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Implementing Change: How, Why, and When Teachers Change Their Classroom Practices

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Abstract

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MA, Immaculata University, 2005

BS, University of Pennsylvania, 1988

Dissertation Submitted in Partial Fulfillment

of the Requirements for the Degree of

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Abstract

Teacher implementation of school reforms varies widely and often results in inconsistent student outcomes. Teachers adopt or resist change for complex reasons that are not fully understood. This qualitative study explored how veteran teachers described their experiences with school reform and changes in classroom practices that occurred over the course of their careers; it also examined factors that teachers identified as having positive and negative influences on their adoptions of change. The conceptual framework was based on Senge's systems theory as applied to learning organizations and Goleman's emotional intelligence theory. The research questions focused on: (a) How veteran teachers described their experiences with various school reforms and changes in classroom practices that have occurred over the course of their careers, and (b) What internal and external factors veteran teachers identified as having a positive or negative influence on their adoptions of change. Eight veteran K-12 public school teachers from a northeastern state were interviewed using a semi-structured, open-ended questionnaire. Data were analyzed using first and second level coding in order to identify emerging patterns and themes and discrepant data. Key findings indicated that the teachers who reported successful implementation of school reforms also reported that the internal factors of self-assessment, self-confidence, initiative, adaptability, and empathy, and the external factors of shared vision, team learning, and systems thinking were important to implementing change. When administrators supported teachers through quality professional development, adequate collaboration time, and respect for their professional judgment, participants embraced school reforms and changed their classroom practices.

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Dedication

This study is dedicated to my friend and confidante, Valerie Smith. Over the past five years, she has logged countless miles with me, listening to theories and ideas and asking questions, ensuring I really understood what I was learning. Her ongoing encouragement, along with remonstrating from time to time, kept me going even when I didn't think I could get through one more day. Thank you for learning with me and being there for all of life's ups and downs. And to EB, thank you for all your love and support. It has made all the difference.

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Chapter 1: Introduction to the Study

Perhaps more than ever before in United States history, it is imperative that public schools change rapidly in response to social and technological transformations (Senge et al., 2012). School reform initiatives designed to improve student learning are typically dependent on classroom teachers for successful implementation, but historically teachers have been notably resistant to making changes in their classroom practices (Evans, 2001; Ravitch, 2001; Thornburg & Mungai, 2011). As a result, reforms come and go, but arguably little has actually changed in schools over the past 100 years (Ravitch, 2001). However, some teachers have made substantial strides in changing their craft, including curricular changes, modifications in instructional methods, and/or classroom management practices (Senge et al., 2012). Educational leaders and advocates for change, therefore, need to consider how, when, and why teachers change their classroom practices.

This study was designed to explore the factors that have influenced how veteran teachers change their classroom practices. Understanding how teachers adopt, adapt, or resist change is crucial for effective school reform (Evans, 2001; Ravitch, 2001; Senge et al., 2012; Tyack & Cuban, 1995). Research shows that teacher implementation of school reforms varies widely and results in inconsistent student outcomes (Gibson & Brooks, 2012; Guhn, 2009; Johnson, Fargo, & Kahle, 2010; Thornburg & Mungai, 2011; Williams, Brien, & LeBlanc, 2012). Many researchers have explored the conditions under which teachers implement change, and several have pointed to external factors that support change such as a culture of risk-taking, supportive leadership, and quality professional development (Craig, 2012; Gibson & Brooks, 2012; Melville, Bartley, &

Weinburgh, 2012). Other researchers have found that teacher collaboration is critical for effective implementation of change (Given, 2010; Williams, Brien, & LeBlanc, 2012). Some evidence exists that internal factors or teachers' emotional characteristics influence the effective implementation of change, but the research in this area is sparse and inconclusive (Brackett, 2010; Garner, 2010; Hall & West, 2011; Kocoglu, 2011; Tait, 2008).

Other researchers have identified school reform as a more complex process than simply providing leadership, professional development, and time for collaboration. Frank and Zhao (2011) found that teachers' length of service resulted in different responses to school reform initiatives, which necessitates a differentiated approach to supporting teachers in making changes to their classroom practices. Guhn (2009) and Waldron and McLeskey (2010) found that multiple processes interacted with each other to either support or inhibit successful implementation of school reforms. This research has shown that teacher implementation of school reform is a complex problem and one that deserves further study. It also indicates that a systems theory approach to analyzing how, why, and when teachers change their classroom practices may be a useful theoretical construct for understanding the myriad of complex factors and how they interact with each other. This study contributes to positive social change by providing knowledge to school leaders that will lead to a better understanding of how to create conditions that will support successful implementation of school reforms. If teachers are more successful at implementing positive change in their classroom practices, then student learning outcomes will improve.

Chapter 1 is an introduction to this study and begins with a summary of the research literature related to the scope of this study topic. This study addresses the gap in knowledge of understanding how, why, and when veteran teachers change their classroom practices. The explanation of the research gap is followed by a problem statement that describes why the topic is current, relevant, and significant to public education. I next describe the purpose and nature of this study in order to frame the research questions within the context of the conceptual framework of systems theory and emotional intelligence (EI). I define the constructs of these theories and clarify the assumptions, scope, delimitations, and limitations. In addition, I include an explanation of the significance of this study and a summary statement that leads into the literature review to provide context for the research problem, which addresses the need for further research.

Background

Research shows that effective school reform often hinges on teacher buy-in and implementation (Garner, 2011; Thornburg & Mungai, 2011). What is not clear from the research are the factors that influence teachers to implement change. Some studies indicate that individual characteristics, or internal factors, are essential for positive teacher change (Brackett, Palomera, Mojsa-Kaja, Reyes, & Salovey, 2010; Hall & West, 2011; Kaniuka, 2012; Kocoglu, 2011; Ripley, 2010; Tait, 2008). However, other studies indicate that external factors such as quality professional development, leadership, and opportunities for collaboration are critical for teacher implementation of change (Dingle, Brownell, Leko, Boardman, & Haager, 2011; Melville, Bartley, & Weinburgh, 2012;

Waldron & McLeskey, 2010). Understanding the complex factors that influence teachers' implementation of change may be best understood as a systemic challenge, and several studies explore implementation of change in classroom practices from a systems theory lens (Austin & Harkins, 2008; Craig, 2012; Givens et al., 2010; Guhn, 2009; Hannay & Earl, 2012; Williams, Brien, & LeBlanc, 2012). Some research suggests that quality professional development has the potential to address both internal and external factors that impact teacher implementation of change, and it may be utilized to understand dynamics within a school system in order to have a positive impact on school reform.

Several studies indicated that effective leadership is critical to teacher success in changing classroom practices (Melville, Bartley, & Weinburgh, 2012; Craig, 2012). However, even effective leaders may find it difficult to motivate all teachers to adopt reforms. In a study about developing effective special education reading teachers, Dingle, Brownell, Leko, Boardman, and Haager (2011) found that personal qualities interacted with external factors to influence how individual teachers responded to change. Waldron and McLeskey (2010) explored how to establish a collaborative school culture through comprehensive reform and also found that multiple factors influence teacher change. The individualistic and complex nature of how, when, and why teachers change their classroom practices suggests that studies of how teachers perceive their successful adoption of change will add to the body of knowledge of successful school reform. Furthermore, the complexity of the situation indicates that using a systems lens to analyze research data could be useful for developing a deeper understanding of internal and external factors which impact change efforts.

Although Senge et al. (2012) demonstrated that organizational systems thinking could be applied to schools, few studies have used systems theory as a lens by which to analyze teacher implementation of change. Austin and Harkins (2008) used systems theory to analyze interactions between school staff members. Silverman, Kramer, and Ravitch (2011) studied how a systems approach could be used to understand how students receive special services, and several researchers have explored how collaboration promotes teacher adoption of change (Pescarmona, 2010; Given et al., 2010; Hannay & Earl, 2012; Williams, Brien, & LeBlanc, 2012). Guhn (2009) concluded that successful reform was the result of seven interrelated processes, but did not specifically use systems theory to analyze data. More research is needed to understand how systems theory is related to teacher implementation of change in their classroom practices.

Even fewer studies have explored systems theory in relation to the construct of EI. Higgins et al. (2012) explored the role of psychological safety in teachers' comfort with experimentation and risk-taking, but did not link the development of psychological safety to the dynamics of a learning organization as defined by Senge et al. (2012). Cherkowski (2012) did combine systems theory with EI theory in analyzing educational leadership and teacher commitment to experimentation, but the study included only one narrative voice to support its findings, and Cherkowski concluded that more research was needed. A gap exists, therefore, in knowledge of the internal and external factors that influence teachers to change their classroom practices. The scarcity of research using systems thinking to analyze school change, combined with a lack of research that focuses on

teacher perceptions of how they have changed their practices, indicates a need for this study.

Problem Statement

Educational reforms must often be implemented by teachers who are or who have become change resistant (Evans, 2001; Ravitch, 2001; Tyack and Cuban, 1995). Educational leaders need a better understanding of how teachers perceive change initiatives and the personal (internal), environmental (external), and systemic characteristics that impact a teacher's likelihood of successfully changing classroom practices (Gibson & Brooks, 2012; Guhn, 2009; Johnson, Fargo, & Kahle, 2010; Thornburg & Mungai, 2011; Williams, Brien, & LeBlanc, 2012). Prior research on teacher implementation of school reform indicates that teachers adopt or resist changes in curriculum, instructional methods, and classroom management strategies for complex reasons that are not fully understood (Guhn, 2009; Hannay & Earl, 2012; Williams, Brien, & LeBlanc, 2012). The need exists for additional research that explores what teachers themselves have to say about their experiences with implementing change, and for an analysis of the data using a systems theory and EI conceptual framework to better understand the factors that influence teachers to implement change. A better understanding of how, why, and when teachers change their classroom practices will help educational leaders create conditions that will result in improved student learning.

Purpose of Study

The purpose of this study was to explore how veteran teachers describe their experiences with school reform and changes in classroom practices that have occurred

over the course of their careers. In addition, the purpose this study was to examine the internal and external factors that teachers identify as having both positive and negative influences on their adoptions of change. Using an interview study design, the goal of this study was to develop an understanding of teacher perspectives about school reforms and their personal experiences with change. The central phenomena of the study was the positive and negative experiences that veteran teachers describe in relation to school reform and changes in their classroom practices.

Research Questions

The research questions for this qualitative study were: (a) How do veteran teachers describe their experiences with various school reforms and changes in classroom practices that have occurred over the course of their careers? (b) What internal and external factors do veteran teachers identify as having a positive or negative influence on their adoptions of change?

Conceptual Framework

The conceptual framework for this study was based on systems theory and EI theory. Senge et al. (1999) proposed a way of using systems thinking to understand organizational systems and how they respond to change. Senge et al. called organizations that are successful at adapting to change "learning organizations" (p. 22), and in a later study applied the concepts of learning organizations to public schools (Senge et al. 2012). EI theory has been developed over time in the fields of biology and psychology, but the various studies that have contributed to EI theory are brought together and clearly explicated in the work of Goleman (2011) and Goleman, Boyatzis, and McKee (2002).

The major proposition of EI theory is that emotional competencies, such as self-awareness, self-management, social awareness, and relationship management are as important, if not more so, than intelligence or physical competency for success in any career. Senge et al. (2012) contended that systems theory shares some similar theoretical constructs with EI theory such as self-management and relationship management, but the focus of systems theory is less on any one individual and more on how the different parts of an organizational system work together to create an organizational culture that either embraces or stifles change initiatives. These theoretical constructs will be described more thoroughly in Chapter 2.

If adoption of change is critical to ongoing individual success (Goleman, 2011), then strong emotional competencies may be indicative of which teachers are more successful at implementing school reforms. The emotional competencies represent the internal characteristics that contribute to teacher adoption of change. The constructs of systems theory represent the external factors that influence teacher implementation of school reforms. By using both theories to analyze teachers' responses about their experiences with change, this study furthers educators' understanding of how internal and external factors contribute to teacher adoption of changes in the classroom. In addition, a better understanding of how, why, and when teachers implement change will aide educational leaders in creating organizational environments that foster change.

