling as “a convenience sample in which individuals willingly agree to participate” (p. 170). Since participating teachers were asked to take the TSES voluntarily, convenience sampling was used.

The second and third phases of the study employed purposive sampling, specifically what Teddlie and Tashakkori (2009) call intensity sampling where the participants (teachers) are selected because their cases (voluntary skill improvement) represent a phenomenon of interest (impact of mastery experiences on self-efficacy) specifically. The researcher employed instructional leadership practices and professionalism to carry out the coaching conversation in which the teacher selected the skill area of refinement (skill selected for mastery experience) and offered specific strategies for skill improvement. Though smaller than the first phase sample, the pre and post-mastery experience sample provided valuable comparative data for the research question, “Do mastery experiences, as supported by principals, influence teacher efficacy?”

Qualitative Sampling

The sampling for the qualitative portion of the study was purposive sampling; specifically a typical purposive sampling was employed. According to Merriam (2009), “A typical sample would be one that is selected because it reflects the average person, situation, or instance of the phenomenon of interest” (p. 78). An advantage to purposive sampling in qualitative research is it provides the ability of the researcher to “generate a wealth of detail from a few cases” (Teddlie & Taskahori, 2009, p. 173). The teachers who participated in the mastery experience opportunities have been purposefully selected for their willingness to receive mastery experiences as a principal support for instructional strategies. The teachers and principals were purposefully chosen to examine the elements specific to mastery experiences influence relative to Bandura’s (1997) theory that mastery experiences have on teacher efficacy as well as establishing a comparative basis between the setting and individual (Creswell, 2009; Maxwell, 2005). Teddlie and Taskahori (2009) also elaborated that purposive sampling helps to address

specific aspects of research questions, in this study the research question “How do teachers’ perceive mastery experiences influence their teacher efficacy?”

Data Collection Procedures

Creswell (2009) explains timing involves the consideration of sequence used in data collection (i.e. qualitative first, quantitative first, or concurrent collection where equal weight is give to each method). The proposed study utilized quantitative data through a survey administered to study the population during the first research phase to establish a baseline of data for comparative purposes. The second phase of data collection consisted of quantitative data from the same survey given in Phase 1 to teachers participating in mastery experiences as well as qualitative data consisting of researcher notes on teachers from the mastery experience. Data collection from the final phase consisted of a post-mastery experience survey (the same survey given in Phase 1 and Phase 2) as well as individual teacher interviews for insight into the teacher’s perception of the mastery experiences. According to Creswell’s timing consideration, this study followed a concurrent timing sequence.

The researcher should also consider the priority or weight given to the methods during the data collection. Will the data be primarily collected through qualitative methods or quantitative methods? Or will each method have equal priority? This study gave greater weight to the qualitative data collected because the primary purpose of the study was to gain teacher’s perspective on the influence of mastery experiences on teacher self-efficacy. Though both quantitative and qualitative data were analyzed and compared, the qualitative data was the primary source of data collected.

After considering the timing and weighting of the mixed methods study, the researcher must determine when best to mix the quantitative (numerical) and qualitative (text and images) data. Creswell (2009) stated, “Mixing the two types of data might occur at several stages: the data collection, the data analysis, interpretation, or at all three phases” (p. 207). Another factor to consider is the way in which the two types of data are mixed. If the quantitative and qualitative data are connected between data analysis of phase1 and data collection of Phase 2 then, the mixed data is considered connected data (Creswell, 2009). If the researcher concurrently collects quantitative and qualitative data counting the qualitative data using descriptive quantitative measures, the data is considered integrated (Creswell, 2009). Finally, if the researcher mixes the data in such a way that one primary data type is reinforced or backed up by the other data type, then the mixed data is considered to be embedded (Creswell, 2009). This study analyzed the quantitative data collected using descriptive statistical measures so that the survey from the first phase, used as a baseline measure, could be compared to the measures of the pre-mastery and post-mastery experience survey. The post-mastery experience survey measures were then be compared to the pre-mastery experiences survey. The survey analysis was compared to qualitative data from the teacher interviews and the data collected during the mastery experience resulting in the integrated mixing of qualitative and quantitative data.

The final mixed methods procedural factor to account for is theorizing. The question to answer regarding the theorization of a mixed methods study is whether the theory is explicitly stated and used as principal focus for the study guiding the research questions and methodology or is the implicit in which the theory itself may be discovered through the course of the study. This study will be guided explicitly by Bandura’s (1997) factors that influence self-efficacy.

The quantitative data was collected through the administration of Woolfolk-Hoy and Tschannen-Moran's Teachers' Sense of Efficacy Scale (TSES). The qualitative data was collected through teacher interviews after they have received mastery experience opportunities as well as observations of the mastery experience opportunities. In this study the qualitative data analysis had greater influence than the quantitative data analysis: quan/Qual. The quantitative data answered the research question: Do mastery experiences, as supported by instructional leaders, influence teacher efficacy? The qualitative data answered the research question: How do teachers' perceive mastery experiences influence their teacher efficacy?

Quantitative Data Collection

Data collection for the quantitative part of this study included administration of Woolfolk-Hoy and Tschannen-Moran's (2001) Teachers' Sense of Efficacy Scale (TSES). The TSES will be given three times during the study. In Phase 1 the TSES was administered to all teachers from the two high schools. The initial whole-group survey was anonymous and void of demographic details to protect the identity of the teachers. In Phase 2 the TSES was administered pre-mastery experience to the teachers participating in the mastery experience opportunity to establish a baseline measure of teacher self-efficacy specific to those teachers participating in Phase 2. The TSES was administered again post-mastery experience to the teachers participating in Phase 3 for comparative purposes with the Phase 1 whole-group survey as well as the pre-mastery experience survey in Phase 2. The teachers' identity participating in Phase 2 and Phase 3 was protected by the use of pseudonyms with no identifying demographic information attached to the pseudonyms.

Teachers who volunteered for Phase 2 and elected to complete Phase 3 of the study responded to the TSES three separate times. The first occurred during the whole group, anonymous administration included in the baseline data analysis, the second occurred in the Phase 2 pre-mastery experience, and the final survey was administered for the Phase 3 post-mastery experience.

Instrumentation

Woolfolk-Hoy and Tschannen-Moran's (2001) Teacher Sense of Efficacy Scale (TSES) long form consists of 24 items predicted on Bandura's Teacher Self-Efficacy Scale (1997). Woolfolk-Hoy and Tschannen-Moran's TSES was developed at The Ohio State University and is commonly known as the Ohio State Teacher Efficacy Scale (OSTES). Participants use a 9-point Likert scale ranging from "nothing to a great deal" when describing their sense of self-efficacy relative to "How much can you do?" on the survey questions (Tschannen-Moran & Woolfolk-Hoy, 2001). The TSES was tested in three separate studies. In the course of the three studies, the original 52-item survey was reduced to 32 items in the first iteration and again to 18 items with three subscales in the second study. The third study resulted in the testing and development of 18 additional items that resulted in the two final TSES documents (a 24-item long form and an 18-item short form).

The first study sampled 244 teachers (146 preservice/ 78 inservice teachers). Through factor analysis of the 52-item survey, 32 items were found to be significant and chosen for further testing. The second study sampled 217 teacher (70 preservice/ 147 inservice) and found 18 items covering three factors (*efficacy for student engagement, efficacy for instructional strategies, and efficacy for classroom management*) best "represented the task of teaching"

(Tschannen-Moran & Woolfolk-Hoy, 2001, p. 797). The third study refined the TSES and strengthened the *teacher efficacy for classroom management* factor by adding survey items to the 3-item subscale. 410 teachers (103 preservice/ 255 inservice/ 38 respondents who failed to indicate level of experience) were sampled. According to Tschannen-Moran and Woolfolk-Hoy (2001), “Reliabilities for the teacher efficacy subscales were 0.91 for instruction, 0.90 for management, and 0.87 for engagement” (p. 799). The TSES was measured for construct validity against similar instruments measuring teacher self-efficacy and was found to be reasonably valid and reliable.

A factor analysis found three moderately correlated factors within the TSES: Efficacy in Student Engagement, Efficacy in Instructional Practices, and Efficacy in Classroom Management (<http://anitawoolfolkoy.com/wp-content/uploads/2015/04/TSES-scoring-zted8m.pdf>).

Reliabilities (Tschannen-Moran & Woolfolk-Hoy, 2001) for the TSES and the subscales are given in Table 2.

Table 2:

Reliability Measures for OSTES (TSES)

	Mean	SD	Long Form alpha
OSTES(TSES)	7.1	.94	.94
Engagement	7.3	1.1	.87
Instruction	7.3	1.1	.91
Management	6.7	1.1	.90

Qualitative Data Collection

The qualitative data of this study were collected by the researcher through observations notes and interviews of teachers who have volunteered to participate in the mastery experience portion of this study. To help address researcher bias, the collection of qualitative data during Phase 2 of the study was conducted by the researcher via an observation checklist (see Appendix B). Qualitative data were collected during Phase 3 by the primary researcher with post-mastery experience teacher interviews based on an interview protocol (see Appendix C). All collected data were securely stored on a password-protected file on the researcher's computer. To protect the identities of participants, the researcher altered the names of the teachers and the schools where the teachers were employed when reporting findings.

Observations

The researcher conducted observations during the mastery experience opportunities. The observations were guided by the Instructional Leader's Mastery Experience Cheat Sheet (see Appendix A) and Mastery Experience Worksheet (see Appendix B) to account for fidelity of implementation of the coaching conversations and mastery experience observations. A benefit of observations is the ability of the researcher to compare observed data with self-reported data from interviews or surveys (Gay, Mills, & Airasian, 2015; Teddlie & Tashakkori, 2009). The researcher acted as observer throughout the observation protocol and mastery experience opportunity.

Interviews

Rubin and Rubin (2012) stated that conducting interviews in studies help researchers to "explore new issues or present old problems in a new way" while gaining valuable "firsthand

knowledge” of the phenomenon (p. 60). Merriam (2009) described interviews as “conversations with purpose” and “the main purpose of an interview is to obtain a special kind of information” (p. 88). The interviews in this study were guided by an interview protocol predicated on gaining the teacher’s perception of how mastery experiences influenced their teacher self-efficacy. The semi-structured interview protocol consisted of open-ended questions that allowed the participants to explain their experiences and perspective (Creswell, 2009; Gay, Mills, & Airasian, 2015; Merriam, 2009; Rubin & Rubin, 2012; Teddlie & Tashakkori, 2009; Yin, 2009) with follow-up, clarifying questions to ensure the researcher understands and captures the participants perception of how mastery experiences influenced their teacher self-efficacy (Gay, Mills, & Airasian, 2015; Merriam, 2009; Rubin & Rubin, 2012).