Nature of the Study

I chose a qualitative approach and an interview design with phenomenological overtones for this study because the reasons why teachers do or do not change their

classroom practices are related to a complex phenomenon that is influenced by both internal and external factors. These factors have not been fully explored from the perspectives of the teachers themselves. The phenomenon I investigated was how, when, and why veteran teachers successfully changed their practices over time. I collected data using semi-structured, open-ended interviews of eight veteran K-12 public school teachers who described their experiences with change in relation to their classroom practices. I analyzed the data using systems theory and EI theory constructs in order to reveal the internal and external factors that impact successful change and to describe the systemic factors that work together to create conditions that foster or inhibit change. The constructs of systems theory and EI theory, as I discuss in Chapter 3, were used as a basis for coding the data and examining the emerging themes and discrepant data for key findings. Additional concepts that emerged as I analyzed the data are also outlined in that chapter, along with evidence that systems theory constructs and EI competencies impact how teachers change their practices.

Definitions

The following terms and definitions are key concepts that were used in this study:

Capacity: The ability of teachers to grow in leadership, content knowledge, and skills (Kaniuka, 2012).

Classroom practices: For this study, classroom practices were defined as any practices used by teachers that were related to curriculum, instructional methods, and classroom management techniques because changes in these practices often improve student learning.

Emotional intelligence (EI): The ability to perceive emotions, to use emotions to regulate thought, to understand emotions in oneself and others, and to reflectively regulate emotions and manage emotional relationships with others so as to promote growth (Goleman, 2011).

Learning community: A term used in education circles to mean a learning organization (Williams et al., 2012).

Learning organization: An organization that explicitly seeks to enhance the capacity of its members to learn and change through their adherence to the disciplines of personal mastery, mental models, shared vision, team building, and system thinking (Senge et al., 2012).

Professional development: Ongoing training in the content, pedagogy, and skills necessary for teachers to stay current in their field (Jaquith, Mindich, & Wei, 2010).

Professional learning community (PLC): Teams of teachers working collaboratively to reflect upon and improve educational practices (Johnson, Fargo, & Kahle, 2010).

Systems thinking: An approach to understanding individuals, groups, and organizations through the concepts of interdependency, interactions, feedbacks, stability, and change (Senge et al., 1999).

Veteran school teachers: For the purpose of this study, veteran teachers were defined as having 15 or more years of K-12 teaching experience because these

teachers will have had considerable experience with mandated or self-initiated changes in classroom practices.

Assumptions

This study was based on several assumptions. The initial assumption was that participants participated voluntarily and were responsive to the interview process. Another assumption was that participants answered interview questions openly, honestly, and thoroughly about their implementation of educational reforms. An additional assumption was that participants voluntarily made inquiries to ensure their understanding of the interview questions. Yet another assumption was that participants offered in-depth and insightful reflections about their experiences as classroom teachers about how, why, and under what circumstances they have changed their classroom practices. These assumptions were essential to the trustworthiness of the data and of my analysis of the constructs that emerged as teachers described their experiences with educational reforms.

Scope and Delimitations

The scope of this case study was the boundaries established by the research problem. The research problem I addressed in this study was how veteran teachers in public schools perceive their experiences with school reforms and changes in their classroom practices. The participants also determined the scope of this study, which included eight veteran K-12 teachers from one large public school district located in a northeastern state of the United States. The scope did not include private school teachers, preschool teachers, or teachers of higher education. The scope of this study was also determined by the theoretical constructs of systems theory and EI theory because these

theories provided the conceptual framework for the research questions and for analyzing the data.

The scope of this study was further narrowed or delimited by time, location, and resources. I collected data in the spring of 2015 from these teachers in in a large public school district located in a northeastern state of the United States. This study was also conducted by a single researcher with limited resources, which also limited the number of participants and the geographical area from which they were drawn.

Limitations

The limitations of a study were generally related to the research design. For this interview study, I was the sole person responsible for all data collection, analysis, and interpretation; therefore, the potential for researcher bias existed. As a classroom teacher, I have had over 15 years of experiences with school reforms. My experiences with reforms had the potential of biasing my interpretation of the data. Other biases could have resulted from how I chose to present the interview questions. In order to address these biases, I maintained an electronic journal in which I reflected on my assumptions, dispositions, and biases in relation to school reforms about instructional change.

In addition to bias, transferability of the results was limited by the sample population, which included only eight veteran teachers who resided in the same county of the same state. Limited transferability of the findings may also be due to the complex and individualistic nature of teacher implementation of change in classroom practices. To address these transferability issues, I recruited participants from a range of grade levels who had diverse experiences in relation to school reforms. I asked participants to

complete respondent validations after the initial data coding and analysis in order to ensure the dependability of the data, the objective analysis of themes, and the accuracy of conclusions.

Significance

The potential significance of a study should be considered in relation to advancing knowledge in the field of education, to improving practice in the field, and to making contributions to positive social change. Concerning knowledge advancement and improved practice, this study will provide knowledge that will further the understanding of educators about how to address teacher resistance to school reforms by identifying the conditions under which teachers successfully change their classroom practices. Overcoming teacher resistance to change has been a concern of educational leaders for the last century (Ravitch, 2001; Tyack & Cuban, 1995). Unfortunately, teacher resistance to change has been misconstrued by educational leaders and the public as a result of teacher laziness or incompetence, and has been addressed by imposing new testing and/or evaluation measures (Tyack & Cuban, 1995). However, research has shown that teachers can clearly articulate their reasons for resisting change, and these reasons are often grounded in practical and pedagogical concerns (Thornburg & Mungai, 2011). What is less understood is how teachers articulate their reasons for adopting change. Understanding why teachers resist change is only a piece of the puzzle that educational leaders must piece together when implementing change. Understanding the conditions under which teachers will more readily adopt change can lead to better educational leadership and management of change.

Ultimately, the goal of this study was to contribute to social change by improving public education. Improvement in classroom practices often leads to improved student learning. Listening to teacher voices about why they have implemented change can provide educational leaders with insight into how to plan for change, how to design effective professional development experiences, and how to create organizational climates that will foster change in order to improve student learning. Student learning is critical to the future strength of the United States because an educated populous is the key to maintaining economic strength in a global economy, keeping pace with rapid technological growth, and moving forward in an increasingly complex, interdependent world (Senge et al., 2012).

Summary

This chapter provided an introduction to this study. Senge et al. (2012) contended that public schools in the United States are uniquely situated to provide today's children with what they need to be successful in a rapidly changing world. Public school educators provide knowledge and skills to all students, which allow them to thrive and participate in a democratic society (Dewey, 2010/1916). In order for students to acquire the necessary knowledge and skills, teachers must keep current with curricular and instructional changes related to national, state, and local mandates and the latest research. The primary way teachers stay current is through district-provided professional development (Jaquith, Mindich, & Wei, 2010). Providing quality PD is a complex task, and even when done well, many teachers resist implementing change (Tschannen-Moran & McMaster, 2009). Understanding the reasons why teachers implement or resist change

is crucial for planning school reforms. Although reasons for teacher resistance has been documented in research (Thornburgh & Mungai, 2011), what is less understood is how, when, and why teachers successfully adopt change. In particular, research is lacking that highlights teacher explanations of why and how they have implemented positive changes in classroom practices.

I sought, with this interview study, to add to the literature related to the topic of teacher change by exploring the internal and external factors that have influenced veteran teachers to change their classroom practices and by analyzing this data using systems theory and EI theory in order to clarify the factors that have positively influenced their adoptions of change. The purpose of this study was to portray how teachers described their experiences with various school reforms and changes in classroom practices that have occurred over the course of their careers using interview data from eight veteran K-12 public school teachers The findings of this study have the potential to enhance the ability of educational leaders to plan professional development programs and to create systemic structures that support the development of true learning organizations in public schools. The development of schools as learning organizations will lead to positive social change because teachers will be better able to adapt curriculum and instructional methods to meet the needs of students entering the modern world. Teachers who embrace constructive change will be able to continually adapt to the changing needs of individuals and society.

In Chapter 2 I present a review of the literature, including the search strategies that I used to conduct this review. I also discuss the conceptual framework in more detail,

and analyze current research related to teacher professional development, teacher implementation of changes to classroom practices, factors that impact how teachers adopt or resist change, and systems theory as applied to educational systems. In the conclusion, I discuss the themes and gaps that emerged from this review.

Chapter 2: Literature Review

School reform movements frequently rely on teacher buy-in and implementation in order to be successful. However, in the past century, attempts at public school reform have often been met with teacher resistance (Tyack & Cuban, 1995). The goal of most school reform initiatives is to improve student learning; therefore, teacher reactions to change initiatives have the potential to critically impact student success or failure (Ravitch, 2001). Unfortunately, little is known about how teachers actually perceive these change initiatives or what factors influence whether or not they substantially change their classroom practices.

Recent research indicates the need to better understand how, when, and why teachers implement change. Some researchers have maintained that teacher professional development, building capacity, and content knowledge are key components to successfully implementing change (Dingle et al., 2011; Frank et al., 2011; Gibson & Brooks, 2012; Kaniuka, 2012). Other research has indicated that teacher knowledge is not as important as the organizational culture (Given, 2010; Hannay & Earl, 2012; Johnson, Fargo, & Kahle, 2010; Pescarmona, 2010; Waldron & McLeskey, 2010; Williams, Brien, & LeBlanc, 2012). Still other researchers are looking at how EI impacts teacher efficacy and implementation of reforms (Brackett et al., 2010; Kocoglu, 2011; Garner, 2010; Hall & West, 2011; Tait, 2008). The answer may be that a combination of factors supports teacher implementation of change, as suggested by Guhn (2009) and Thornburg and Mungai (2011), but more research is needed to determine those factors and how they

interact with each other. In addition, little research exists about teachers' perceptions of the reasons why they have been successful at implementing change.

This chapter begins with a description of the search strategy that I used to find recent research on how teachers experience school change initiatives. I also describe the conceptual framework that guided the development of the research questions for this study. In addition, I provide an overview of the literature related to teacher implementation of school change, outline how researchers have developed and understanding of how, when, and why school reforms succeed or fail, and identify where gaps exist in understanding how teachers themselves perceive the changes they have made in their practice over time. Finally, I conclude with a summary of the major themes and gaps that emerged from this literature review, and discuss how the present study will address the gaps in the literature and enhance knowledge in the discipline.

Literature Search Strategy

To search for literature related to teacher implementation of changes in their classroom practices, I used the ERIC and ProQuest databases. In addition, I used the Google search engine to search forward from older research articles. I started with the following ten search terms listed below, and searched for them in both databases: *school reform, school change*, *teacher change*, *teacher resistance to change*, *teacher implementation of reforms*, *systems theory*, *Senge*, *systems thinking*, *schools as systems*, and *learning organizations*. After finding articles that were related to the research questions and/or the conceptual framework, I read their abstracts for additional search

terms and added the following terms to my search: *learning communities, teacher empowerment*, and *teacher capacity.*

Conceptual Framework

The conceptual framework for this study was based on systems theory and emotional intelligence (EI) theory. These two theories provided the framework for understanding certain constructs that may impact implementation of change. Senge et al. (1999) proposed a way of using systems thinking to understand organizational systems and how they respond to change. Senge et al. called organizations that are successful at adapting to change "learning organizations" (1999, p. 22), and later applied the concepts of learning organizations specifically to public schools (Senge et al., 2012). Emotional intelligence theory has been developed over time in the fields of biology and psychology, but the various studies that have contributed to EI theory are brought together and clearly explicated in the work of Goleman (2011) and Goleman, Boyatzis, and McKee (2002). In this section, I briefly describe systems theory, EI theory, and the relationship between these theories and school reform. I also discuss how these theories relate to this study.

Systems Theory

Senge et al. (1999) developed a set of five practices, or learning disciplines, which they believed differentiated successful organizations from ones that were unable to adapt to change. These practices were (a) personal mastery, (b) mental models, (c) shared vision, (d) team learning, and (e) systems thinking (p. 32). Personal mastery refers to the ability of individuals to form a realistic assessment of their lives and to set and meet personal goals. The development of mental models is the ability to reflect on what

attitudes and perceptions influence people's thoughts and actions. The skill of developing mental models is integral to one's ability to see different perspectives and to develop an awareness of personal limitations of perception. A shared vision is an organizational commitment to a common goal. Team learning consists of learning communication skills that will allow for collaborative problem-solving. Systems thinking is a broad term that Senge et al. used to conceptualize the interdependency of people and structures in an organization that impact the change and growth processes. Their work focused primarily on how leaders can foster these five practices in their organizations, but the practices can also be used by individuals in any capacity within an organization to adopt and adapt to change.