Interviews were conducted in Phase 3 following the delivery of mastery experiences by the instructional leader and post-mastery TSES. Interviews were conducted in a face-to-face format so that the researcher may ask clarifying questions for a deeper understanding of the teacher’s perception of mastery experiences and their influence on teacher self-efficacy.

Data Analysis

Mixed methods data analysis provides a blend of qualitative and quantitative analytical techniques (Teddlie & Tashakkori, 2009) that allow the researcher to utilize the strengths of each methodology to strengthen the findings validity (Creswell, 2009). For example, analysis of qualitative data may provide rich details of a phenomenon that may be supported or refuted by numerical data from quantitative analysis. A parallel mixed data analysis strategy was used with the constant comparative method because the quantitative survey data was used as a teacher self-

efficacy baseline to be compared to the experimental mastery experience group (Teddlie & Tashakkori, 2009).

Quantitative Analysis

Quantitative data analysis of teacher's survey data consisted of central tendency measures of each of Bandura's Teacher Self-Efficacy Scale (1997) survey items. The primary central tendency measure used was determined when answers to the survey items were entered as suggested by Gravetter and Wallnau (2011). The quantitative data was integrated with the qualitative data collected (Creswell, 2009) when observation, interview, and survey data were compared. Comparisons were made between teacher cases and within each individual teacher case. The initial Phase 1 whole-group TSES results were used for general comparative purposes for the post-mastery experience TSES in Phase 2. The Phase 2 pre-mastery experience TSES was also used for comparative purposes for the Phase 2 post-mastery experiences TSES. The quantitative data was integrated with the qualitative data for convergent or divergent tendencies (Creswell, 2009).

Qualitative Analysis

Qualitative data analysis consisted of researcher observation notes from teacher mastery experiences and interviews of teachers who have received mastery experiences. This study utilized the constant comparative method, formulated by Glaser and Strauss (1967) and refined by Lincoln and Guba (1985), which "allows analysts to compare different pieces of data, refine or tighten up categories, and move on to higher conceptual levels" (Teddlie & Tashakkori, 2009, p. 254).

Observations. Data from researcher observation notes of individual teachers participating in mastery experience opportunities were compared to other qualitative data collected during the study to derive common themes (Teddlie & Tashakkori, 2009). Observation data was guided by the Instructional Leader’s Mastery Experience Cheat Sheet (see Appendix A) and Instructional Leader’s Mastery Experience Observation Sheet (see Appendix B) and gathered during the coaching conversation and mastery experience opportunities.

A document analysis of the data collected from the researcher observation sheets was compared to the teachers’ interview responses. Notes from the Mastery Experience Worksheets (Appendix B) were analyzed for common themes and actions. This data was broken down into categories using code assignment of “interesting or potentially relevant” (Merriam, 2009, p. 178) information. Categories were formed as data segments from documents converge around a common idea relative to this study’s research questions. Converging or divergent themes relative to teachers’ responses might allow further insight into the teacher’s perception of the mastery experiences as a principal support.

Interviews. Interview data was collected digitally and transcribed. The transcriptions were analyzed using the constant comparative method as the researcher color coded emerging common themes and compared with other data collected for commonalities (Teddlie & Tashakkori, 2009). By coding and allowing emergent themes to develop, the interview data analysis allowed the researcher to gain insight into teacher’s perception of mastery experiences influence on the belief that they can affect student learning (Teddlie & Tashakkori, 2011) and be integrated with the quantitative measures of Bandura’s Teacher Self-Efficacy Scale (1997). See Table 3.

Table 3:

Code Mapping

CODE MAPPING FOR MASTERY EXPERIENCE OPPORTUNITY
(Research Question 2)

Teacher's Perception of Mastery Experience Influence on Teacher Efficacy

(Third Iteration: Emergence of Themes)

1. Immediate Feedback 2. Positive/Constructive Feedback
3. Feedback in Non-threatening Classroom Setting

(SECOND ITERATION: PATTERN VARIABLES)

1A. Time Sensitive Feedback 2A. Feedback Enhanced Understanding
1B. Real-time Feedback 2B. Feedback Focused Correction
1C. Contact Between Teacher and Leader 2C. Feedback Strengthened Skill

3A. Feedback in Actual Setting
3B. Non-threatening Growth Opportunity
3C. Superior to Outside-of-Classroom PD

(FIRST ITERATION: INITIAL CODES)

1A. Need for time sensitive feedback	1B. Feedback right now	1C. Leader response
1A. Feedback not delayed	1B. Immediate	1C. Connected to leader
1A. Feedback in better timeframe	1B. Immediate implementation	1C. Meet teacher needs
2A. This is how I fix this	2B. Focused feedback on skill	2C. Refined solid strategy
2A. Better understanding of skill	2B. Specific to my needs	2C. Used skill with pos. res.
2A. I know this will work next time	2B. Helped improve focus area	2C. This really does work
3A. Awesome to have FB in classroom	3B. No pressure	3C. Benefits more than other PD
3A. Allowed use of skill in classroom	3B. Non-threatening learning	3C. Best learning experience
3A. Location made the difference	3B. Not evaluative	3C. Impossible not to grow

For data analysis of both observational and interview data the constant comparative model (Glaser, 1965) was used. Documents and transcriptions will be initially analyzed for codes relevant to the study's research questions and theoretical framework. The emerging codes were compared and refined as necessary into categories. Once all data were collected, compared with other pieces of data (e.g. interviews are being compare to data collected from observations), and codified into categories, comparison of the categories took place. The categories were analyzed for relationship and interaction with other emergent categories to determine if categories can be merged or stand alone as factors of teachers' perception of mastery experiences as a principal support. To avoid confusion or irrelevant information being presented, analysis and presentation of findings were delimited by expressed and experienced factors impacting mastery experiences (Glaser, 1965).

Methods of Validity and Verification

A common misconception surrounding qualitative research is that this methodology is difficult to validate and replicate (Creswell, 2009; Gay, Mills, & Airasian, Maxwell, 2009; Merriam, 2009; 2015; Teddlie & Tashakkori, 2009). Very important to any methodology is verification of valid data collected during the research process. This study addressed internal validity through triangulation of data, data saturation during the data collection procedures, researcher reflexivity, member checks of interview data collected, and thick description of observational and interview findings. Merriam (2009) explained that qualitative researchers may never be able to capture an "objective truth or reality" (p. 215), but there are many ways to increase the credibility of the findings.

Triangulation

Triangulation is an approach in which the researcher collects multiple data forms through multiple collection strategies and methodologies (Creswell, 2009; Gay, Mills, & Airasian, 2015; Teddlie & Tashakkori, 2009). Triangulation helps to improve validity (Gay, Mills, Airasin, 2015) as well as reducing the possibility of “systematic biases or limitations of a specific source or method” (Maxwell, 2009, p. 93) allowing the researcher to gain a better understanding of the phenomena. In the case of this study, survey data were analyzed and integrated with interview data and principal observation notes for areas for convergence or divergence.

For example, the whole group survey from Phase 1 indicated teachers have a higher level of teacher efficacy via the mean score of a specific survey question (e.g. Item 11) above the individual teacher survey (pre-mastery experience) from Phase 2, but both the interview data and Phase 3 survey (post-mastery experience) data indicate a different outcome. The different outcome in this example might indicate the treatment, in this case the mastery experience, had an impact on teachers’ self-efficacy because the data diverged after the treatment.

Reflexivity

Reflexivity is the deliberate explanation by the researcher of the thoughts, assumptions, and biases throughout the research process (Merriam, 2009). I maintained a research journal that allowed me to critically reflect on the decisions, actions, and thoughts occurring during this study to provide the readers with transparent views of the researcher rationale and methodologies employed.

Member Checks

Member checks are an important part of creating internal validity if qualitative data (Creswell, 2009; Merriam, 2009). During interview transcription I conducted member checks that allowed me to ensure proper interpretation of the participants' responses and help to prevent researcher bias by providing the participant opportunities to clarify any misinterpretation (Creswell, 2009; Merriam, 2009). Maxwell (2009) referred to member checks as "respondent validation" and emphasized "participants' feedback is no more inherently valid than their interview response" (p. 111) only to be viewed as collected evidence. Member checks were conducted via email and catalogued in the researcher's reflexive journal.

Conclusion

This chapter outlined the methodology employed in this study. This mixed methods study used a pre-test/ post-test design with a 3-phase approach to explore teachers' perception of mastery experience as a principal support for teacher self-efficacy with mastery experiences being the intervention treatment. Data were collected from two public high schools located in the same school district in the southeastern region of the United States. All parties participated on a voluntary basis and were given opportunity to withdraw from the study at any time.

Phase 1 of the study included a convenience sampling of teachers where a self-efficacy survey was administered to every teacher at both schools. Phase 2 of the study included a purposive voluntary sample of teachers to participate in the treatment (mastery experiences) of the study. These teachers took the same survey administered in Phase 1 and then the treatment (mastery experience opportunity) was administered. Observational data were collected during Phase 2 by the researcher and reported on an observation worksheet to minimize classroom

disruption or impact on the experience by the researcher. Teacher interviews were conducted after the implementation of mastery experiences. These interviews were guided by an interview protocol predicated on answering the research questions of the study. Phase 3 of the study included the post-test administration of the teacher efficacy survey.

All quantitative data were analyzed using central tendency measures, specifically mean and standard deviation and integrated with the quantitative data collected through observations and interviews. Qualitative data were analyzed using the constant comparative method and integrated with the quantitative survey data.

Triangulation, reflexivity, and member checks will be utilized as methods of validity and verification. All data were analyzed for patterns of convergence or divergence through triangulation to better understand the phenomena. A reflexive journal of the researchers thought process and analysis was maintained throughout the data collection and analysis to ensure researcher transparency. Finally, member checks of interview data collected were executed with the interviewees to improve the internal validity of the study. Subsequent chapters present the study's research findings and their implication as well as outline the direction of future research.

CHAPTER 4

ANALYSIS AND FINDINGS

The purpose of this mixed methods study was to examine mastery experiences as a support tool used by principals and the influence of the mastery experiences on teacher self-efficacy as perceived by the high school teacher. This chapter will answer the following questions:

1. Do mastery experiences influence teacher efficacy? (QUAN)
2. How do teachers' perceive that mastery experiences provided by an instructional leader influence their teacher efficacy? (QUAL)

The chapter will provide a description of the district and quantitative data analyzed from the participating high schools in the district as a baseline for teacher self-efficacy. First, there will be an analysis and explanation of the quantitative data collected from individual participants prior to the mastery experience. Then, the qualitative data analysis of the individual participant from the mastery experience will be presented, followed by an analysis of the comparison of the quantitative data collected before and after the intervention.

Limitations

Limitations of a research study are characterized as those factors impacting the outcome of a study that are out of the control of the researcher (Simon, 2011). This study was limited by three factors. First, the use of the case study research design does not allow for findings to be generalizable to other settings (Merriam, 2009; Herriot & Firestone, 1983). The case itself is bound to specific subjects in specific environments; therefore, the findings of this study would not be applicable to other cases outside the specifications of this case study. Second, this study

was limited to the selection of volunteer subjects. Data collected during this study contained self-reported information that may or may not be completely exact and dependent on the participants' willingness to be forthcoming with fully accurate information. This limitation was addressed through the collection of multiple data points through interviews, document analysis, and observations. The participants may have feared reprisal for answers given and refused to provide the data requested. Findings were limited to those who choose to participate and cannot be generalized to all teachers in the sample schools. Finally, since the study will involve only high school teachers in small rural schools, the findings were not generalized to teachers at other levels. However, because instructional leaders are utilized in schools of varying sizes, location, and levels, the findings might have relevance.

A limitation of this study also pertained to the methodology of case study. Yin (2009) described "methodological rigor" as a "sloppy", asystematic procedure of experimentation that has "allowed equivocal evidence or biased views to influence the direction of findings and conclusions" as a possible limitation of case study research (p. 14). This limitation will be addressed through the systematic and thorough collection, analysis, and interpretation of all data by the researcher. Evidence will be reported fairly after careful analysis.

Another limitation is the bias of the researcher as a current school administrator. All data collection, analysis, and conclusion will be done in systematic order and reported fairly through multiple data sources. Multiple data sources will help to develop data source triangulation where the researcher observes similar phenomena across time, situation, and personal interaction (Stake, 1995) as to remove researcher bias. Maxwell (2005) said of triangulation, "This strategy reduces the risk that your conclusions will reflect only the systematic biases or limitations of a

specific source or method, and allows you to gain a broader and more secure understanding of the issues you are investigating” (p. 93-94). Another way to reduce researcher bias will be through the member check process (Stake, 1995).

District Context

The sites selected for this study include three high schools (grades 9-12) in a rural school district in a southeastern state. The school district has a collective student population of 60% economically disadvantaged with 17% students with disabilities (Tennessee Department of Education, 2016). From the three sites, 97 teachers took and 30 teachers voluntarily responded to the Teachers’ Sense of Efficacy Scale (Tschannen-Moran & Woolfolk-Hoy, 2001) survey consisting of a 1 (None) - 9 (A Great Deal) Likert Scale for a comparative baseline of teacher efficacy. Site A had a participation rate of 33%, Site B participated at a rate of 21%, and Site C at a rate of 44%. The overall site participant rate was 31% (see Table 4). Phase 2 and 3 participants (see Table 6) varied in content area and teaching experience. The gender of phase 2 and 3 participants have been withheld to protect their identity because the number of teachers in specific content areas at these sites is such that specific descriptors might provide identity-revealing information.

Phase 1 Analysis

Findings from the baseline participants are reported using descriptive statistics, specifically group means were utilized in the phase 1 item analysis of the TSES. Phase 1 participants indicated the lowest belief of “some influence” on the following survey items: 1, 4, 12, 14, and 22 (see Appendix E for complete instrument). Item 4, “How much can you do to motivate students who show low interest in school work?” (M = 6.4) and item 1, “How much

can you do to get through to the most difficult students?” (M = 6.63) were the items scored the lowest and most relevant to the research questions. Participants indicated the highest belief of “Quite a Bit” on the following survey items: 5, 8, 11, 16, and 20. Item 11, “To what extent can you craft good questions for your students?” (M = 7.9) and item 20, “To what extent can you provide an alternative explanation or example when students are confused?” (M = 8.0) were items scored highest by the baseline participants.

Phase 1 data were disaggregated into the 3 highest and 3 lowest item mean scores by school. The schools were labeled as school A, school B, and school C and findings are reported using descriptive statistics. Site-level survey data from phase 2 correspond with the phase 1 survey data analysis as item 5 is in the highest category for each site as well as the entire data set and item 22 is among the lowest. Item 5 of the TSES states, “To what extent can you make your expectations clear about student behavior” and item 22 states, “How much can you assist families in helping their children do well in school”. The data are represented in Table 5.

Table 4:

Table of Participants (Phase 1)

Site	Teacher Population	Responses	Percentage of Resp.
School A	25	11	44%
School B	42	9	21.4%
School C	30	10	33.3%
Total	97	30	30.9%

Table 5:

Item Analysis by Site

		Highest			Lowest		
School A	Clear Expect for St	Provide Alt Explan	Rspnd to Diff Quest	Get Thru to Diff St	Asst Fam to Help St	Foster St Creativity	
	Mean	8.27	8.18	8.00	5.64	5.73	6.27
	SD	0.91	0.75	1.00	1.69	2.37	2.65
School B	Rspnd to Diff Quest	Clear Expect for St	Craft Good Quest	Asst Fam to Help St	Use Var of Assess Strat	Calm Disrupt St	
	Mean	9.00	8.67	8.44	6.44	7.2	7.33
	SD	1.00	0.50	0.88	2.40	1.6	1.5
School C	Clear Expect for St	Establish Routines	Estblsh Clsrm Mngt	Asst Fam to Help St	Implmnt Alt Strat in Clsrm	Rspnd to Defiant St	
	Mean	8.60	8.50	8.00	5.70	6.40	6.40
	SD	0.52	0.53	0.80	1.49	1.35	1.51

Characteristics of Mastery Experience Context

During phase 2, volunteers (n =5) were asked to participate in a mastery experience opportunity. The volunteers were assured confidentiality would be maintained throughout the study as well as in the presentation of findings by removing identifiers such as name of participant, name of participant's school or school district, and participant's teaching assignment. To help ensure confidentiality of those teachers working in schools with small numbers of specific content area teachers (i.e. Algebra 1, World History, English 1, etc...) no participant has been identified by content area taught. All data and documents collected during this study have been stored in a locked filing cabinet behind 3 locked doors. The mastery experience opportunity included the pre-intervention TSES survey, a pre-conference in which the teacher chose an area of focus and discussed potential strategies that could improve the area of focus, and a post-mastery experience interview. The participants of this study were explicitly informed prior to the pre-conference conversation that though I am the researcher conducting this project, I am not their principal nor will I be reporting any part of the mastery experience opportunity to their principal/ immediate supervisor or any school official in the district. In efforts to make the mastery experience as Bandura (1997) suggested "non-threatening" and "non-punitive", I emphasized the focus of this mastery experience opportunity as a chance to improve an area of pedagogy of the participants choosing and all feedback given by the researcher should be viewed as suggestive tools to help the teacher improve that area of focus. The participants were clearly informed that the mastery experience opportunity was not in any way connected by or to influence any teacher evaluation system utilized by their school district. No building administrator or district educational leader was involved in any facet of the mastery experience

opportunity. The teachers were male (n = 3) and female (n = 2) from a variety of content areas (Science, [2] Math, Social Studies, and CTE) and experience levels ([2] less than 3 years, [2] 4-16 years, and [1] 16 plus years). See Table 6.

During the pre-conference, teachers were asked to choose an instructional strategy for the focus of their mastery experience opportunity. After choosing their area of focus, teachers were asked to explain specific strategies currently used around the area of focus. The researcher noted the strategies used and made suggestions of other strategies that could be employed during a lesson to assist with the teacher's mastery of the area of focus. For example, one teacher chose questioning as the area of focus and explained that multiple types and levels of questions asked were current strategies. The teacher was given the suggestion of choosing an essential or overarching question that would be used as the lesson's focus or objective and directing all other questions asked during the lesson from the overarching question. The researcher asked the teacher to plan regular classroom transitions where the students would move or transition from instruction to activity or activity-to-activity so that feedback from the researcher may be provided without interruption to the students learning process. Each pre-conference lasted approximately 30 minutes and took place during the planning period of the participating teacher in their classroom or area designated for teacher planning. Consent forms were signed and the pre-mastery experience TSES was administered to these teachers during the pre-conference time.

Each teacher was asked to execute a regularly scheduled lesson plan with opportunities imbedded within the lesson that would allow for mastery experiences of the focused area chosen. Each teacher would concentrate on the instructional strategy chosen and utilize the recommendations provided for the area of focus during the lesson.

Table 6:

Table of Participants (Phase 2/3)

Site	Teacher	Years Experience	Content Area	Area of Focus
School A	Teacher 1	4-10 years	Career Tech.	Motivating Students
School B	Teacher 1	4-10 years	Social Stud.	Questioning
	Teacher 2	0-3 years	Science	Questioning
School C	Teacher 1	0-3 years	Math	Motivating Students
	Teacher 2	11-15 years	Science	Questioning

Throughout the lesson, the teacher was given feedback in the form of encouragement, guidance, and suggestion all directed towards the area of focus by the researcher. During natural breaks in the lesson (i.e. transitions from instruction to activity or activity to activity), the researcher would remind the teacher of the strategies discussed in the pre-conference and provided feedback specific to the area of focus. For example, a teacher focused on questioning forgot to provide ample time for the students to answer the questions presented. So, when the teacher transitioned the students to an activity, the researcher encouraged the teacher to continue asking the various levels of questions, while remembering to allow enough time for the students to respond. Another suggestion provided was to ask the higher order questions to a student, allow the student to formulate a response on paper while the remainder of the class was given other questions, then return to the original student to present their response rather than stopping instruction to wait for the response to the more difficult question. Disruption to the students'

learning process was minimal because the natural breaks were planned into the teachers lesson and used by the researcher to relay feedback and suggestions.

Lesson duration varied from 52 to 60 minutes. Phase 3 of the study concluded with a post-intervention TSES survey and teacher reflective interviews. The interview questions were open-ended and developed to elicit responses specific to individual teacher experiences and perceptions of their mastery experience opportunity. See Appendix C for the interview protocol.

Interview Data Analysis

Analysis of the interview data resulted in three themes determined through the code mapping process (see Table 3). Teacher interviews were conducted via phone call where the teacher gave the researcher permission to record the conversation. All five interviews were approximately 8-10 minutes in duration and were scheduled to accommodate the teacher's schedule. The interviews were transcribed by the researcher and analyzed for themes using the coding process. The transcribed interviews were read and common responses by the teachers were designated by color code. The transcriptions were analyzed collectively rather than by school so that each response was viewed individually.

The analysis of the transcriptions yielded initial codes that were narrowed to more definitive patterns and resulted in the emergence of three specific themes explaining teachers' perception of mastery experiences as a tool regarding their teacher self-efficacy. The emerging themes were the provision of immediate feedback, positive and constructive feedback, and feedback given in a non-threatening classroom setting given to the teacher during the mastery experience opportunity. In the context of the mastery experience opportunity interview responses, immediate feedback can be described as feedback given in close proximity to the

action around the focus area (i.e. questioning) rather than days or weeks later. Positive and constructive feedback can be explained as a response to an action that provides specific actionable corrections in such a way that the feedback provides clearer understanding to the teacher of the focus area without being critical. Finally, feedback in a non-threatening classroom setting can be described as receiving actionable corrections in the environment where the action(s) took place presented in such a way as to not be punitive (i.e. connected to evaluation or job threatening).