Emotional Intelligence Theory

The term *emotional intelligence* was coined in the 1990s to describe several emotional habits and social behaviors that researchers found are positively correlated with career advancement and other measures of adult success (Goleman, 2011). Many of these traits have been shown to more highly correlate with success relative to traditional intelligence measures or even academic achievements (Goleman, 2011). These skills include (a) self-awareness, (b) self-management, (c) social awareness, (d) relationship management, and (d) responsible decision-making (Goleman, 2011). Under the umbrella of these five main concepts are specific emotional competencies and relationship skills that individuals possess and use to balance emotional responses with cognitive processes in order to make decisions about both daily interactions and major life decisions. Over

time, these competencies form patterns of behavior that influence an individual's professional and personal relationships.

System Thinking, Emotional Intelligence Theory, and School Reform

Some of the constructs of systems thinking and EI theory are related. Two of Senge's (1999) concepts about systems theory share common features with EI theory (Goleman, 2002). These concepts are personal mastery--aligning a personal vision with realistic goals, and mental models--using reflection and questioning to understand interpersonal interactions. According to Goleman, Boyatzis, and McKee (2002), EI theory consists of numerous interrelated competencies grouped together under the broader categories of (a) self-awareness, (b) self-management, (c) social awareness, and (d) relationship management (pp. 253-256). The competencies clustered under self-awareness and self-management correspond to Senge et al.'s (1999) concept of personal mastery. These competencies include skills such as emotional self-awareness, self-assessment, and self-control. The competencies clustered under social awareness and relationship management correspond to Senge et al.'s concept of mental models in relation to how individuals interact in particular situations. These skills include empathy, organizational awareness, conflict management, and collaboration.

Although researchers have typically used systems theory to analyze the family system and how it affects student performance in school (Hardaway et al., 2012; Johnson, 2010; Sturge-Apple, Davies, & Cummings, 2010), several researchers have used systems theory as a theoretical lens for understanding implementation of school reforms. Action researchers Austin and Harkins (2008) explored how conflict resolution training impacted

the collaborative climate of an administrative team at a preschool facility in New England. They found that although higher levels of collaboration initially increased conflict, over time conflict resolution training was positively correlated with stronger perceptions of a collaborative climate among members of a school administrative team. They also found that training resulted in team members using more direct language to state their wants and needs, and this change in language use resulted in an improved organizational culture.

More recently, Silverman, Kramer, and Ravitch (2011) applied a systems theory approach to analyzing interactions among teachers, administrators, parents, contracted support services staff, and in-house support services staff in order to identify how informal communication affected how a child qualifies for support services. They found that school staff used informal channels of communication more often than formal channels in determining the services students would receive. The findings of this study improved awareness among staff members about how they needed to improve communication with both parents and the outside agencies.

Hannay and Earl (2012) used a systems theory lens to analyze interview data collected over the course of 4 years from teachers and school administrators in an Ontario, Canada school district to better understand how the school district supported reforms that required teachers to make substantial shifts in their mental models of teaching. Hannay and Earl found that changes to three organizational conditions helped support teacher change. The first condition was developing a clearly articulated focus on student learning; the second condition was increasing opportunities for teachers to

collaborate; and the third condition was using data-driven evidence to evaluate whether changes in instructional strategies were working to improve student learning. The conditions Hannay and Earl identified as being critical for change reflect the systems theory constructs of shared vision and team learning. Team learning is also the focus of an emerging reform approach that uses a professional learning community model (PLC). This model has been the focus of recent research.

Williams, Brien, and LeBlanc (2012) analyzed data from educators in 50 Canadian schools who had adopted a PLC approach. Using a system theory lens as defined by Senge et al. (2012), Williams et al. focused on culture, leadership, teaching, and professional growth changes in these schools. The PLC model was based on the same concepts as a learning organization, including shared leadership, a culture of creativity, shared values and vision, support for risk taking, and collaboration. Williams et al. found that teachers in schools that implemented PLCs reported higher levels of collegiality, trust, and feelings of commitment to improving instructional practices. Teachers in PLC schools also reported that work conditions, such as common planning time, supported them in collaborating and reflecting and gave them a voice in decision making.

Johnson, Fargo, and Kahle (2010) examined the impact of a systemic reform program on teacher change and student learning in science and also found that PLCs were instrumental in the successful implementation of a new science curriculum in middle school. Professional learning communities have been found effective in building teacher empowerment in other nations as well (Song, 2013).

In a discussion of insights from successful and unsuccessful implementations of school reform programs, Guhn (2009) applied a bio-ecological theory lens, which shared similar constructs to systems theory, to analyzing these reforms. Guhn found seven processes interacted to produce successful reforms. These processes were: (a) relationship building, (b) autonomy, (c) resistance to change, (d) competence, (e) leadership, (f) team support, and (g) school-family-community partnerships. Through factor analysis, Guhn found that no one factor determined the success or failure of a school change initiative, but rather all factors needed to be in place for a reform initiative to succeed long term.

Other researchers have focused on how EI impacts teacher effectiveness, which is a specific component of school reform. In an examination of novice teacher success, commitment, and retention, Tait (2008) found that a particular EI skill, resilience, contributed to first-year teachers' successes. Brackett et al. (2010) investigated the relationship between emotional regulation and both job satisfaction and teacher burnout among secondary school teachers in Kent, England. They found that emotional regulation skills had a positive correlation to teacher resistance to burnout and, indirectly, to job satisfaction and feelings of personal accomplishment. Kocoglu (2011) explored the relationship between self-reported teacher efficacy beliefs and their EI scores as measured by the Bar-On Emotional Quotient Inventory (EQ-i:S). Kocoglu found that teacher self-efficacy beliefs were positively correlated with their EQ measures. Hall and West (2011) examined the relationship between EI measures and student teacher performance. Their findings were mixed. The EI subscale of understanding emotions was

positively correlated with positive communication, but the subscale of managing emotions was negatively correlated with meeting the needs of diverse learners, and the other EI subscales showed no correlation with the student teacher rubric. Hall and West questioned the usefulness of the rubric to evaluate student teachers, and they concluded that more research was needed. Garner (2010) conducted a review of research on emotional competencies and their influence on teaching and learning, and found that emotional competencies are correlated with creating positive classroom environments conducive to student learning. However, Garner noted that direct links to student performance were lacking in many of the studies. Part of the problem with developing a link between EI theory and teacher effectiveness is no one definition of EI exists, nor is there consensus on how to measure it. Cherkowski (2012) is the only known researcher who has used both systems and EI theories as a conceptual framework for research on teacher leadership, but more research is needed to identify how these two conceptual lenses used together may lead to a better understanding of internal and external factors that influence the adoption of change.

Relationship of Theories to This Study

By integrating EI theory with systems theory to create a conceptual framework for this study, I hoped to produce a deeper understanding of the factors that influence teachers to implement instructional change. Senge et al. (1999) used numerous anecdotes to illustrate how the five disciplines support a learning organization. Goleman's (2011) EI theory, with its multiple components, addresses the personal skills that are needed to be a systems thinker and successfully implement change. In addition, the five disciplines

of systems theory and the three umbrella competencies of EI theory are useful constructs for first cycle coding of the data, while the more detailed descriptions of EI competencies provide some potential constructs for second cycle coding.

This study is based on the assumption that to understand how, when, and why veteran teachers change their classroom practices, researchers and educational leaders must listen to what the teachers themselves have to say about their experiences with instructional change. Prior research indicates that teacher EI may be related to teacher effectiveness, but no study to date specifically links EI competencies to how well teachers adapt to and adopt instructional changes in the classroom (Brackett et al., 2010; Cherkowski, 2012; Garner, 2010; Hall & West, 2011; Kocoglu, 2011; Tait, 2008). EI theory also relates to this study because the EI competency of self-awareness is a critical part of the reflections that veteran teachers make about their instructional practice, while self-management plays a critical role in how teachers respond to change. Teachers are part of a complex system of school, district, state, and national forces, so systems theory is also relevant to this study because an analysis of teacher experiences through the lens of systems theory can reveal the external factors that influence their successful adoption of new instructional or classroom management practices. Using both theories as a framework for analyzing interview data yielded a deeper understanding of how veteran teachers perceive themselves as agents of change, as well as how they perceive the various external layers of the system that have impacted how they developed as educators over time. One of the research questions for this study is: What are the factors and conditions that veteran teachers believe have influenced them to change their classroom

practices? Systems theory and EI theory provided the concepts needed to identify common themes in relation to how, why, and when teachers successfully change their instructional and classroom management practices. Through the voices of veteran teachers describing their experiences with school reform, this study provides additional support for the use of systems thinking and EI concepts in analyzing how school structures can be used to support school reform.

Literature Review

The importance of the role of teachers in implementing school reforms is supported by the research literature (Garner, 2011; Thornburg & Mungai, 2011). However, the factors that influence teachers to change their practices are not clear. Some studies point to internal factors, or characteristics, of the teachers themselves (Brackett, Palomera, Mojsa-Kaja, Reyes, & Salovey, 2010; Hall & West, 2011; Kaniuka, 2012; Kocoglu, 2011; Ripley, 2010; Tait, 2008); others highlight the external factors that support or obstruct teacher implementation of teacher (Dingle et al., 2011; Melville, Bartley, & Weinburgh, 2012; Waldron & McLeskey, 2010). Still others suggest that teacher implementation of change is a systemic challenge and must be understood in the context of complex, interrelated dynamics (Austin & Harkins, 2008; Craig, 2012; Givens et al., 2010; Guhn, 2009; Hannay & Earl, 2012; Williams, Brien, & LeBlanc, 2012). The research literature also suggests that quality PD is an integral piece to implanting school reform (Frank, Zhao, Penuel, Ellefson, & Porter, 2011; Gibson & Brooks, 2012; Johnson, Fargo, & Kahle, 2010; White, Polly, & Audette, 2012). Quality professional development, as defined and described in various studies, has the potential to address

both internal and external factors that impact teacher change, and can be the vehicle by which systemic interactions are understood and harnessed to positively influence change.

This literature review includes an analysis of research about the characteristics of quality professional development and how approaches that consist of these characteristics have a positive impact on teacher implementation of change. This review also includes an exploration of how quality professional development impacts internal factors, such as how teacher self-efficacy beliefs, teacher capacity, and emotional competencies influence how effectively teachers implement change. In addition, this review includes an analysis of research related to the external, and systemic influences on teacher implementation of reforms, such as leadership and opportunities for collaboration and how understanding teacher perceptions and experiences is important to understanding how to support positive classroom changes. Finally, this review includes a discussion of the themes and gaps in the literature that suggests the need for this study.

Professional Development and Teacher Change

The importance of quality professional development in successful teacher adaption of school reforms has been explored by many researchers (Frank, Zhao, Penuel, Ellefson, & Porter, 2011; Gibson & Brooks, 2012; Johnson, Fargo, & Kahle, 2010; White, Polly, & Audette, 2012). Professional development provides teachers with updates about content knowledge, a shared vision for student learning, adequate practice time to master new skills, and opportunities for professional collaboration (Lee & Buxton, 2013). Once teachers have received certification, professional development is the mechanism by which they stay current in their field (Jaquith, Mindich, & Wei, 2010). States that show

the highest levels of improvement in student performance on national assessments are those states that have mandated plans for ongoing teacher professional development (Jaquith et al., 2010). Advocates have suggested that effective professional development includes not only content-specific information, but also opportunities for active learning, coherence with the larger vision of the school and its current programs, sufficient duration to obtain mastery, and enough participation of staff in a specific building or district so that individual teachers have opportunities to collaborate with colleagues (Lee & Buxton, 2013; Mistretta, 2012). Other advocates have noted that leadership is critical to effective teacher professional development, although leadership may be formal, originating from building principals and district administrators, or informal, originating from teachers themselves (Mizell, 2012).

Recent research on effective teacher professional development supports the suggestions made by these advocates. In a mixed method study, Hough (2011) examined characteristics of effective professional development in relation to character education classroom management approaches at the middle school level. In an analysis of survey data and focus group feedback, Hough found that the most effective professional development included expert presentations, leadership support, alignment with school goals, alignment with actual student and teacher needs, and compatibility with teacher background and experience. These results supported Lee and Buxton's (2013) study about teacher professional development to improve science and literacy achievement for English language learners in which they suggested effective professional development

consists of more than just providing teachers with content and practice, but also fosters a sense of common vision and is differentiated for various teacher needs.