Mastery Experience Observation Analysis

During the mastery experience opportunity, the researcher collected notes relative to the teachers' and students' actions during the lesson. Teachers had an area of focus in which feedback from the researcher was provided as the teacher executed a lesson in their content area standards. As the teacher utilized the feedback, the researcher noted teacher interactions with the students as well as student reactions/ responses. The researcher also collected data of the teachers' interaction with the feedback for the area of focus. Teacher body language and disposition during the lesson as feedback was given and attempted was recorded. Table 7 provides individual data points collected during the mastery experience opportunity.

Table 7:

Researcher Observation Outcomes

Teacher	Area of Focus	Lesson	Outcome
School A T-1	Motivating Students	Skills Necessary for Manufacturing	Teacher had difficulty initially connecting to students, but when encouraged to connect content to personal student goals the students became more engaged evidenced by participation in discussion and questions from students.
School B T-1	Questioning	Interpreting Photos of 911 for Publisher's Intent	Teacher asked an effective number of questions to students regarding the emotions evoked from 911 photographs and was encouraged to provide students with enough time to respond to these questions. Teacher began utilizing effective wait time for student response. The students' increased participation made the teacher smile and seem to become more confident as the lesson progressed. The teacher was encouraged to choose a specific student to ask a more difficult higher-order thinking question and provide that student with an opportunity to formulate a response while the teacher asked other students their opinion of photographs. Teacher was visibly happy with the level of response received by the student provided more wait time.

Table 7 Continued

Teacher	Area of Focus	Lesson	Outcome
School B T-2	Questioning	Thermodynamics	Teacher was encouraged to ask guiding questions to assist students in reaching the desired response to the original question. The teacher has minor difficulties with wait time, but as more guiding questions were asked, student responses became more frequent and detailed. The teacher verbally expressed his pleasure with students for their answers. Teacher was also encouraged to utilize students problem solving on board as an opportunity to ask students to explain the processes (thought and mathematical) needed for the solution. Teacher used this feedback and students explanations led to deeper discussion as well as revealing student's misunderstanding of processes.

Table 7 Continued

Teacher	Area of Focus	Lesson	Outcome
School C T-1	Motivating Students	Tessellations	<p>Teacher was encouraged to demonstrate excitement for the lesson through body language, tone, and offering incentives (candy) to help students become more motivated in the lesson. The teacher used exciting tonal inflection in speech and emphatic gestures while explaining tessellation concept. Students responded by looking at each other, smiling, and engaging in the activity. Teacher was encouraged to give positive feedback to students and utilize exemplars from students during activity. Teacher circulated the classroom with positive feedback to students and showed student examples of tessellations, which elicited request from students for the teacher to see their work. Teacher was visibly happy and encouraged.</p>

Table 7 Continued

Teacher	Area of Focus	Lesson	Outcome
School C T-2	Questioning	Solution Concentrations and Molarity Calculations	<p>Teacher was encouraged to provide an “over-arching” question directing students to objective mastery. Teacher forgot to present the question at the beginning of the lesson, but was reminded a few minutes into the lesson and presented the question. This resulted in a student making a major connection to previous information and sharing that with the class. Teacher was amazed at the student’s response and other students’ reactions. Teacher was encouraged to utilize guiding questions to help students arrive at specific answers. Teacher used various levels of questions in the lab experiment that helped guide students to deeper understanding of solutions. Students responded with more correct answers and became more engaged in discussions/explanations.</p>

Mastery Experience Summary

An individual's self-efficacy is relative to the specific task being attempted (Bandura, 1997). More specifically, Bandura (1997) posited verbal persuasion, physiological cues, vicarious learning, and mastery experiences influence individual self-efficacy, the most influential being mastery experiences. Since mastery experiences have the greatest influence on self-efficacy (Bandura, 1997) and may assist teachers with improving pedagogical skills, instructional leaders might include these experiences as a support to help teachers develop and master necessary instructional strategies.

The quantitative analysis to follow will show the potential impact that mastery experiences might have on teacher self-efficacy. Also, the analysis of the TSES pre and post-intervention will provide a framework for attaching meaning to the qualitative analysis of teacher's interview responses.

Research Question1: Do mastery experiences influence teacher efficacy? (QUAN)

The previous description of the mastery experience opportunity provides reference for the quantitative data analysis. Inferential analysis was not completed due to the limited number of respondents in each phase of the study, but the demographic statistics will provide some explanation of the possible differences in teacher self-efficacy between phase 1 (control), phase 2 pre-mastery experience intervention, and phase 2 post-mastery experience participants. Phase 2 pre-intervention and phase 2 post-intervention subjects are the same participants measured before and after implementation of the mastery experience opportunity.

Pre-intervention compared to post-intervention. There are differences in item mean scores of phase 2 pre-intervention and phase 2 post-intervention participants. The item mean

scores increased in 23 of 24 TSES items in the post-intervention participants. The lone item mean score that did not increase remained the same (see Table 6). The largest changes in mean score between pre and post intervention participants occurred in items 22, 2, 14, 12, and 23. Item 22 asks, “How much can you assist families in helping their children do well in school?” Pre-intervention mean score for item 22 (M = 5) increased (M = 7.2) in post-intervention. Item 2 asks, “How much can you do to help your students think critically?” Pre-intervention mean score for item 2 (M = 6.8) increased (M = 8.2) in post-intervention. Item 14 asks, “How much can you do to improve the understanding of a student who is failing?” Pre-intervention mean score for item 14 (M = 6.4) increased (M = 7.6) in post-intervention. Item 12 asks, “How much can you do to foster student creativity?” Pre-intervention mean score for item 12 (M = 6.4) increased (M = 7.4) in post-intervention. Item 23 asks, “How well can you implement alternative strategies in your classroom?” Pre-intervention mean score for item 23 was 7 and increased to 8 post-intervention.

Specific differences in the mean scores of individual TSES items between the pre-intervention group and the post-intervention responses have relevance and interest to this study. Items of particular interest measure teacher efficacy prior to and following mastery experience intervention in the areas of focus chosen, motivation (n = 2) and questioning (n = 3). Item 1 closely aligns with motivating student and asks, “How much can you do to get through to the most difficult students?” had a mean of mean of 6.2 in the pre-intervention responses and had a mean of 7 in the post-intervention responses, (0.8 increase). Item 4 also aligns with motivating students asks, “How much can you do to motivate students who show low interest in school?”

had a mean of 6.6 in the pre-intervention responses and a mean of 7.4 (.8 increase) in the post-intervention responses.

Item 14 is of particular interest as it encompasses both motivation and questioning strategies, “How much can you do to improve the understanding of a student who is failing?” has a pre-intervention mean of 6.4 and post-intervention mean of 7.6. The mean increase (+1.2) for item 14 from pre-intervention to post-intervention is one of the largest mean increases of a single TSES response item in this study.

Item 11, “To what extent can you craft good questions for your students?” is an important item because 3 of 5 participants in the mastery experience selected questioning as their strategy of focus. The mean score of item 11 for pre-intervention ($M = 7.0$) and the post-intervention ($M = 7.8$) responses resulted in an increase (+.8).

The largest change in the pre-intervention and post-intervention responses was evidenced in item 22, “How much can you assist families in helping their children do well in school?” For item 22 the pre-intervention response is a mean score of 5.0. The mean score for the post-intervention responses ($M = 7.2$) is an increase of 2.2. Though not directly related to questioning or motivating students, the response to this item could have implications on future research of mastery experience and teacher self-efficacy. See Table 8 for complete pre-post item analysis.

Table 8:

TSES Pre-Post Intervention Item Mean Analysis

Item	Mean Score Pre- Intervention (n=5) w/ diff.	Mean Score Post- Intervention (n=5)	Mean Score Diff. Between Post-Int./ Pre- Int.
1	6.2	7	+.8
2	6.8	8.2	+1.4
3	7	7.4	+.4
4	6.6	7.4	+.8
5	7.2	7.8	+.6
6	7.4	8	+.6
7	7.2	7.8	+.6
8	7.4	7.8	+.4
9	7	7.8	+.8
10	7.6	7.8	+.2
11	7	7.8	+.8
12	6.4	7.4	+1.0
13	7.6	7.8	+.2
14	6.4	7.6	+1.2
15	7	7.2	+.2
16	7.2	8	+.6
17	6.6	7.4	+.8
18	6.8	7.4	+.6
19	7	7.8	+.8
20	8	8	0.0
21	6.8	7.4	+.6
22	5	7.2	+2.2
23	7	8	+1.0
24	7.4	7.8	+.4

Post-intervention compared to phase 1. The mean differences of the TSES item responses between the post-intervention participants and the phase 1 (Control) participants are not as large, but similar in difference for specific items. Overall, the mean item score for the post-intervention responses increased for 16 items, decreased for 5, and did not change for 3 (see Table 9). The largest differences between the post-intervention and phase 1 participants occurred on items 22, 23, 14, 9, and 2. Item 9 did not have a large mean increase in the pre-post comparison and asked, “How much can you do to help your student value learning?” Item 9 increased (.63) from $M = 7.17$ in phase 1 response to $M = 7.8$ in the post-intervention response. The largest mean decrease was on item 8, “How well can you establish routines to keep activities running smoothly?” from phase 1 (-.47). Table 7 displays all the item mean differences of the phase 1 and post-intervention comparison.

There is a need to note mean differences of TSES item responses specifically related to post-intervention participants’ area of focus and phase 1 survey responses. TSES items 1 and 4 are directly related to motivating students. The mean for item 1, “How much can you do to get through to the most difficult students?” increased (.37) from phase 1 responses ($M = 6.63$) to post-intervention responses ($M = 7$). The mean for item 4, “How much can you do to motivate students who show low interest in school work?” increased (1.0) from phase 1 responses ($M = 6.4$) to post-intervention responses ($M = 7.4$). Item 14 connects motivating students with questioning. The mean for item 14, “How much can you improve the understanding of a student who is failing?” increased (1.2) from phase 1 response ($M = 6.8$) to post-intervention response ($M = 7.6$). Finally, item 11 is specific to questioning asks, “To what extent can you craft good

questions for your students?” The mean for item 11 decreased (.13) from phase 1 response (M = 7.93) to post-intervention response (M = 7.8).