Dixon, Yssl, McConnell, and Hardin (2014) examined differentiated instruction, professional development, and teacher efficacy and found that an increased number of professional development hours in differentiated instruction was positively correlated with teacher self-efficacy. The self-efficacy beliefs measured in this study included a willingness to invest in new instructional strategies, setting goals, persistence, and resilience. Because differentiated instruction, by its nature, requires constant flexibility and adaption to change in order to meet student needs, the concepts of Dixon et al.'s study may be applied to effective teacher professional development in general. If professional development is the primary mechanism by which teachers are taught new instructional strategies and classroom management skills, Dixon et al.'s study suggests that effective professional development must increase teacher self-efficacy beliefs, which in turn are an important component of EI. Dixon et al.'s study also supports Jaquith et al.'s (2010) advocacy for state mandated professional development hours in order for teachers to retain their certifications.

Quality professional development does not consist of short-term instruction, but occurs over a period of time (Honey & Graham, 2012; Shymansky, Annetta, Yore, Wang, & Everett, 2013; White, Polly, & Audette, 2012). White et al. (2012) examined implementation of response to intervention at an elementary school and found that teacher responses to professional development change over time as they become more comfortable and competent with the new initiative. Using interviews of key personnel at

a North Carolina elementary school, White et al. presented a case study on implementing a new academic intervention model. White et al. coded the interview data to show a "time-ordered matrix" (p. 78). Teachers reported that classroom implementation of the intervention was generally successful and cited supportive leadership and quality professional development as major reasons for success. Teachers also reported that being able to see positive student outcomes relatively quickly motivated them to make the necessary changes. The time-ordered matrix revealed that teachers felt overwhelmed and exhausted early in the process. These feelings subsided over time, but teachers continued to report that the amount of time needed to implement the new intervention model took them away from other activities, and they did not see this negative impact diminishing. White et al.'s research indicates that quality leadership is critical to effective professional development, especially in the early stages when teachers often feel overwhelmed. Strong leadership can guide teachers through this difficult phase of reform implementation until positive student results provide an additional form of motivation for teachers to continue to implement change. White et al. used change dynamics as a theoretical construct by which to interpret teacher responses to professional development, but they did not explore internal factors that may have influenced teacher change or used a systems approach to understanding their data.

In related research, Gibson and Brooks (2012) conducted a case study about a group of teachers from a Canadian school district who implemented a new social studies curriculum. Through an analysis of surveys, interviews, and classroom observations, Gibson and Brooks found that lack of quality professional development was the major

reason teachers cited as why they struggled to implement the new curriculum. Professional development was provided in the middle of the school year, which necessitated teachers being out of their classrooms and preparing plans for substitutes. This professional development consisted of three afternoon sessions, but no follow-up was provided during the rest of the school year. Teachers also complained that professional development sessions were vague and theoretical and did not provide enough concrete training about how to apply the theory to actual lesson planning. Gibson and Brooks found that teachers who believed they were successful in implementing the curriculum named supportive colleagues and building leadership as positive factors. This research provided a window into teacher experiences by exploring how teachers themselves perceive their reactions to school change. The coding done by Gibson and Brooks also provided ideas for the types of themes that might develop from case study research. Although Gibson and Brooks focused on one particular school reform, the themes of leadership, collegial support, and the quality of professional development may emerge from the responses of veteran teachers as they describe the different types of change initiatives they have experienced over the years.

Johnson, Fargo, and Kahle (2010) also highlighted the importance of professional development in a quasi-experimental study of the impact of a systemic reform program on teacher change and student learning of science in relation to 12 middle school science teachers in the United States. Johnson et al. used a control group to demonstrate that students who were assigned science teachers who received initial training and ongoing support in implementing the new curriculum through participation in a professional

learning community (PLC) scored higher on state science assessments, even into the high school years. Johnson et al. also conducted classroom observations of teachers who had participated in enhanced professional development for the new science curriculum. Initial training was conducted in the summer over two full days, with monthly follow-up during the rest of the year. The PLC group provided opportunities for social and personal growth in addition to support for implementing the science lesson plans. Johnson et al. did not survey or interview either the intervention or control group of teachers to determine what factors they perceived as important to implementation success. This research supported the idea that effective professional development is critical to successful school reform, but additional research is needed to uncover how teachers respond to various elements of professional development, follow-up, and opportunities provided in PLCs.

Some researchers have found that professional development works best if differentiated for teacher needs (Petrie & McGee, 2012; Frank, Zhao, Penuel, Ellefson, and Porter, 2011). Frank et al. (2011) examined teacher experiences that transform knowledge related to the implementation of innovations and found that differentiation of professional development was the most effective way to reach all teachers who are responsible for implementing change. Frank et al. surveyed teachers in 25 different schools who had introduced a technological innovation into the curriculum. They found that experienced teachers adopted the innovation more readily when they were given time to collaborate with peers, while less experienced teachers needed time to experiment or "fiddle" (p. 150) with the program first, and new teachers needed more direct instruction on how to implement the change. Analysis of the data also showed that newer teachers

reported minimal positive effects of collaboration in implementing change, and teachers with a middle range of experience showed slightly more positive effects of collaboration. Only veteran teachers showed a positive impact from all three types of training, which included direct instruction, time to experiment, and time to collaborate, with the greatest impact resulting from collaboration. Frank et al. concluded that knowledge diffusion follows a predictable trajectory influenced by the number of years a teacher has been in service. They recommended that professional development designs include differentiated instruction so that implementation by all teachers is optimized.

The literature suggests that professional development (PD) for teachers is critical for their ongoing success in the classroom. States that have clear plans and guidelines for teacher professional development show the strongest national test scores for K-12 students (Jaquith, Mindich, & Wei, 2010). Effective professional development consists not only of disseminating content knowledge, but also of imparting a shared vision of the school's mission and goals, providing teachers with opportunities for practice of skills, and fostering a culture of collaboration (Eargle, 2013; Lee & Buxton, 2013). Dixon, Yssl, McConnell, and Hardin (2014) noted that quality professional development results in higher teacher self-efficacy beliefs, and Mizell (2012) found that it occurs in relation to strong, effective leadership.

Despite researchers' findings that quality, ongoing teacher professional development is essential to implement changes in curriculum and instruction needed for improved student learning, how to provide effective professional development is still unclear. Tschannen-Moran and McMaster (2009) discovered that building more layers

upon basic professional development does not always result in greater teacher capacity for successful implementation. Tschannen-Moran and McMaster conducted a quasi-experimental study of four different professional development models, each of them building on the features of the other. The purpose of the study was to examine how self-efficacy beliefs affect the implementation of a new reading program. Ninety-three teachers across nine schools in five districts completed self-efficacy surveys before and after training in the new program. The first training group listened to an expert presentation. The second group received the same presentation plus extra time for watching the presenter model a lesson. The third group received the presentation and modeling, but they were also given time for practice. The fourth group received the same training as group three, plus they were given coaching throughout the year.

Although Tschannen-Moran and McMaster (2009) predicted that each level of training would result in greater teacher reports of self-efficacy, this prediction did not come true. All four groups showed an increase in general self-efficacy beliefs, and only participants in the first and fourth groups showed an increase in task-specific self-efficacy. Tschannen-Moran and McMaster concluded the two groups that had some opportunity to see and practice the new lesson formats, but were not given coaching to support them throughout the year, reported less self-efficacy because they had a sense they were not implementing the program as they should. The first group, who only heard the presentation, did not have a sense of where they were failing at implementation, and the fourth group received support, so these two groups demonstrated significant self-

efficacy gains. Tschannen-Moran and McMaster's study is a good example of how sensitive teachers can be to professional development attempts that fall short.

Another problem with providing effective professional development is that teacher espoused implementation practices may not always reflect what is really happening in the classroom. Polly and Hannafin (2011) examined how learner-centered professional development influences teacher practices and found that teachers who reported satisfaction with implementation of a new learner-based mathematics program adhered to the tenets of the program less than 15% of the time. When experts helped co-plan the lessons, teacher adherence to the program improved, but overall, teachers fell back on strategies they were comfortable using prior to the professional development and were satisfied with their levels of change in classroom practices. This study demonstrates inherent difficulties in determining whether or not professional development has been influential in changing classroom practices unless time-consuming observations are included in the professional development plan.

Teachers can fall short of their own goals to implement new strategies due to other constraints as well (Eargle, 2013; Jenkins & Yoshimura, 2010; Lee & Buxton, 2013; Mizell, 2012; Yan, 2012). In their examination of teacher professional development to improve science and literacy achievement for second language learners, Lee and Buxton (2013) noted that effective professional development must be coherent with the other goals and activities of a school. Eargle (2013) found that teachers were only able to capitalize on professional development if they were able to practice in an environment that encouraged risk-taking and that developed teacher leaders in lieu of

traditional hierarchical structures. In addition, Mizell (2012) noted that teacher leadership is an important part of effective professional development. However, in their discussion of meeting the special education professional development needs of elementary teachers, Jenkins and Yoshimura (2010) found that even when these two features are a part of a professional development program, teacher participation can fall short due to testing pressures. In their case study of elementary teachers given the opportunity to volunteer for professional development sessions offered during lunchtime, Jenkins and Yoshimura reported that initially two-thirds of the faculty signed up, but by the end of the year, only a few remained; those teachers who had dropped the program cited time constraints due to preparing for standardized tests as the reason. The teachers who continued to attend professional development sessions reported greater satisfaction with their ability to implement practices conducive to the full inclusion of special needs students. Jenkins and Yoshimura's study further illustrates the difficulties in determining what kind of professional development is effective and how to best deliver it. The study highlighted the fact that other internal and external factors can influence how well teachers respond to change initiatives, even when the professional development has been well designed and amply available. The research on teacher professional development and how it influences successful implementation of change in classroom practices reveals gaps in the knowledge of what factors impact how, why, and when teachers change their classroom practices and how the various factors interact with each other. More research is needed in order for educators to understand the role professional development plays in conjunction with other factors that influence teacher change.

Barriers to Implementing Change

In addition to understanding the reasons why teachers are successful at implementing reforms, it is important to understand the reasons why teachers resist and/or are otherwise unsuccessful at implementing change. Researchers have found various reasons for teacher resistance to implementing change, including inadequate professional development, time constraints, concerns over student needs, and philosophical differences with the proposed change (Vazques-Bernal, Mellado, Jimenez-Perez, & Lenero, 2011; Danielowich, 2012; Dever & Lash, 2013; Gainsburg, 2012; Thornburg & Mungai, 2011). Thornburg and Mungai (2011) conducted a phenomenological study of 42 elementary and secondary New York state teachers and school reform initiatives for special needs students. Thornburg and Mungai acknowledged that teachers are often resistant to change initiatives, but posited that teacher resistance is a way of communicating legitimate concerns about a particular reform when their opinions and experiences are not heard or valued. Thornburg and Mungai collected data on teachers' experiences over the course of 6 years through interviews, group meetings, and field observations. They analyzed the data using a modified analytic methodology. Lack of time emerged as the biggest reason why teachers resisted change in this study. Inconsistent leadership was the second most frequently cited reason in teacher failure to successfully implement change. The third biggest reason teachers failed to adopt change was concern over student needs. Teachers voiced concerns that testing mandates were an obstacle to meeting student academic needs and that pressure for all students to fit into the same academic mode was harmful to students

who would be better suited to vocational training. Thornburg and Mungai also found that veteran teachers resisted change more than newer teachers, and they cited weariness with continuous reforms and with reforms that were not really new but given new names as reasons for failing to implement them.

Although the study took place over several years, Thornburg and Mungai (2011) collected data on many different change initiatives in their early stages of implementation. Unlike Kaniuka (2012), they did not determine if teacher reactions to the same reforms changed over time. Still, it is helpful to keep in mind not only those school conditions that may foster teacher implementation of change, but also those factors that could lead to teacher resistance to change. Thornburg and Mungai (2011) also presented several themes that emerged from their research that may have implications for this study. Thornburg and Mungai focused on why teachers resist change, rather than how, when, and why they have been successful at change, but they also demonstrated the importance of understanding teacher perceptions in order to comprehend why change initiatives succeed or fail.

Internal Factors that Support Teacher Change

One reason professional development may be so critical in implementing school reform is that teacher self-efficacy is increased through quality professional development. Kaniuka (2012) conducted a case study of eight teachers who implemented a new reading program. Data from teacher reflection logs were triangulated with student performance scores. Kaniuka found that as teachers reported greater feelings of control and competence with the new curriculum, which Kaniuka called teacher capacity, they moved

from feelings of resistance to acceptance and finally to endorsement of the new program. Teachers were initially involved in selecting the reading program, which gave them a sense of distributed leadership, and they were initially trained for 4 hours before beginning implementation, with 6 hours of follow-up support provided throughout the school year. In addition to quality professional development, Kaniuka also found that student outcomes were important to how well teachers embraced the new program. Kaniuka used teacher logs instead of interviews to collect data, but the findings support the idea that understanding teacher perceptions and experiences are helpful in understanding how to implement school reforms. The impact of reforms on student learning outcomes may also become another emerging theme to consider in my research.

Pyhalto, Pietarinen, and Soini (2011) also found that teacher beliefs about themselves influenced how they perceived school reform efforts. Pyhalto et al. identified professional agency as a combination of a teacher's self-efficacy, motivation, and participatory skills (p. 100). In a qualitative study designed to elicit teacher perceptions of their own agency and of a country-wide school reform effort in Finland, teachers were found to perceive themselves as either active subjects or passive recipients of reforms and to have either holistic or atomistic attitudes towards the reform initiative. Atomistic attitudes saw the reform initiative as fragmented and/or one dimensional. Holistic attitudes consisted of identifying the interacting factors that comprised successful reform. The study results showed that teachers with atomistic perceptions of school reform also tended to have more passive perceptions of themselves as agents of change, while teachers who communicated more holistic attitudes were more likely to see themselves as

active agents of change. Pyhalto et al. concluded that schools that want to create a culture of change must address interacting factors, both internal, such as professional agency, and external, such as communicating the reform in a cohesive manner. This conclusion supports the use of systems thinking to explore how teachers experience school change. Le Cornu's (2013) study supported the claim that teachers' beliefs about themselves impact their resilience in solving problems they encounter in teaching. Interviews with teachers and their supervisors revealed that relationships were critical in creating the conditions under which new teachers were successful, and one of the most important relationships was that which new teachers had with themselves, in other words, whether or not they had high EI skills to begin with. Le Cornu also concluded that new teacher success was the result of a complex interaction of factors, in which the individual reacted to relationships and contextual conditions within the system.

Professional development may lead to greater teacher self-efficacy and capacity, but other internal characteristics may influence how teachers respond to change. Researchers have attempted to link teacher success to internal factors such as those Goleman (2011) identified as emotional competencies. Tait (2008) examined the roles of resilience, efficacy beliefs, and emotional competence in a first year teachers' experience. In this narrative study, Tait found that scores on a Stress Resilience Test (SRT) helped identify teachers with positive first year experiences, whom Tait later interviewed. Using answers to items on the SRT, interview data, and a written essay from teachers, Tait identified common themes among teachers who ranked themselves as highly satisfied with their first year teaching experience. These themes included strong stress

management strategies, an overriding concern for student well-being, and previous life experiences that had built resilience to difficult situations. Tait's study did not explore the experiences of veteran teachers and their resilience during school reform initiatives, but the study supports the findings of Teach for America administrators (Ripley, 2010) that stories of past resilience by teaching candidates is a better predictor of success in the Teach for America program than any other measure, including grade point average and teacher certification test scores.

Potter (2011) also tried to link success in the field of education to emotional competencies. In a qualitative exploration of a new concept in support of good educational leadership and emotional intelligence, Potter identified ten components of EI: (a) assertion, (b) comfort, (c) empathy, (d) decision-making, (e) leadership, (f) drive strength, (g) time management, (h) commitment ethics, (i) self-esteem, and (j) stress management (p. 2). Potter also identified three negative emotional reactions, including aggression, deference, and change orientations (p.4). Potter solicited eight participants in a convenience sampling procedure, and they completed the Emotional Skills Assessment Profile (ESAP). Potter divided the eight participants into two groups: one group as high achievers and one group as average achievers. The high achievers included one urban elementary school principal who had turned his school from a low-ranked school to one of the highest ranked on state tests for 3 years, one chief executive officer of a multi-million dollar retail company, one chief financial officer of a hospital, and one education professor. The average achievers were an elementary school principal whose school ranked as low-performing for 3 years, an elementary classroom teacher who had just

entered an educational leadership program, an administrator in higher education, and a college career counselor. Potter analyzed the profile results and calculated how many of the 10 items the participants ranked high, how many ranked within the normal range, and how many ranked low. Potter also looked at how problem emotional behaviors were scored. All four of the high achievers had high rankings on the majority of the ten skills, ranging from 10/10 to 7/10. Of the average achievers, the range of high scores was 10/10 to 5/10. Potter found a correlation between EI competencies, as measured by the ESAP and career achievement, although the difference between groups was not as great as hypothesized.

The Potter (2011) study did not focus on the success of teachers in the classroom; in fact, Potter intimated that success in education could be inferred by leaving the classroom and becoming a successful administrator. Potter arbitrarily assigned the one classroom teacher in his study to the low-achieving group without providing any evidence of this teacher's competencies in the classroom. Potter's study does suggest, however, that the measures used for EI may be correlated with career success, and the findings of this study also support the need for further investigation into whether or not EI competencies can help classroom teachers respond positively to school change.

In an examination of EI and teacher efficacy, Kocoglu (2011) linked the self-efficacy beliefs of pre-service teachers to EI scores on the Bar-On Emotional Quotient Inventory (EQ-i:S). Ninety pre-service Turkish teachers of English completed the EQ-i: S and the Teachers' Self Efficacy Scale (TSES), which measured items under the constructs of motivating student engagement, classroom management skills, and use of

instructional strategies. Kocoglu found significant positive correlations between EI and self-efficacy beliefs, with the largest correlation between interpersonal skills as measured by the EQ-i: S and the student engagement subscale on the TSES. Adaptability subscale scores and stress management subscale scores on the EQ-i:S did not correlated with any subscales on the TSES. This lack of correlation is noteworthy because adaptability and stress management are both emotional competencies that would serve teachers well in adapting successful to school change. Conclusions based on this study are limited, however, because the participants were all pre-service teachers. Their self-efficacy beliefs about their abilities as teachers had not been tested by only a year or more of actual service, nor were the results triangulated with outside data regarding their performance as student teachers.

Kocoglu (2011) did not explicitly link self-efficacy beliefs to implementing change, but Kocoglu described efficacious teachers as more likely to try new practices in the classroom and to persist when faced with challenges. Given the similarities between self-efficacy beliefs and efficacious teaching with systems theory about learning organizations and the correlation between self-efficacy beliefs and EI that Kocoglu discovered, this study supports the idea that EI and systems theory provides useful constructs for understanding veteran teachers' experiences with school change.

In a related investigation, Hall and West (2011) conducted a quantitative study to examine the relationship between EI and student teacher performance. Using the Mayer-Salovey-Caruso Emotional Intelligence Test (MSCEIT), Hall and West compared scores of 74 secondary education pre-service teachers from the western region of the United

States with student teacher performance, using a university-designed rubric. The results were mixed. The overall EI score was not positively correlated with student teaching scores on the rubric. One subscale score, understanding emotions, was positively correlated with positive communication; however, the subscale of managing emotions was negatively correlated with understanding diverse learner needs. Hall and West's study highlights the difficulties in using EI theory to better understand characteristics of successful teachers. Several different subscales on the MSCEIT measure different types of emotional competencies, and therefore, many different ways to measure teacher success exist. More research is needed in order to determine if EI provides useful constructs by which to understand teacher competence in general and how teachers respond to change initiatives in particular.

In another study, Brackett, Palomera, Mojsa-Kaja, Reyes, and Salovey (2010) examined the relationship between emotional regulations and teacher job satisfaction or burnout among secondary school teachers in Kent, England. Using the MSCEIT, they measured correlations between EI and teacher responses to their jobs. These results were also mixed. Emotional regulation was found to be positively correlated with positive affect, but not inversely correlated with negative affect. Emotional regulation was also found to be positively correlated with feelings of personal accomplishment, but was not correlated with emotional exhaustion. A separate measure of building principal support was found to be a mediating factor in teacher job satisfaction, and Brackett et al. concluded that emotional regulation ability may have an indirect rather than direct impact on teacher levels of job satisfaction. None of these measures were used to examine how

well teachers implemented change initiatives over the years, leaving room for more studies that link either job satisfaction with the ability to adapt to change or directly linking emotional regulation with positive responses to change.

The research linking EI to effective teaching indicates that no clear picture exists about how emotional competencies should be measured and to what extent they impact teacher success. Garner (2010) conducted a literature review of the studies attempting to link EI with teaching success. The results were inconclusive, and Garner stated that more research is needed. Garner noted that there are many variations on the use of EI as a theoretical construct and different tools are used to measure these constructs. Despite strong evidence that EI is correlated with student learning, researchers have failed to demonstrate conclusively that EI in educators is predictive of their success in teaching. Garner cited studies linking a positive emotional climate in classrooms to effective teaching, but these studies did not specifically use EI constructs to describe the changes that occur in the classroom environment or how teachers create this environment. The differences in constructs, definitions, measures, and methods of the various studies on EI in schools led Garner to conclude that "the theories may work better in concert rather than in isolation to explain the detailed emotion regulatory processes" (p. 309). This conclusion suggests that using systems thinking to enhance an understanding of the internal emotions teachers experience when implementing change may lead to a better understanding of the processes by which they are successful.

External Factors That Support Teacher Change

Research into what helps teachers change their classroom practices has not provided indisputable evidence of the specific factors that induce teachers to change their practices. Dingle, Brownell, Leko, Boardman, and Haager (2011) explored the influence of professional development, context, and individual qualities in relation to developing effective special education reading teachers, and they found several personal qualities interacted with external factors to influence how these teachers implemented a literacy intervention program. Dingle et al. collected data from multiple sources, including surveys, interviews, and implementation ratings by outside experts. Dingle et al. found that prior content knowledge and general pedagogical skills motivated teachers to try new practices and the current curriculum contributed to how well participants implemented the new program. Teachers were provided with a professional development model that included coaching, observation, and feedback.

Dingle et al. (2011) discovered that the personal characteristics and different experiences of teachers influenced how they responded to the professional development. For example, one veteran teacher who demonstrated high levels of content knowledge found it difficult to embrace new practices. Another teacher was new and enthusiastic about implementing new practices, but outside commitments prevented him from successfully implementing the new curriculum. A third teacher had experience and knowledge, but was new to special education and was eager to try something other than the traditional curriculum; this teacher was most successful in implementing the reforms. This study highlighted the complex interaction of both internal and external factors in

how teachers implement changes in their classroom practices. The results were based on a small sample, but they suggested that because how teachers react to change is individualistic, it is challenging for school leaders to find ways to successfully motivate large numbers of teachers to enact school reforms. Because school leaders are expected to motivate teachers to implement new practices, however, it is imperative that researchers continue to look for common factors that promote successful change.

In a similar study, Waldron and McLeskey (2010) investigated establishing a collaborative school culture through comprehensive school reform and found that multiple conditions are needed to support teachers who implement school change. They conducted a literature review of the use of comprehensive school reform (CSR) practices to develop schools that are inclusive of students with disabilities. Waldron and McLeskey reported that successful implementation hinged on the development of three CSR components: (a) development of a collaborative culture, (b) high quality professional development, and (c) quality leadership. Waldron and McLeskey examined school reform with the idea that school culture must be changed in order for other reform initiatives to be successful. They believed that the school culture must include support for teachers so that teachers can engage in self-reflection in order to change their belief systems regarding teaching. This support is provided through the development of distributed leadership. Waldron and McLeskey contrasted this kind of school culture with one where teaching is individualistic, professional development is externally driven, and leadership is autocratic. School leadership has been found to impact the emotional and psychological well-being of teachers in schools (Craig, 2012; Higgins, 2012). Waldron

and McLeskey's findings emphasized the idea that school leaders impact different aspects of a school's internal systems and turn it into a place where teachers are a part of the learning organization as well as students.