Not every item on the TSES has been quantitatively explained in this analysis, but has been outlined in Table 10. Table 10 compares the mean scores for each item response to the TSES by the different intervention group of participants in this study and the difference in mean score of each item of each comparative group. The three groups represented are the “control” group of survey only participants (phase 1), the pre-intervention, and post-intervention group (phase 2). The following section seeks to answer the second research question through analysis of teacher interview and observational data (QUAL)

Table 9:

TSES Phase 1 (Control)/ Post-Intervention Item Analysis

Item	Mean Score Control (n=30)	Mean Score Post- Intervention (n=5)	Mean Score Diff. Between Post-Int./ Control
1	6.63	7	+.37
2	7.63	8.2	+.57
3	7.63	7.4	-.23
4	6.4	7.4	+1
5	8.5	7.8	-.7
6	7.57	8	+.43
7	7.97	7.8	-.17
8	8.27	7.8	-.47
9	7.17	7.8	+.63
10	7.77	7.8	+.03
11	7.93	7.8	-.13
12	6.97	7.4	+.43
13	7.8	7.8	0.0
14	6.8	7.6	+.8
15	7.2	7.2	0.0
16	7.9	8	+.1
17	7.4	7.4	0.0
18	7.31	7.4	+.09
19	7.1	7.8	+.7
20	7.97	8	+.03
21	7.23	7.4	+.17
22	5.93	7.2	+1.27
23	7.03	8	+.97
24	7.57	7.8	+.23

Table 10:

TSES Item Analysis

Item	Mean Score Control (n=30)	Mean Score Pre-Intervention (n=5) w/ diff.	Mean Score Diff. Between Pre-Int./Control	Mean Score Post-Intervention (n=5)	Mean Score Diff. Between Post-Int./Pre-Int.
1	6.63	6.2	-.43	7	+.8
2	7.63	6.8	-.83	8.2	+1.4
3	7.63	7	-.63	7.4	+.4
4	6.4	6.6	+.2	7.4	+.8
5	8.5	7.2	-1.3	7.8	+.6
6	7.57	7.4	-.17	8	+.6
7	7.97	7.2	-.77	7.8	+.6
8	8.27	7.4	-.87	7.8	+.4
9	7.17	7	-.17	7.8	+.8
10	7.77	7.6	-.17	7.8	+.2
11	7.93	7	-.93	7.8	+.8
12	6.97	6.4	-.57	7.4	+1.0
13	7.8	7.6	-.2	7.8	+.2
14	6.8	6.4	-.4	7.6	+1.2
15	7.2	7	-.2	7.2	+.2
16	7.9	7.2	-.7	8	+.6
17	7.4	6.6	-.8	7.4	+.8
18	7.31	6.8	-.51	7.4	+.6
19	7.1	7	-.1	7.8	+.8
20	7.97	8	+.03	8	0.0
21	7.23	6.8	-.43	7.4	+.6
22	5.93	5	-.93	7.2	+2.2
23	7.03	7	-.03	8	+1.0
24	7.57	7.4	-.17	7.8	+.4

Research Question2: How do teachers’ perceive that mastery experiences provided by an instructional leader influence their teacher efficacy? (QUAL)

Quantitative findings showed there are differences in levels of teacher self-efficacy responses on the TSES between the control group and pre-post intervention group. This section will answer the question: How do teachers’ perceive that mastery experiences provided by an instructional leader influence their teacher efficacy? Five teachers participated in phase 2 and phase 3 of this study, which included a mastery experience opportunity observed by the researcher and concluded with an interview. The teacher’s responses will provide some explanation as to their perception of the influence the mastery experience opportunity had on their beliefs about their teacher efficacy. These findings represent the experiences of the five teachers participating in phase 2 and phase 3 of this study and are limited in their generalizability.

Teacher efficacy is influenced by four factors (Bandura, 1996). The factor with the greatest influence on teacher efficacy is mastery experiences (Bandura, 1996). The teachers’ responses revealed that the immediate feedback targeted to their area of focus within the mastery experience opportunity, the combination of positive and constructive feedback, and the feedback given in the classroom setting contributed to the perceptions that mastery experiences have on their teacher efficacy. The following section further explains these findings.

Immediate Feedback Influences Perception of Teacher Efficacy

All five teachers participating in the mastery experience opportunity of this study felt the most influential component was the immediate feedback provided. The primary component of the mastery experience is the opportunity for immediate feedback that allows the subject to

revise efforts of the skill towards the expected outcome (Bandura, 1997). Teacher 1 of School C explained the influence of immediate feedback received in the mastery experience opportunity relative to previous methods of feedback as:

You were there in the classroom with me and you were giving me immediate feedback. I was trying the things you told me to try and you would tell me “yes” you did this part right, here’s how you can fix this part. It was one of the best educational experiences for me. I feel like the mastery experience... was more beneficial than any PD [professional development] I could take on the weekend because [receiving traditional feedback] sometimes it’s too late to fix a problem you need help with and to have someone in the classroom there with you watching what you are doing and giving immediate feedback on what you could do or not do, even things you could add to your teaching, for me [immediate feedback is] really beneficial.

During the mastery experience opportunity, the teacher was observed having difficulty remembering specific strategies that would help with implementing various question types that could illicit higher order thinking from the students. Teacher 1 of School B expressed that the feedback opportunity was most influential on teacher efficacy during the mastery experience as they stated:

I thought the most impactful [component of the mastery experience] was the 1 on 1 contact between me and you as the lesson was unfolding and getting feedback from you as I was going through the lesson. I think that was the biggest thing because it was things that you said that helped me to the next part of the lesson that helped me make that jump. I think that was the best part of the mastery experience.

In a similar belief, Teacher 1 of School C expressed improved teacher efficacy in the focus area a result of the immediate feedback:

I tried some of the tricks that you gave me, like being excited about the project really focusing on what the kids can do and helping them understand and make it through what they couldn't do. Really making sure to like touch base with every student and to help them feel like I am seeing you in this classroom. Instead of the students hiding in the corner and not if I don't talk, I won't be seen kind of thing and drawing those students out. And then through the entire class when I took a break from teaching or something, you were always there to encourage me and tell me what I did right and give me extra chance something I could add to that and it was overall really awesome to have that happen in class while I was teaching right then and there, immediate feedback.

Bandura (1977) posited mastery experiences provide the greatest influence on self-efficacy because the subject sees immediate results that allows for immediate adjustments toward the desired outcome to be made. The immediate feedback provided to the teachers allowed them to make such adjustments towards their area of focus. Teacher 2 of School B had difficulty introducing the "main guiding question" for the lesson that would allow the students to be guided to the lesson's objective by answering this overarching question. This teacher, whose area of focus was questioning, explained:

I thought it went great in my classroom, um I actually really appreciated your insight in the classroom, because that's where I feel sometimes I have a good plan and the good plan on paper will get some great thinking going on, but when its actually in the classroom it turns out to be a question I wasn't actually going for. So the fact that you

were able to help me during the lesson, I kept forgetting to ask them the main guiding question. So when you prompted me to ask the guiding question again, or for the first time for the guided question, it just unfolded exactly like I wanted it to. It got the kids thinking about what was the purpose and I was very pleased it got them thinking critically immediately.

Teacher 2 of School B believed the specific immediate feedback was important to utilize in later lessons stating:

The feedback you gave me during my instruction was really beneficial. I even took down notes and writing them down later. Well it helped me a lot, because I had been struggling with either trying to reach those that are on the lower end and higher end. But, knowing that I have different strategies now to ask questions and use those strategies to ask questions so that I reach those that need to be reached at a higher level as well as those at the average normal level and the lower level as well. So, I feel like it had helped me out a lot.

Four of five teachers (Teacher 1- School A, Teacher 1- School B, Teacher 1- School C, and Teacher 2- School C) felt the feedback received from traditional methods such as teacher evaluations lacked in response time. In other words, the feedback received during the evaluation process doesn't provide the immediate feedback these teachers felt the mastery experience provided that allowed for specific adjustments necessary to achieve the expected outcome of their area of focus. This was evidenced by Teacher 2 of School C:

It wasn't me thinking about what I was going to do. It was me actually doing it and getting immediate feedback which is what I try to give my students. I try to pride myself

on giving immediate feedback to them and I feel teachers are no different. We need, besides just professional development; we need that immediate feedback that's not being evaluated.

Immediate feedback helped the teachers of this study focus energies on specific strategies that they believe impacted the specific outcome they were expecting. All mastery experience participants directly or indirectly expressed a positive influence on their teacher self-efficacy related specifically to their area of focus.

Positive and Constructive Feedback Influences Perception of Teacher Efficacy

Throughout the collection of interview data, participants expressed that positive and constructive feedback was an influential factor on their teacher efficacy during the mastery experience opportunity. Every teacher, during the mastery experience opportunities was observed utilizing feedback given as well as seeking further feedback throughout the execution of the lesson as they continually worked to improve their area of focus. Bandura (1977, 1997) explained that improved self-efficacy could be manifested through increases in motivation and perseverance towards improved skill acquisition. Several teachers stated that positive, constructive feedback coupled with its timeliness provided motivation and the perseverance necessary to continue improving their area of focus:

It reinforced that a lot. Because sometimes I doubt myself a lot if I really am asking the right questions and if I can get them to think critically just through the question I ask in my classroom. So that reinforced the idea that yes I can prompt that in my classroom or I can get my students to engage in a more thoughtful way just by the types of questions I ask. (Teacher C 2)

Teacher 1 of School B expressed similar results from the constructive, positive feedback impacting a desire to continue improving the questioning focus area worked in during the mastery experience opportunity when stating:

It [mastery experience] impacted by kind of instilling in me that I can go make a further step in teaching and asking questions. You were able to get me to the next level of being a teacher. I thought it helped and was probably one of the best lessons that I have done in a while. It was really good! I was very satisfied with the outcome.

Teacher 2 of School B explained the benefits of constructive feedback specific to the area of focus while explaining this mastery experience opportunity:

The questioning was what I was focusing on with my students and how to reach those for higher thinking order as well as reaching those at a lower level of thinking... It (mastery experience opportunity) helped me... knowing that I have different strategies now to ask questions so that I reach those (high level and low level) students.

Teacher 1 of School A also expounded on the benefits received from constructive feedback in the focus area of motivating students and the influence that feedback has on teacher efficacy by stating:

Good advice as far as having different ideas for helping students stay on subject... and keeping them motivated is a positive thing and how to improve yourself and the situations in the classroom.

Another characteristic of mastery experiences is the non-threatening manner in which feedback is provided (Bandura, 1996). Unlike traditional forms of instructional feedback (i.e. teacher evaluations), mastery experiences do not contain a quantitative rating system based on criteria

used for rating. Teacher 2 of School B described the value of principals using mastery experiences as a tool to support teachers as:

I think YES [mastery experience] would be very valuable because I felt very comfortable. I didn't feel like I was being evaluated. It wasn't a judgment situation. It was, I went into it like I knew it was going to be very helpful and I went into it very open minded about taking advice and I wasn't nervous about what kind of a score I was getting. I was honestly just looking for some feedback. I thought it was great.

Teacher 1 of School A expressed appreciation for someone spending time with helping develop instructional tools and believed this was an influence on their teacher efficacy:

I think it's good to have someone who would take the time and care enough to evaluate what you're doing and give you ideas on how to improve yourself and how to improve the situations in the classroom. You took the time to come out to not only talk to me, but [to see] the classroom situation and how I interact with the students and how the students interact with me. I just think it's good advice and a good thing to be open for that.

Positive and constructive feedback given during the mastery experience opportunity provided the teachers necessary support for increased motivation and perseverance towards improving their area of focus. The way the feedback was administered in conjunction with the non-threatening (non-evaluative) context created an environment for the principal to positively influence their practice.

Feedback in Classroom Setting Influences Perception of Teacher Efficacy

Bandura (1977, 1997) explained that mastery experiences are the most influential factor influencing self-efficacy. A significant component of the mastery experience is the aspect of a

skill being practiced in the most realistic and practical environment. In this study, the skills are practiced with students during a lesson in the classroom setting. All participants in this study implied this was a factor that had a positive influence on their teacher efficacy. Teacher 2 of School C expounded on the importance of the mastery experience involving a specific skill being practiced in the natural setting as they explained:

I love the fact that we can pick one or two things to hone in on during the lesson, because I enjoy going to in-service trainings and professional developments during the summer, but I feel this was most effective because it was in the moment.

Teacher 2 of School B described the impact of feedback in the classroom setting as well as influence of this mastery experience opportunity on future lessons in the statement:

It really stuck with me, the feedback you gave during class and I plan to use it in future classes. I even took down notes. The feedback you gave me during my instruction was really beneficial.

Teacher 2 of School C explained that the mastery experience opportunity provided an unexpected result that wouldn't have taken place outside the classroom when describing the impact of the questioning practice on her level of teacher efficacy when they stated:

It was amazing! Because to be honest with you I was expecting the answer or the “aha” moment to come from a couple of other students. I guess I had a preexisting idea of what I thought would happen and the fact that that student was the one that had the moment that actually was understanding what I wanted them to get and what was the purpose of what we were doing, the fact that he did that I was very excited. I felt the questioning was not only effective for those kids that already had the higher order thinking skills, but

its going to be effective with some of my other students on different levels in the classroom.

Mastery experience opportunities provide valuable feedback in a setting aligned with the actual execution of the skill. This alignment allows the teacher to directly connect and transfer the new skill to future opportunities in which the same skill will be employed. Thus, positively influencing the teacher efficacy related to the skill and the expected outcome when using the skill.

Integrated Findings Summary

Integrated findings of quantitative and qualitative data supported one another.

Quantitative data from the TSES supports the qualitative observational and interview data that mastery experiences as a principal support influences teacher perception of teacher efficacy.

Overall, quantitative and qualitative data support a positive influence of mastery experiences on teacher efficacy through increased mean scores from pre-intervention to post-intervention coupled with positive interview responses and observational data. Specifically, phase 2 participants' belief that they could affect certain outcomes in the focus areas of questioning and motivation was affirmed quantitatively and qualitatively.

Findings from observational data support interview response data as well as TSES survey data. For example, Teacher 1, School B (area of focus, questioning) was observed getting frustrated when students were not answering questions correctly. When encouraged to provide appropriate "wait time" for student responses, the teacher allowed enough time for the students to formulate answers to the questions. This resulted in more students answering questions effectively; as a result the teacher was visibly encouraged and smiled when more students

answered questions appropriately. This teacher's interview response, "I thought it was one of the best lessons that I have done in a while" when elaborating on the questioning feedback received during the mastery experience supported the observational finding. Furthermore, the TSES survey data (Pre-Intervention compared to Post-Intervention) supports observational and interview data for Item 11, "To what extent can you craft good questions for your students?" with a .8 increase in mean score.

Another example of integrated data supporting the research finds was from Teacher 1, School A (are of focus, motivation) when expounding on the benefits of constructive feedback stated, "Good advice as far as having different ideas for helping students stay on subject... and keeping them motivated is a positive thing and how to improve yourself and the situations in the classroom." This teacher was advised to help students make personal connections to the instructional content to improve motivation and participation. The teacher helped students to make connections between the content and their future careers for greater student motivation as a response to feedback received during the mastery experience opportunity. More students became engaged in classroom the discussion, which prompted the teacher to establish more connections. The teacher was visibly smiling and more active during student discussion. Item analysis of the TSES responses support the observational and interview data with increases in post-intervention mean scores on Item 1, "How much can you do to get through to the most difficult students?" and Item 4, "How much can you motivate students who show low interest in school work?" of .8 from the pre-intervention means as well as a mean increase of 1.0 for Item 4 from the control group to post-intervention group.

Item 14 of the TSES survey, “How much can you improve the understanding of a student who is failing?” combines focus areas of questioning and motivation. Item 14 mean had the most significant increase from pre-intervention to post-intervention (+1.2). Teacher 2, School C experienced an effective “aha” moment of questioning describing, “I felt the questioning was not only effective for those kids that already had higher order thinking skills, but its going to be effective with some of my other students on different levels in the classroom.” Teacher 2, School C was reminded to ask the “over-arching” question that allowed the students to make valuable connections between previous concepts taught and this lesson’s objective. The student that made the connection and explained the concept to the class was not the student this teacher anticipated doing so. The teacher was excited and surprised by the student’s ability to connect the concepts simply based on the question asked by the teacher.

Conclusion

The three schools sampled utilized the same teacher evaluation model and represented similar student and teacher demographics. The quantitative analysis showed a difference in teacher efficacy between the control group and the experimental group of teachers who participated in the mastery experience opportunities. The quantitative analysis also showed a difference in the experimental group from pre-intervention to post intervention.

Analysis of the qualitative data provided insight into the teachers’ perception of the mastery experience opportunities on their teacher efficacy. The analysis revealed three themes expressed in the teachers’ interview responses of: the immediate feedback catered to their area of focus within the mastery experience opportunity, the combination of positive and constructive feedback, and the feedback being given in the classroom setting contributed to the perceived

influence mastery experiences has on their teacher efficacy. These factors appeared to have the greatest influence on the perceived influence of the mastery experience opportunity on teacher efficacy.

While these findings represent the experience of the five teachers with the influence of mastery experience opportunities on teacher efficacy, more research is needed to confirm if these findings are true for all teachers. In spite of the limited number of participants resulting in a limited amount of data, several suggestions may be made for improving professional development and teacher efficacy in schools across the state. These suggestions will be discussed in the next chapter.

CHAPTER 5

DISCUSSION AND IMPLICATIONS

The methodology, data collection, and data analysis of this study has been guided by the questions:

1. Do mastery experiences influence teacher efficacy? (QUAN)
2. How do teachers' perceive that mastery experiences provided by an instructional leader influence their teacher efficacy? (QUAL)

The following chapter discusses the findings relative to research on teacher efficacy, mastery experiences as a tool for building teacher efficacy, implications for state and district leaders, and offers recommendations for mastery experience and teacher efficacy research.

District and school leaders are charged with improving instructional strategies so that teachers might provide the most effective instruction for their students. Tools and strategies ranging from teacher evaluation to numerous professional development programs are employed in attempt to accomplish improved instruction. Efficacy impacts one's desire to attempt new strategies and the perseverance required to enact the necessary changes for improved skills (Bandura, 1977; 1997). For teachers to acquire and sustain the necessary skills for instructional improvement, their level of teacher efficacy must be increased. Bandura's (1977) theory on efficacy posits that self-efficacy must be improved before behavior might change. Bandura (1997) also stated that of the four factors (mastery experience, vicarious learning, verbal persuasion, and affective states) found to impact self-efficacy, mastery experience is the most influential on self-efficacy. To help teachers improve instructional strategies, school leaders might first need to focus on improving teacher self-efficacy through mastery experience

opportunities. This study attempted to explain teachers' perception of mastery experience's influence on teacher self-efficacy as a tool of teacher support utilized by school leaders.

Discussion of Findings in Light of Research on Teacher Efficacy

Tschannen-Moran and Woolfolk-Hoy (2001) found a greater need for research to find “what structural features and supports make a difference in the formation of efficacy beliefs” and “what leadership behaviors on the part of the principal make a difference [on teacher efficacy]” (p. 802). Of the five teachers participating in the mastery experience opportunity in this study, all five teachers stated that the immediate support provided gave them a greater sense of understanding and desire to try the suggested strategies. This was supported by an increased teacher efficacy mean on the TSES in 23 of 24 items. Bandura (1996) concluded that self-efficacy impacts an individual's drive to sustained efforts towards a specific outcome. In this study, the specific outcome was the improvement of a predetermined instructional strategy. The participants' perseverance toward this outcome indicates increased teacher efficacy as a result of the principal support offered through the mastery experience opportunity. The increased TSES ratings and interview responses indicated a positive impact of the mastery experience opportunity on teacher efficacy and teacher perception of their teacher efficacy.

Bandura (1977; 1996) theorized that self-efficacy was specific to the individual and the action being executed. Thus, a teachers sense of efficacy may differ from skill to skill or task to task. Teacher efficacy, in this study was positively influenced by the mastery experience opportunity relative to the specific instructional strategies (i.e. questioning and motivating students). To have a greater impact on teacher efficacy Tschannen-Moran and Woolfolk-Hoy (2001) posited, “The professional development of teachers would be structured as powerful

mastery experiences with an eye toward helping teachers garner evidence of improved learning on the part of their students in order to reap the efficacy pay-off that would result” (p. 803).

Two teachers responded they felt the mastery experience opportunity was the best form of professional development they had experienced and another teacher suggested mastery experiences be used as a highly effective form of professional development. These responses supported by the increases of teacher efficacy ratings on 23 of 24 TSES responses supported Tschannen-Moran and Woolfolk-Hoy’s idea of structuring professional development as “powerful mastery experiences” and further supports Bandura’s (1996) research that mastery experiences, of all the sources of self-efficacy, have the greatest influence on efficacy.

In their research to further develop the construct of teacher efficacy, Ashton, Webb, and Doda (1983) found “teachers’ sense of efficacy is negotiated daily in their myriad transactions with students, peers, and administrators” (p. 38). To the contrary, Bandura (1996) suggested that self-efficacy is relatively constant and resistant to change once established. Both the survey results and interview responses indicated that the participants in the mastery experience opportunities had increases in their teacher efficacy in their selected instructional strategy.