One external factor clearly related to how teachers effectively implement change is school leadership. Melville, Bartley, and Weinburgh (2012) studied how school leadership at the secondary level impacted teacher success in implementing reforms. In this study, leadership was provided by the department chairperson, as well as administrators at the school and district level. The reform initiative was to create a single-sex male classroom for an applied mathematics course in a diverse, rural high school in Ontario. This initiative was based on an analysis of student needs and piloted by one classroom teacher. Four participants were interviewed four times for the study: the classroom teacher who implemented the change, the mathematics department chairperson, a school counselor, and the principal. Melville et al. used the theoretical lens of Sergiovanni's change forces to analyze the interview data (p. 2). Sergiovanni defined these forces as bureaucratic, personal, market, professional, cultural, and democratic.

Melville et al.'s (2012) data analysis revealed the critical importance of the department chairperson in making the reform effort successful. This person served not only as a support to the classroom teacher, but also as a liaison between the teacher and the school administrator who addressed the potential political issues the reform engendered. Their analysis also revealed that trust and a risk-taking culture were essential to the success of the classroom teacher in implementing change. The teacher reported that he trusted the department chairperson enough to share his frustrations and mistakes with

the new initiative, and the department chairperson used the word trust to describe the relationship she had with both the school counselor and the principal. They trusted that the principal would advocate for them with district administrators and with the public if the reform effort proved to be unsuccessful or unpopular. Using the themes of change forces, Melville et al. identified personal forces, cultural forces, and democratic forces as the most important to successful change. By democratic forces, Melville et al. meant that the participants relied on a shared commitment or vision of the common good, which in this situation, was the impact of curriculum on the learning and well-being of the students involved.

The importance of leadership to school reform initiatives becomes even clearer in Craig's (2012) narrative study of teachers' experiences with reform initiatives and school culture changes in one middle school over a 12 year period. Craig was hired by the school district with grant money and was given the task of documenting what happened with reforms. One teacher's narrative dominates the research article, but Craig used other teachers' reports to support the assertions of the main participant. Craig documented changes in organizational culture that influenced this teacher's feelings about a reform initiative she initially embraced.

Initially, Craig (2012) noted, this teacher, along with others from the district, enthusiastically embraced replacing their current literacy practices with reading and writing workshop practices that became popular in the 1990s and acted as an informal change agent in the school. At first the organizational culture was one of experimentation and collaboration. Two principals supported teachers' experiments with instructional

changes in the classroom, teacher implementation was voluntary, and teacher collaboration was open, informal, and based on a sense of mutual trust and respect. Craig noted that two factors disrupted this process: one, national and state mandates that emphasized accountability measures based on standardized testing, and two, a change in building leadership, accompanied by the hiring of an outside staff developer who was charged with making sure all teachers implemented literacy workshop models in the same way.

Within a year, Craig (2012) noted that the atmosphere at the school completely changed. The school became a charter school within the public school system, which meant that teachers no longer had job security. Each year, teachers were required to reapply for their jobs, and teachers from other schools were enticed to submit applications in the hopes of supplanting original staff members. The new staff developer was condescending about the teachers' prior knowledge and experience, Craig reported, and her approach was backed by the new principal. Repeated observations of teachers in the classroom, followed by critiques that were given in front of other colleagues and students, made teachers leery of trying new instructional practices for fear of making mistakes. The staff developer squashed all discussion and debate about best practices. After the second year, teachers were forced to sign an oath that they would implement workshop models faithfully and that any dissension was to be kept private between them and the principal. Craig noted that leaders adopted what they called a "persistent discomfort" (p. 97) model of professional development, meaning that rather than expressing concern about teachers' growing unhappiness, they used this discomfort as

evidence that professional growth had occurred. In the meantime, teachers felt disrespected professionally and fearful personally. Teachers began to leave the school and the profession. By the end of the narrative, Craig noted that the principal had been promoted to superintendent, and the new principal was more supportive of the teachers; however, Craig also reported that damage to a culture of collaboration, trust, and innovation persisted.

Thus, the studies cited in this literature review that focused on external factors impacting teacher implementation of change reveal the complex nature of how different factors interact in each circumstance to support or impede how teachers react to reforms. This complexity suggests that a systems approach to analyzing how, why, and when teachers change their classroom practices could provide useful tools for school leaders to better support reform initiatives.

Using Systems Thinking to Support Teacher Change

Although Senge et al. (2012) demonstrated that systems thinking could be an effective way to help schools adapt to change by becoming learning organizations, by and large, research applying systems theory to schools has focused on family systems, not the organizational system. For example, Johnson (2010) and Sturge-Apple, Davies, and Cummings (2010) examined how family systems impact the school behaviors of young children and found that children from cohesive families demonstrated few behaviors that negatively impacted school performance. Children from disengaged families, however, demonstrated negative external behaviors, such as aggression, while children from enmeshed families exhibited internal behaviors such as depression. These behaviors

impacted school performance, although the internalized behaviors were less disruptive than the external manifestations. In another study, Hardaway, Wilson, Shaw, and Dishion (2012) examined how chaos in family systems is correlated with anger, aggression, and attention problems in school-age children. Hardaway et al. found that self-regulation skills were lacking in these children, a finding which supports the idea that EI competencies and systems thinking constructs can be better understood in the context of how they are interrelated.

Austin and Harkins (2008) are some of the few researchers that have applied systems thinking to the interactions between school staff rather than to the families of schools. They investigated how conflict resolution training impacted the collaborative climate of an administrative team in a preschool facility in New England. Interestingly, Austin and Harkins noted that collaboration is often associated with higher rather than lower levels of conflict, presumably because more collaboration demands that team members communicate more directly with each other about expectations, desires, and needs in relationship to curriculum and instructional practices. Austin and Harkins participated in an action research study to teach conflict resolution skills so that members of the administrative team could more effectively collaborate with each other. They measured how the organization was perceived in terms of trust and support, how professional interactions were described, and how participants developed cognitive, emotional, and volitional language during the course of their communications over time. Austin and Harkins found that conflict resolution training resulted in better perceived collaboration and a shift in how participants used language to state wants and needs. This

research suggested that collaboration as part of developing a learning organization is a complex process that includes developing strategies for managing conflict. The link between collaboration and conflict when implementing school reforms needs to be addressed by school leaders and may become an emerging theme in any study of teacher perceptions about how they implement change.

Collaboration is not limited to interactions amongst teaching faculty or even between administrators and faculty. Silverman, Kramer, and Ravitch (2011) explored a systems approach to understanding occupational therapy service negotiations in a preschool setting and found that systems thinking provided an effective means of analyzing interactions between administrators, teachers, and parents in order to evaluate how both formal and informal communication affected the child's qualifications for support services. Using a mixed method approach that included surveys, interviews, and observational field notes, Silverman et al. determined that important interactions between individuals who were vested in the service decisions were missing. The study also revealed discrepancies in the reciprocity of interactions. This study supports the findings of Austin and Harkins (2008) in suggesting that collaboration, which has been identified both as an important EI skill (Goleman et al., 2002) and as a systems thinking construct (Senge et al., 2012), is a complex phenomenon worthy of additional study, especially when effective collaboration may support teachers in implementing important school reforms.

Recent studies also demonstrate the importance of understanding teacher collaboration as a part of implementing change. Several studies linked opportunities for

teachers to collaborate to the creation of learning organizations, which by definition are ones that are responsive to change (Senge et al., 1999). Collaboration not only encourages problem solving behavior, it also appears to meet the emotional needs of educators who need support when dealing with changing conditions. Pescarmona (2010) conducted a case study of a school in Italy where teachers implemented a new curriculum in an elementary school setting. Pescarmona aimed to understand how teachers implemented goals and integrated them into already existing structures by collecting data from multiple sources, using field notes, artifacts, interviews, and observations over a 2-year period. The themes that emerged from this study included the following: teacher concerns about how students learn, how to assess student work, how pre-existing structures impact change initiatives, and the nature of teaching and authority.

Pescarmona (2010) found that implementing change in schools is a complex process, even when teachers are provided with the time and supports they need to do it well. The teachers' responses to the changes asked of them could only be understood in light of the underlying structures of the school culture, which at times, ran counter to the changes required by the new curriculum. This study suggests that a systems approach is necessary to fully understand the emotional processes teachers go through when implementing change. The study also demonstrates the need for further research because the research was conducted in a preschool setting in Italy and focused on only one change initiative. The themes suggested by Pescarmona's research may have implications for this study as well, which would lend further support to using systems thinking to analyze teacher responses to change.

Some researchers in the United States have attempted to apply a systems lens to public schools. Given et al. (2010) examined changing school culture using documentation to support collaborative inquiry and found when educators provided the time and structures needed for teachers to work collaboratively, teachers eventually took ownership over decision-making and initiating change. In three different settings, including a preschool, a public elementary school, and a university-based lab school, teachers who were at first guided by a facilitator during team meetings gradually took over leadership of those meetings and began actively looking for ways to improve their instructional practices. Given et al. suggested that the collaborative process not only helps support teachers who implement changes suggested by leaders, but this process also promotes differentiated leadership among the leaders, faculty and staff in schools, which in turn, leads to more change. As Senge et al. (2012) contended, systems thinking is inherently a complex approach to understanding organizations in general and school reform initiatives in particular.

In a related study, Guhn (2009) conducted a meta-analysis of the research available on two long-standing school reform programs, the School Development Program and the Child Development Project, in order to uncover change processes these programs have in common that would help explain their success. Guhn used the theoretical lens of Bronfenbrenner's bio-ecological theory of human development to conduct a thematic analysis of both the qualitative and quantitative literature on these programs. Guhn found that seven processes interact to produce successful reforms: (a) relationship building, (b) autonomy, (c) resistance to change, (d) competence, (e)

leadership, (f) team support, and (g) school-family-community partnerships (p. 349). In other words, Guhn found that no one factor determined the success or failure of a school change initiative and concluded that any reform movement that purports to change student outcomes by changing only one aspect of their curriculum was not likely to succeed in the long term. Although Guhn did not identify systems thinking as a theoretical foundation for this study, parallels between bio-ecological theory and systems theory can be found. System thinking entails seeing organizational structures as the product of various factors rather than the sum, and this approach to analyzing teacher experiences with school reforms could help clarify how factors similar to those identified by Guhn interact to impact successful change in classroom practices.

In another study, Hannay and Earl (2012) used a systems theory lens to identify school district triggers for reconstructing professional knowledge. They analyzed interview data collected over 4 years from teachers and school administrators in an Ontario, Canada school district that initiated curriculum reforms. Hannay and Earl found that three organizational conditions encouraged teachers to change: (a) a clearly articulated focus on student learning (shared vision), (b) opportunities for the teachers to talk and collaborate (team learning), and (c) data-driven evidence to evaluate whether or not different actions led to better student learning because tracking data would be part of the district's systems thinking. Hannay and Earl used the term "reconstructing professional knowledge" (p. 313) to describe the process educators need to go through in order to adjust their teaching to fit the skills students need to have in today's world. They noted that district leaders provided more than extended professional development

sessions to support teacher change; they required teachers to make changes in their instructional practices, and they provided them with ongoing, substantial time for dialogue and collaboration throughout the year. Teachers reported that over time, they found themselves more willing to discuss pedagogical issues and share problems and failures, as well as successes with each other. In other words, their teaching became more collaborative. Teachers also made a shift in how they looked at test data. In the beginning of the study, they expressed the need to raise standardized test scores. Within a few years, their comments shifted to discussing the types of strategies and questions students needed to understand in order to do well on the tests. In other words, teachers contextualized standardized testing to improve student learning.

Hannay and Earl (2012) concluded that teachers became more self-reflective in their teaching practices as a result of reconstructing their professional knowledge through shared vision, collaboration, and using data to verify that reforms were effective. Hannay and Earl's study is important because they examined the reasons why collaboration is important to teacher implementation of change and how collaboration fits into a larger systemic view of professional development. Hannay and Earl concluded that teachers became more self-reflective as a result of quality professional development and opportunities for effective collaboration, but they admitted that they did not explore these findings further due to changes in their data collection towards the end of their study. The data was collected in eight different data sets. Some of the participants were the same for each set, but others changed towards the end of the study. As a result, Hannay and Earl acknowledged that while the data suggested that EI skills such as self-reflection are

important to the implementation of change, further research is needed to support this claim.