Tschannen-Moran and McMaster (2009) stated, “Without coaching to assist teachers in the implementation of the new skill, a significant proportion of teachers were left feeling more inadequate than they had before” (p. 241). The utilization of mastery experiences as a principal support for teachers of this study had a positive influence on their perceived teacher efficacy as well as a quantifiable increase on the TSES. The opportunity to

Mastery Experiences as a Tool for Teacher Efficacy

Timperley and Phillips (2003), through their study of self-efficacy beliefs and conditions required to affect change in reading instructional strategies found that a complex relationship between change and external factors existed. They proposed that, “the change process is likely to be iterative rather than a sequential one, where changes in beliefs, actions or outcomes are both shaped by, and built on, each other” (p. 630). The findings in their study led Timperley and Phillips to contend that professional development for teachers needs to simultaneously address improvement in teaching skills as well as teachers’ beliefs.

McKinney, Sexton, & Meyerson (1999), found participants with lower self-efficacy beliefs experienced issues characteristic of those individuals in early stage change scenarios, in which the focus was on how the change would affect them. Contrary, participants with higher self-efficacy beliefs focused attentions on how the change would affect their students and school as well as how to refine the new strategies to best fit their teaching context. Those with the highest self-efficacy beliefs viewed the new strategies as both important and possible.

Several elements of the mastery experience opportunity have presented as key factors for improving teacher self-efficacy in this study. The element emerging from interview responses that seemed most influential was the immediate feedback given on the area of focus. Positive and constructive feedback emerged as another element influencing teacher self-efficacy during the mastery experience. The final element was the setting. The execution of the mastery experience in a setting closely aligned to the actual execution of the focused area appeared highly influential. In this study, the area of focus was an instructional strategy executed in a classroom setting, which would require the mastery experience to be conducted in a similar

setting for similar results on teacher efficacy. These elements may prove crucial to the mastery experience's influence on teacher efficacy and need to be attended by the instructional leader for an effective mastery experience opportunity. These elements are represented in Figure 3.

Implication for State and District Leaders

Principals are asked to wear many hats and none more important to the success of a school than the hat of instructional leader. Supporting principals as instructional leaders is important to the direction of any statewide or local school system. One way instructional leaders support their teachers is through identification and refinement of skills needed in the classroom. Teacher efficacy plays an integral role in the level of goals set forth by the teacher, the amount of effort put into accomplishing the goal, and the perseverance for overcoming obstacles needed to achieve a particular outcome. Supporting principals as they help develop teacher's skills while improve teacher efficacy could make more efficient instructional growth opportunities. Mastery experiences provide instructional leaders with the opportunity to refine teaching skills as well as improving teacher efficacy.

District leaders should consider identifying schools and leaders that offer mastery experiences as part of their teacher support. By identifying schools using mastery experiences as a teacher support, district leaders may be able to identify specific strategies employed by the school and school leaders that are useful in further improving professional development offerings, evaluative measures, and teacher supports. Another consideration for district leaders might also be the resources and supports needed by school leaders to implement mastery experiences as a means of teacher support. By allocating resources for the implementation of mastery experiences as a means of teacher support, school districts might be able to maximize

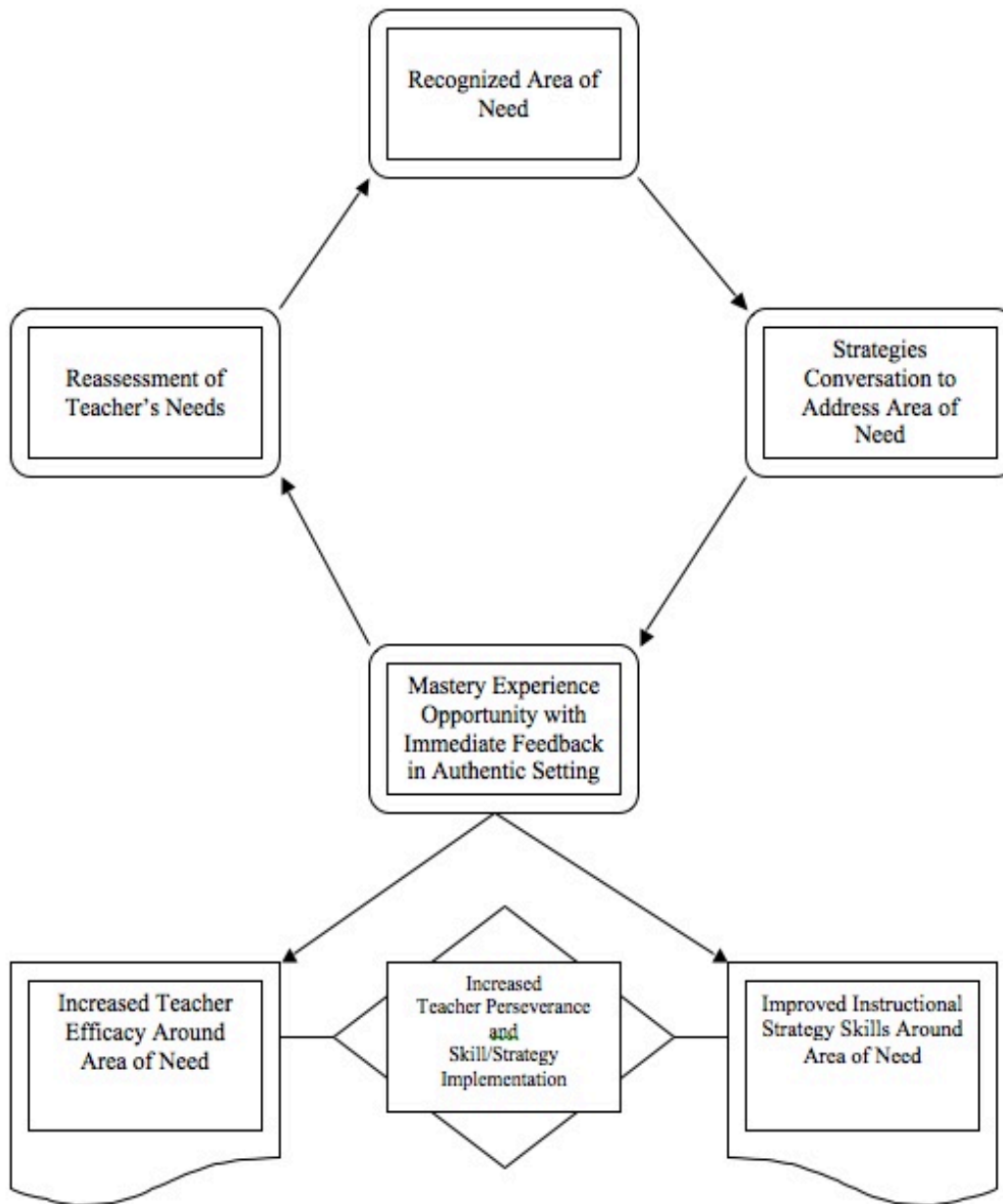


Figure 3: Mastery Experience Cycle

professional development opportunities in ways that allow for pedagogical skill acquisition as well as improved teacher efficacy. Local school officials might also need to consider the role of the principal as an instructional leader in the school setting and provide more support for principals to develop mastery experience opportunities within their school setting. Allowing principals the opportunity for an increased instructional leadership role may require a commitment from local leaders to reduce other responsibilities like student discipline or school management tasks (i.e. facilities management). Local school leaders may have a direct impact on prioritizing mastery experience development and implementation, but state leaders can also play a critical role.

State leaders might consider the identifying school districts and schools who utilize mastery experiences as a teacher support tool. By accessing pre-existing knowledge and strategies of systems/schools currently using mastery experiences as a tool for teacher support, state leaders may be able to enhance existing programs of professional development and evaluation to maximize impact on teacher efficacy and growth. By identifying these schools, state leaders might also be able to utilize the experience of school leaders in implementing mastery experiences to provide greater support for districts and principals to implement mastery experience opportunities. Both local and state leaders of education could influence the implementation and development of mastery experiences as a teacher support tool, but principals and teachers play an important role also.

Findings from this study might be used to assist rural schools and rural schools districts with retention and development of teachers. Rural schools have difficulty attracting new teachers due to limited resources (i.e. lower salaries and instructional resources). The ability of a

district or building principal to develop effective teachers with a focus on teacher self-efficacy through implementation of mastery experience opportunities might reduce the need to replace teachers. Furthermore, the best rural teachers often become the targeted desire of surrounding systems that might have higher salaries or provide greater instructional support opportunities due to greater resource availability. Mastery experience opportunities might assist instructional leaders, generally the building principal in rural schools, with developing trusting, professional relationships with their teachers while helping the teacher develop pedagogically. Thus, increasing teacher retention in rural schools.

Further implications for state and local leaders could include increased focus on the coaching and instructional leadership role of the rural school principal. With limited resources and personnel, the rural school principal will most likely be the instructional leader as well as the formal evaluator. State and district leaders might consider providing resources that allow the building principal training to manage both roles or support personnel that might allow the rural principal to be the instructional leader or manager/evaluator of the building.

By understanding the influence of teacher efficacy on improving teacher skill acquisition and the direct influence mastery experiences can have on teacher efficacy, principals can help teachers improve pedagogically. For principals to execute effective mastery experiences relationships of trust between the principal as the instructional leader and the teacher must be developed. Then, the mastery experience opportunity must be created in a non-threatening, low stakes setting that allows feedback to be given by the instructional leader and received by the teacher without fear of professional reprisal so that efforts to improve the area of focus might be earnest. Principals as instructional leaders may have to separate themselves from their

supervisory role, as evaluators in order to protect the instructional leader-teacher trust relationship, especially to execute mastery experience opportunities. The teacher has similar implications and responsibilities for mastery experiences to be effective.

Teachers should be open to the role of the principal as an instructional leader. By being open to the principal's role as instructional leader, the teacher will help the principal separate the evaluative from instructional support and build the trust relationship key to effective mastery experience opportunities. Earnest self-reflection of skill level and openness to instructional feedback will also help the teacher maximize the pedagogical and teacher efficacy benefits mastery experience opportunities provide. Principals and teachers working together can develop effective mastery experience opportunities, but they should be introduced to the concept, structure, and benefits of mastery experiences in their preparation programs.

Leader and teacher preparation programs exposing and training both principals and teachers as to the concept, structure, and benefits of mastery experience opportunities could allow for greater implementation fidelity as well as improved mastery experiences. Preparation programs could improve mastery experience opportunities by providing practice and feedback to future instructional leaders and teachers. As trained instructional leaders and teacher are hired, their level of experience and success with mastery experience opportunities can assist untrained peers with pedagogical and teacher efficacy growth through mastery experience opportunities.

Recommendations for Mastery Experience Research

To aid in the generalizability and validity of these research findings, replicated studies including a greater number of secondary participants is needed. The findings of this study show improved teacher efficacy quantitatively, with increases in the TSES survey means of phase 2

participants and qualitatively through phase 2 participant interview responses and observation notes. A longitudinal study is needed to understand the lasting effects of the mastery experience on teacher efficacy. Do those effects carry over to other areas of focus or are mastery experiences required for every area of focus for similar findings? Findings of future research regarding specific focus areas and teacher efficacy might warrant the development of new teacher efficacy instruments that could measure efficacy levels for each instructional skill.