In another related study, Williams, Brien, and LeBlanc (2012) used a systems theory lens to better understand how leadership impacted teacher implementation of change. Williams et al. focused on how school leaders created professional learning communities (PLCs). Williams et al. analyzed data from educators in 50 Canadian schools who had adopted a PLC approach. Using a systems lens as defined by Senge et al. (2012), Williams et al. focused on culture, leadership, teaching, and professional growth changes in these schools. The PLC model was based on the same concepts as Senge et al.'s (2012) idea of a learning organization, and consisted of reforms in the areas of shared leadership, a culture of creativity, creating shared values and vision, support for risk taking, and collaboration. Williams et al. used a survey to measure statements that reflected these aspects of a PLC. They used the survey to measure PLC readiness data on schools under the supervision of the New Brunswick Department of Education, which had experienced a massive, decade-long mission to implement PLC models in all schools. Williams et al. found that educators who attempted to implement PLCs reported high levels of collegiality, trust, and commitment. Teachers who ranked these constructs high reported feeling comfortable when colleagues and supervisors visited their classrooms because they knew the goal was to improve instructional practices. Teachers in PLC-ready schools also reported that they had sufficient time to collaborate and that systems were in place that helped them hold productive discussions, even when opinions differed. Another major factor in PLC-ready schools was high rankings on shared leadership.

Teachers in these schools reported that the principal involved them in decision making. Teachers in the PLC-readiness schools identified time with paraprofessionals for collaboration and training and the ability to meet the needs of students with different ability levels as areas of concern. Although these factors were considered barriers to creating a PLC, Williams et al. also interpreted the concerns as evidence that teachers cared enough to provide the best instruction to all students.

Rodriguez (2013) believed that master teachers are innately systems thinkers and that is why they are effective at understanding how children learn. Rodriguez suggested that teachers can be taught systems thinking in order to become better educators but provided no research to back this claim. More research is needed to determine how systems theory can both explain and inform quality teaching and of what benefit systems thinking might be to administrators attempting to initiate school reforms.

Systems Thinking and Emotional Intelligence

The application of Senge et al.'s (2012) systems theory to school in relation to the disciplines of a learning organization disciplines is relatively new. Consequently, and perhaps as a result of the emphasis in education circles on student testing and teacher accountability, few researchers have used a systems lens to analyze how, when, and why teachers change their classroom practices. Even fewer researchers have explored systems thinking in relation to the constructs of EI. Higgins et al. (2012) explored the role of psychological safety, experimentation, and leadership that reinforces learning in the organizational structure of schools. Higgins et al. applied concepts of systems thinking to their analyses of survey data from 941 elementary and secondary teachers in a large

urban school district in order to better understand the factors that contributed to organizational learning. They surveyed teachers using the Organizational Learning Survey (2008) that Garvin, Edmondson, and Gino (as cited by Higgins et al., 2012, p. 74) developed for use in the corporate world. Higgins et al. (2012) adapted the survey for a public school setting. Specifically, they selected the three subscales of psychological safety, experimentation, and leadership that support learning in order to analyze their relationship to each other and how they contribute to the environment of a learning organization. Higgins et al. conducted extensive statistical analyses, which revealed that the three subscales are discrete constructs. In other words, for organizational learning to occur, all three constructs need to be developed. Higgins et al. also found that the three subscales are indicators of organizational learning, rather than the other way around. In addition, they found that while a significant positive relationship exists between each of the subscales, the strongest relationship is between psychological safety and leadership that supports learning, with leadership as a determinant of psychological safety.

In addition to these findings, Higgins et al. (2012) drew several conclusions about their research. Originally, they set out to refine an organizational learning scale so that it could be used to accurately assess conditions in a public school setting. While they succeeded to a large extent in meeting this goal, more research needs to be done before organizational learning theory, as applied in business settings, can be applied to educational ones. Higgins et al. concluded that other subscales on the original instrument should be examined further and that the experimentation subscale is a weaker measure than the other two. They also lacked demographic data from the teachers they surveyed,

so they were unable to determine whether or not other variables impacted the teacher ratings of organizational learning. Higgins et al. did not explain how different schools in the district developed or failed to develop organizational learning, only if they had developed a culture of organizational learning based on subscale scores. This evidence is of limited practical use without other qualitative data that would suggest the process by which faculty successfully develop psychological safety, experimentation, and leadership that support student learning.

Cherkowski (2012) combined systems theory and EI theory in an investigation of educational leadership and teacher commitment in sustainable learning communities. Using a case study design, Cherkowski examined a principal's use of emotional leadership to motivate teachers to improve their practices. Cherkowki's study took place over four months in a small, urban elementary school. The principal in this school tried to change the entrenched culture and move the faculty in the direction of becoming a learning community through positive organizational scholarship, which entails acknowledging the importance of human emotions in organizational systems. Cherkowski interviewed the principal and three teachers, conducted classroom observations of teachers conducting lessons, and analyzed teacher journal entries. Cherkowski found that teachers were re-invigorated in their professional lives by the attention the principal paid to their personal lives and emotional needs. Teachers reported feeling free to try new practices, and they were more enthusiastic about collaborating with colleagues and more open to change. Cherkowski concluded that further research is

needed about how teachers describe their perceptions of school change and how internal, external, and systemic factors influence their experiences.

Summary and Conclusions

In this chapter, I presented a review of the research literature related to teacher implementation of change. I described the literature search strategies that I used to conduct this review, and I also described the theoretical foundations and conceptual framework for this study. I reviewed the role of effective professional development to teacher change and explored barriers to implementing change. I then reviewed the literature related to internal factors, such as EI competencies, that support teacher change. I also examined the research that described external factors that support change and discussed research in which systems thinking was used to analyze school structures that support change. Finally, I explored how systems thinking could be used in conjunction with EI theory to analyze how, why, and when teachers change their classroom practices.

Several themes emerged from this review of research related to of teacher perceptions of change. These themes include the importance of external factors such as quality professional development and leadership, internal factors such as resilience, professional agency, and emotional regulation, and systemic conditions such as structures that support collaboration and risk-taking in order for change to become an invigorating part of the organizational culture. These themes indicate that research on when, why, and how veteran teachers change their practices and whether internal factors, such as emotional competencies, or external ones, such as the systemic processes related to the five disciplines of Senge et al.'s (2012) art of the learning organization, is like fitting

together the pieces of a puzzle. Part of this puzzle is the perceptions of veteran teachers themselves about how they have experienced and responded to change. More research is needed to understand the factors and conditions veteran teachers believe have influenced them to successfully change their classroom practices.

This review of the research literature also revealed several research gaps in understanding how teachers respond to school reforms by focusing on the conditions under which veteran teachers perceive themselves as successful agents of change. The research on EI and teacher quality has been inconclusive (Brackett et al., 2010; Garner, 2010; Hall & West, 2011). Research by Kocoglu (2011), Potter (2011), and Tait (2008) indicated that EI competencies impact educator success through improved resilience and higher self-efficacy beliefs, but participants in these studies were not veteran teachers who experienced years of educational mandates and personal change (Kocoglu, 2011; Potter, 2011; Tait, 2008). Other researchers have explored teacher reactions to change, but their research leaves questions that may be better answered by changes in methodology. For example, Kaniuka (2012) found internal factors played an important role in how teachers responded to change, but teacher interviews were not included as part of the study. Higgins et al. (2012) combined systems thinking with EI by analyzing the correlations between subscales on an organizational learning survey to demonstrate that teacher perceptions of psychological safety were positively correlated with leadership that supported a culture of experimentation. Cherkowski (2012) also used both systems theory and EI theory to examine educational leadership and teacher commitment in sustainable learning communities, but the final report consisted of only one teacher

participant. Pyhalto, Pietarinen, and Soini found that teacher feelings of agency corresponded with their attitudes towards reform, and they concluded that their results demonstrated the need for more research that examines the complex interaction between factors that impact the implementation of reforms. Thornburg and Mungai (2011) examined teacher empowerment and school change, but did not look closely at the factors that led teachers to successfully change their practices. Although understanding barriers to reforms and why teachers fail to implement initiatives is important, this understanding does not necessarily lead to deeper knowledge about how, why, and when teachers are successful at change. Teachers continually face obstacles to change similar to those found by Thornburg and Mungai, but examples of teachers changing their classroom practices to improve student learning abound (Ravitch, 2001; Tyack & Cuban, 1995; Senge et al., 2012). Exploring how and why veteran teachers have achieved success despite numerous obstacles is an important piece of the puzzle of school change that this study explored.

Similar gaps exist in the research on external factors of teacher implementation of school reform and how these factors may work together to form systemic dynamics that support or inhibit change. Researchers have suggested that external factors such as leadership, collaboration, and school culture are important to implementing change, but their studies consisted of a small number of participants, and they examined only one change initiative (Craig, 2012; Dingle et al., 2011; Waldron & McLeskey, 2010). This study allowed for a fuller expression of teacher voices by encouraging veteran teachers to reflect on and discuss the changes in classroom practices they believed were the most critical to their success, rather than focusing on any particular reform.

The literature also indicated a need for more research on how Senge et al.'s (20120 systems thinking approach to organizational change can be understood and applied to public schools. Some systems theory research has focused on family systems and how they impact student performance (Johnson, 2010; Sturge-Apple et al., 2010). Other researchers have used Senge et al.'s systems thinking approach as a theoretical lens to investigate the development of PLCs through systemic teacher collaboration (Austin & Harkins, 2008; Hannay & Earl, 2012; Pescarmona, 2010; Silverman et al., 2011; Williams et al., 2012). The studies of PLCs were based on unspecified district-selected formats for creating PLCs (Austin & Harkins, 2008; Hannay & Earl, 2012; Pescarmona, 2010; Silverman et al., 2011). The idea behind creating school-based PLCs is that teachers will have more voice, choice, and control. This aspect of a PLC fits Senge et al.'s (2012) description of team building. However, more research is needed to explore whether or not teachers can experience choice and control without the formal implementation of a PLC model in school. Two researchers revealed some additional systems-related themes, but they did not explore them further. Pescarmona (2010) investigated the management of professional development and school culture in relation to complex instruction and found that existing structures within a school impact teacher change efforts; Hannay and Earl (2012) investigated the reasons why school district educators reconstruct professional development and discovered that teacher self-reflection is critical to this restructuring. However, they did not pursue further inquiry into how self-reflection impacted teacher change. The open-ended interview methodology associated with this study encouraged veteran teachers to reflect upon all of

their experiences with change in their classroom practices over the years of their educational careers and which ones they feel they have been successful and/or unsuccessful at implementing.

The research in this study adds to the body of literature regarding teacher change in relation to classroom practices and how to create effective professional development for teachers as they make these changes. Researchers have examined various attempts to initiate school change through professional development sessions, with varying degrees of success (Frank et al., 2011; Gibson & Brooks, 2012; Johnson et al., 2010; White et al., 2012). The research from this study adds to the growing body of literature that suggests that merely changing curriculum will not result in substantial changes in the classroom unless teachers embrace reform and implement it through effective classroom practices. By highlighting the successful experiences of veteran teachers, this research provides educational leaders and policymakers with a deeper understanding about how they can best support teachers in future reform efforts related to classroom practices, thereby improving learning for the next generation of students.

Chapter 3: Research Method

One purpose of this qualitative study is to explore how veteran teachers' describe their experiences with school reforms and changes in classroom practices that have occurred over the course of their careers. Another purpose is to examine the internal and external factors that teachers identify as having both positive and negative influences on their adoption of changes. Using an interview research design with phenomenological overtones, my goal was to develop an understanding of teacher perspectives about school reforms and their personal experiences with change. The central phenomenon of the study was the positive and negative experiences that veteran teachers described in relation to school reform and changes in their classroom practices.

In this chapter, I described the research method. I included a description of the research design and rationale and my role as a researcher for this study. In addition, I described the methodology for this study including the participants and instrumentation, and the procedures for recruitment, participation, and data collection. This chapter also includes a description of the data analysis and a discussion of issues of trustworthiness and ethical procedures.

Research Design and Rationale

The following research questions for this study were based on the conceptual framework and a review of the literature: (a) How do veteran teachers describe their experiences with various school reforms and changes in classroom practices that have occurred over the course of their careers? (b) What internal and external factors do

veteran teachers identify as having a positive or negative influence on their adoptions of change?