To gain a broader understanding of the influences of mastery experiences, future research might also include a wider range of educator demographics (e.g. elementary and middle school teachers, apprentice and professional level teachers, under performing and high performing teachers). Each of these demographic profiles might provide greater insight into the influence of mastery experiences on teacher efficacy as well as allowing leaders to focus supports on specific subgroups of teachers with the greatest needs.

Further research might explore the influence mastery experience opportunities have on developing and retaining teachers for at-risk areas (i.e. rural schools). Replicating this study with a focus on rural schools might provide insight into the effectiveness of mastery experiences in helping to develop teachers in areas that traditionally struggle to hire educators. As well as teacher development, future research on implementing mastery experiences as a principal support might focus on teacher retention in rural schools.

Recommendations for Efficacy Research

To further validate the findings of this study as to the influence of mastery experiences influence on teacher efficacy, a larger number of participants need to be added. This may mean the inclusion of demographics outside the purview of this study, including experience, grade

level, and level of effectiveness. Future research might also focus on specific elements of the mastery experience that have the greatest influence on teacher efficacy.

In today's educational climate of accountability, future efficacy research might help educational systems (National, State, and/or Local) develop new or alter current teacher evaluation systems to combine teacher accountability with teacher development in a way that allows positive influences on teacher efficacy. This research might include a comparison of evaluation systems without imbedded professional development to those systems with embedded professional development (specifically mastery experiences) to better understand each systems influence on teacher efficacy. More research is needed to better understand teachers' perception of effective professional development and the elements that allow professional development to positively influence teacher efficacy.

The findings of this study show mastery experiences as a principal support for teachers positively influenced teacher efficacy. More research is needed to determine other principal supports that influence teacher efficacy and which of these supports has the greatest influence on teacher efficacy. Educational leaders could use findings from these studies in order to focus resources and efforts on helping principals develop supports that have the greatest, positive influence on teacher efficacy.

Educational systems might also utilize findings from studies that look at the influence of teacher efficacy levels and principal supports as a way to retain teachers in rural schools. Rural schools have difficulty hiring and retaining teachers for various reasons, but does improving teacher efficacy through principal support help rural schools and systems retain their teachers? The difficulty with hiring new teachers to fill vacancies might also be a motivator for

implementation of mastery experiences for rural schools as a form of professional development in order to improve current teachers pedagogical skills. Future research might include teacher efficacy of rural teachers relative to development and retention.

Recommendations for Coaching and Instructional Leader Research

To further expand on the findings supporting the influence of mastery experience opportunities on teacher self-efficacy, more research on the role the instructional coach or instructional leader might have on the mastery experience opportunity is needed. Future research might focus on what leadership style of the coach/ instructional leader might best execute mastery experience opportunities or what skills possessed by the coach/ instructional leaders have the greatest impact on effective mastery experiences. Furthermore, successful mastery experiences require a unique level of trust between the leader and the teacher. More research is needed to identify what level of trust is needed between the leader and teacher and what factors might influence the development of trust in order to have successful mastery experience opportunities.

The role of coaching and instructional leadership in the execution of mastery experiences has implications for teacher and administrator preparation programs. More research is needed on how these programs might best develop future leaders/ teacher to execute and participate in mastery experience opportunities. Understanding of how these preparation programs might impact instructional quality within a classroom, school, or system through mastery experience opportunities as well as the indirect impact these experiences might have on student achievement is needed.

Summary

Findings from this study indicated that mastery experiences had a positive influence on teacher efficacy. Mastery experience opportunities have the potential to influence teacher efficacy and teacher perception of their efficacy levels. Mastery experiences might be used to develop teacher pedagogical skills while positively influencing their teacher efficacy. Increased levels of teacher efficacy have been linked to higher goal setting, increased effort towards skill improvement, and perseverance towards completing the skill improvement (Bandura, 1977; 1997). By utilizing principals as instructional leaders for the purpose of supporting teachers through mastery experience opportunities, state and local systems might maximize improved classroom instruction and enhancing teacher professional development.

Teachers expressed the success of the mastery experience opportunity depended upon the experience providing immediate feedback directed at improving the area of focus considering the feedback is positive and constructive with the mastery experience opportunity being executed in the classroom setting. The teachers' perception of their teacher efficacy specific to their area of focus increased as a result of the mastery experience as supported by the increased mean scores of the TSES survey taken by the phase 2 participants. Teacher efficacy is an important factor in the growth and development of teachers. Findings support Bandura's (1977) theory that mastery experiences have the greatest influence on self-efficacy, which justify consideration by state and local educational systems of implementation of mastery experiences as a way to improve teacher efficacy as well as teacher pedagogical skill.

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APPENDICES

Appendix A

Instructional Leader Mastery Experience Cheat Sheet

Key definitions:

1. Self-efficacy- an individual's belief in their ability to perform a specific task for a specific outcome (Bandura, 1997).
2. Teacher Self-efficacy- a teacher's belief in their ability to have a positive effect on student learning (Ashton, 1985).
3. Mastery Experiences- opportunities for an individual to practice new skills without fear of reprisal. Mastery experiences are coaching opportunities that lead to an impact of self-efficacy (Bandura, 1997; Gawande, 2011; Tschannen-Moran & McMaster, 2009).

Step 1:

Allow the teacher to determine the "area of refinement" from the Instructional Domain of the TEAM Evaluation for mastery experience opportunity. This will allow greater buy-in from the teacher, making them more receptive to the principal's coaching.

Step 2:

Have 10-15 minute coaching conversation of specific strategies that the teacher will try/work on in the classroom. Use this meeting to clarify any confusion or misconceptions around the area of refinement and schedule the mastery experience opportunity.

Step 3:

Execute the mastery experience opportunity where the teacher practices discussed strategies from Step 2 in the classroom with students. The principal may provide minimal scaffolding if requested by the teacher. During Step 3, the principal will take notes (see Mastery Experience Worksheet) on the mastery experience opportunity.

Step 4:

Provide feedback to teacher following mastery experience and ask/ answer any questions about the experience.

Appendix B

Mastery Experience Observation Worksheet

Principal: _____

Teacher: _____

Step 1:

Area of Refinement _____

Step 2:

Coaching Conversation Notes (strategies suggested, teacher openness, etc...)

Step 3:

Mastery Experience Notes (comfort, implementation of strategies, improvement)

Feedback Given:

What improvement in skill did you notice of the teacher during the mastery experience?

What struggles or difficulties did the teacher experience during the mastery experience process?

What method(s) (verbal, demonstration, etc...) did you utilize to help the teacher better understand the skill?

How receptive was the teacher to your suggestion? (circle 1)

Not At
All Receptive

Moderately
Receptive

Highly
Receptive

1 2 3 4 5 6 7 8 9 10

Appendix C

Interview Protocol

- Starting with the area of refinement on which you worked, describe the mastery experience you had with your principal.
- How do you feel the mastery experience opportunity impacted the belief that you could effectively (_____)? *insert area of refinement*
- Explain how you feel about principals using mastery experiences as a support tool for teacher self-efficacy.

Appendix D

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Abbas Tashakkori, Ph. D. <abbas.tashakkori@unt.edu>

Mon 10/3/2016 9:21 AM

Inbox

To:

Calahan, Scott;

Cc:

edtedd@lsu.edu;

Hi Scott!

Yes, please feel free to use the table as you see fit.

For published work, direct permission from Sage is required.

Best of luck!

Abbas

Abbas Tashakkori, Ph. D.,

Professor and Chair,

Department of Educational Psychology

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(<http://www.coe.unt.edu/educational-psychology>)

**“Education is the most powerful weapon which you can use
to change the world.” Nelson Mandela**

Appendix E

Teachers' Sense of Efficacy Scale¹ (long form)

Teacher Beliefs	How much can you do?								
Directions: This questionnaire is designed to help us gain a better understanding of the kinds of things that create difficulties for teachers in their school activities. Please indicate your opinion about each of the statements below. Your answers are confidential.	Nothing	Very Little	Some Influence	Quite A Bit	A Great Deal				
1. How much can you do to get through to the most difficult students?	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
2. How much can you do to help your students think critically?	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
3. How much can you do to control disruptive behavior in the classroom?	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
4. How much can you do to motivate students who show low interest in school work?	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
5. To what extent can you make your expectations clear about student behavior?	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
6. How much can you do to get students to believe they can do well in school work?	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
7. How well can you respond to difficult questions from your students ?	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
8. How well can you establish routines to keep activities running smoothly?	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
9. How much can you do to help your students value learning?	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
10. How much can you gauge student comprehension of what you have taught?	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
11. To what extent can you craft good questions for your students?	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
12. How much can you do to foster student creativity?	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
13. How much can you do to get children to follow classroom rules?	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
14. How much can you do to improve the understanding of a student who is falling?	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
15. How much can you do to calm a student who is disruptive or noisy?	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
16. How well can you establish a classroom management system with each group of students?	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
17. How much can you do to adjust your lessons to the proper level for individual students?	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
18. How much can you use a variety of assessment strategies?	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
19. How well can you keep a few problem students from ruining an entire lesson?	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
20. To what extent can you provide an alternative explanation or example when students are confused?	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
21. How well can you respond to defiant students?	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
22. How much can you assist families in helping their children do well in school?	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
23. How well can you implement alternative strategies in your classroom?	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
24. How well can you provide appropriate challenges for very capable students?	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)

VITA

L. Scott Calahan was born in Crossville, TN, the eldest son of Larry and Debbie Calahan. He graduated from Cumberland County High School in 1996 and went on to receive his Bachelor of Science degree in Physical Education from the University of South Alabama in 2001. Scott taught high school physical education at Satsuma High School in Satsuma, Alabama while coaching football and boys soccer. In the summer of 2003, Scott, moved to Crossville, TN where he began teaching physical education and coaching baseball at his alma mater Cumberland County High School. In 2007, Stone Memorial High School was completed in Crossville and Scott was asked to be the department head of the health and physical education department as well as coach baseball and golf. In 2009, Scott enrolled in the Educational Leadership and Policy Studies Master of Arts program at the University of Tennessee.

Upon graduating from the University of Tennessee in 2011, Scott began working as a head principal at Harriman High School in Harriman, TN as well as enrolling in the University of Tennessee Educational Leadership and Policy Studies doctoral program. In 2019, Scott completed his Doctorate of Philosophy Degree in Educational Leadership and Policy Studies. Scott is pursuing advancement as a district supervisor and potentially director of schools with an emphasis on principal and teacher development through instructional leadership.

Scott has a beautiful wife, McGhie and three wonderful children, Gracie, Sutton, and Julius.