The central phenomena of the study was the positive and negative experiences that veteran teachers described in relation to school reform and changes in their classroom practices. The theoretical foundations of this study were systems theory and (EI) theory. Senge et al. (1999) proposed a way of using systems thinking to understand how schools adapt to changes in curriculum and instruction, calling organizations that are successful at adapting to change "learning organizations" (p. 22). This term has been changed to "learning communities" in education circles (Cherkowski, 2012; Hipp et al., 2008; Williams et al., 2012). Emotional intelligence theory has been developed over time in the fields of biology and psychology, but the various studies that have contributed to EI theory are brought together and clearly explicated in the work of Goleman (2011) and Goleman, Boyatzis, and McKee (2002). Although some researchers have tried to apply EI theory to understanding teacher behaviors (Brackett et al., 2010; Hall & West, 2011; Kocoglu, 2011; Tschannen-Moran & McMaster, 2009), the effects of EI on teaching are unclear (Garner, 2010).

For this study, I used systems theory and EI competencies to analyze factors that veteran teachers identify as important to their successful adoption of change. More specifically, I used the systems theory constructs of personal mastery, mental models, shared vision, and team building (Senge, 1999) to examine the interview data for emerging themes. In addition, I used specific EI competencies that support effective collaboration with colleagues such as self-awareness, self-assessment, self-management

of emotions, efficacy, empathy, and relationship management (Goleman, 2011) to examine the interview data for emerging themes.

For this study, I selected a qualitative, rather than a quantitative approach for several reasons. Qualitative research is critical to developing a deeper, richer understanding of complex phenomena and individual voices and experiences (Patton, 2012). Qualitative research allows the researcher to study real-life situations and to adapt the research as needed when situations or the understanding of a situation changes (Patton, 2012). Qualitative research is also useful when purposeful sampling is required in order to uncover or illustrate phenomena of interest, and it lends itself to inductive analysis of the data which allows patterns and themes to emerge (Patton, 2012).

The research design that I used was an interview study with phenomenological overtones. Creswell (2007) defined phenomenological research as research about the meaning that individuals give to "their lived experiences of a concept or phenomenon" (p. 57) and Merriam (2009) called it "people's conscious experience of their life-world" (p. 25). The purpose of using a phenomenological approach to the interview study was to use the rich description that participants provided about their experiences with changes in order to capture the essence of these experiences (Moustakas, 1994). Phenomenological research using interviews includes data collected from lengthy interviews with a number of people who have similar experiences (Patton, 2012). My rationale for choosing this interview study design was to allow teacher voices to emerge in order to provide a deeper, richer understanding of veteran teachers' experiences with school change. The interview approach also allowed for flexibility in the kind of data collected since the

semi-structured approach encouraged me to ask clarifying and follow-up questions deemed suitable for the context. Using a phenomenological approach for the analysis of the interview data in this study helped me uncover the meaning and essence of veteran teachers' lived experiences with adapting to change in public schools. Understanding teacher perceptions of how they respond to change initiatives may help educational leaders implement and manage change initiatives more effectively.

Role of the Researcher

My role as the researcher in this interview study was to conduct teacher interviews, transcribe the interview recordings, and analyze their responses. Because I was the only individual who collected, transcribed, and analyzed data for this study, the potential for researcher bias existed. Therefore, it was necessary to reflect on my own experiences with educational reform. My work experience includes 15 years of teaching at one of the elementary schools in the school district in which this study took place. My status as a veteran teacher meant that I have personally experienced both state and national level mandated school reforms as well as district-initiated changes in curriculum and instructional practices. On my own initiative, I have also implemented changes in my classroom practices as a result of attending workshops and courses. I have served on several curriculum committees in my school district and have helped to develop new curricula for science, social studies, and language arts that I hoped fellow teachers would embrace and implement in their classrooms. In this capacity, I have experienced the implementation of school change not only from the standpoint of a teacher attempting to implement changes initiated by others, but also from the standpoint of a teacher leader

undertaking a reform initiative and trying to encourage other teachers to implement changes to the curriculum. Because of these experiences with changes in classroom practices, I had my own biases about the factors and conditions that support and/or hinder attempts to implement change.

In order to address potential issues of bias that may result from my own teaching experiences, I used several strategies including member checks and peer review to improve the trustworthiness of this study. Those strategies are described in more detail later in this chapter. In addition, I conducted the interviews with teachers with whom I had no previous relationships or supervisory responsibilities, and who were employed in one of the two other elementary schools and in the middle and high schools in my district.

Methodology

In this subsection on my methodology for this interview study, I include a description of the sample size and rationale in relation to potential participants and inclusion criteria, the instrumentation used, and procedures for recruitment, participation, and data collection. In addition, this section includes an explanation of how I coded and analyzed the data, a discussion of the strategies I used to enhance the study's trustworthiness, and a description of the procedures I used to ensure the ethical implementation of this study.

Participant Selection Logic

I purposely selected a sample of eight participants using the following inclusion criteria: (a) teachers must have been employed as a full time elementary, middle, or high

school teacher in the proposed public school district for this study, (b) teachers must have had some experience with implementing educational reforms in their classrooms, and (c) teachers must have had at least 15 total years of experience teaching in a public school setting. I purposefully selected these eight participants from a list of teachers that fit these inclusion criteria in order to have representatives from four grade level clusters: (a) Grades K-2, (b) Grades 3-5, (c) Grades 6-8, and (d) Grades 9-12.

The number of participants I selected for this study was related to the concept of saturation (Mason, 2010). Saturation is reached when the data collected from qualitative interviewing becomes repetitive and redundant (Mason, 2010). Although saturation of information is difficult to prove, qualitative research is about making meaning of experiences rather than proving generalized statements; therefore, the number of participants should reflect various viewpoints and experiences and should be based on the scope of the study (Mason, 2010). Patton (2002) advised selecting a sample size based on the reasonableness of describing the phenomenon with the number of participants selected. These suggestions offered conceptual guidance, but Creswell (2007) was more specific in suggesting a sample size of 5 to 25 participants for qualitative studies using a phenomenological approach.

I chose this sample size of eight in order to provide at least two representatives from each of the four grade level groupings of veteran teachers. I classified public school teachers in the district where I conducted this study into four grade level groupings. I included two representatives from each grade level grouping in order to ensure that saturation was reached from within the district. The curricula for primary, intermediate,

middle, and high school teachers were substantially different, as were the types of classroom management strategies that teachers used in these different grade groupings. I chose a sample size of eight to provide sufficient representation for each of these grade level groupings.

Instrumentation

Data were collected using a researcher-produced interview protocol designed specifically for this study (Appendix C). This semi-structured interview protocol asked teachers to reflect on their experiences with changing classroom practices, how the changed practices impacted students, and the factors that contributed to their successful implementation of changes. The interview protocol was developed using Patton's (2002) guidelines for conducting qualitative interviews. An initial version of the interview protocol was used to complete an assignment for an advanced qualitative research course and was revised in response to the participants' feedback and researcher's experience conducting the interviews and analyzing the data. Content validity was established by conducting member checks and peer reviews of the data during the analysis stage of the study (Creswell, 2007). In order to provide sufficient data collection, the questions were designed to elicit responses to the each of the research questions and to encourage participants to think of both the internal and external factors that influenced their implementation of change. The questions were open-ended and included an opportunity for participants to volunteer additional information not directly asked.

Recruitment, Participation, and Data Collection

In relation to recruitment, I first met with the superintendent of the school district, who was responsible for approving research studies, in order to explain the purpose of this study and obtain a signed letter of cooperation from the district, indicating its willingness to be my research partner (Appendix A). I also asked the superintendent for school email addresses for teachers who fit the initial criteria. After receiving district approval, I sent an electronic letter of invitation (Appendix B) to all potential participants, which explained the purpose of the study, what their participation would consist of, and invited them to participate. I offered participants a $30.00 Amazon.com gift card as compensation for their time. This amount represented the hourly rate faculty receive at the selected district for summer work. I selected the first eight participants who sent a reply and who met the criteria for the study and sent them an email message with the consent reform attached with a note in the message that said, "By replying to this email, I am indicating that I have reviewed the attached consent form and consent to participate in the study." Potential participants not selected for the study were sent an email message that read, "Thank you for your interest in my study; however, it has been determined that your participation in this study was not needed." Concerning the final selection of participants, I selected the eight participants for this study from the potential pool by choosing the first two primary teachers, first two intermediate teachers, the first two middle school teachers, and the first two high school teachers who responded with interest in participating in the study and who subsequently returned a signed consent form

to me. I contacted these selected participants via email to schedule interviews during non-instructional hours and at their convenience.

Regarding data collection, I used an interview protocol that included an initial interview of approximately 60 minutes. I interviewed participants in a private space, such as a school conference room, the teacher's classroom after school hours, or in two cases, offsite, so there were no interruptions. I audio recorded the interviews for me to accurately transcribe them after the interviews. I began the interviews with an introduction to the study, its purpose, and a review of the rights of the participants to withdraw at any time, as well as assurances of the confidentiality of the study, and the opportunity later in the study for them to ensure trustworthiness through member checking. I asked some demographic questions related to the participants' number of years and types of teaching experiences before asking questions designed to elicit their reflections about the types of classroom changes they had made and the factors that influenced their adoption of these changes over the courses of their careers. Using the strategy of member checking, I gave participants the opportunity to change or add anything to their comments as they desired.

Data Analysis Plan

Data analysis consisted of first cycle and second cycle coding that I did without the assistance of coding software (Miles, Huberman, & Saldana, 2014). First cycle coding included assigning labels to the data that represented examples of internal and external factors reflecting the research questions. Second cycle coding included chunking the data into themes in order to identify common factors that supported the teachers in

implementing change. To complete data analysis, I used a modification of the Van Kaam method of analysis for phenomenological data that Moustakas (1994) recommended. First, I listed participant statements that were relevant to their experience with changes in their classroom practices. I included each statement in this list if it contained information that provided clarity in understanding how the participant experienced change and if it could be identified and labeled. Second, I clustered the invariant constituents into thematic groupings. Discrepant data was examined to determine whether the interaction of various systemic factors produced a different experience for a subset of participants. Third, I validated the invariant constituents and themes by checking them against the transcribed records for compatibility. Fourth, I constructed individual textural descriptions of each participant's experience using transcription evidence, and fifth, I constructed a structural description of the individual experiences. Finally, I used the textural-structural descriptions and invariant constituents and themes to develop a composite description of the experiences with school change experiences by this group of teachers as a whole. Finally, I analyzed these experiences using the lenses of system theory and EI competencies to make meaning of the factors that impacted teacher implementation of change in classroom practices.

Issues of Trustworthiness

The trustworthiness of qualitative research is established through the constructs of credibility, reliability or dependability, transferability, and confirmability or objectivity. Merriam (2009) describes credibility as how the research findings match reality. In this study, I enhanced the credibility of this study through the use of the member checks

strategy by asking participants to read my preliminary analysis of the data to make sure my interpretation of their experiences rang true (Merriam, 2009). Credibility was also enhanced by collecting enough data to reach saturation (Merriam, 2009). Evidence of saturation occurred when the data indicated that teachers were reporting similar factors that influenced their positive experiences with implementing change.

Reliability or dependability occurs if the findings are consistent with the data (Merriam, 2009). I enhanced the reliability of this study through the use of such strategies as reflexivity, maintaining an audit trail, and the peer review process. Reflexivity required that I describe my own experiences and bias that may influence how I interpret the data (Merriam, 2009). It also required that I engaged in self-monitoring to ensure that I was considering alternate explanations for the phenomena I described. I created an audit trail by maintaining a researcher's journal in which I provided a detailed account of the research process and how I came to my conclusions about the data.

Transferability is the extent to which the findings of a study can be applied to other situations (Merriam, 2009). I enhanced the transferability of this study through the use of such strategies as maximum variation and rich, thick description. I used maximum variation by selecting participants from a wide range of grade levels and experiences with school reform, and I used rich, thick description to present the setting and the essence of the experiences these veteran teachers had with school reform.

Confirmability is related to the objectivity of qualitative research. I enhanced the objectivity of this study by using the strategy of reflexivity, which Merriam (2009) describes as engaging in self-reflection in order to identify factors which will influence a

researcher's interpretation of the data. The factors I reflected upon in a researcher's journal were my own experiences with school change which may have resulted in biases, values, and assumptions that impacted how I viewed the data. Reflecting upon these factors as I presented the results of my study increased the confirmability of my conclusions about the patterns and themes that emerged from other teachers' experiences.

Ethical Procedures

After receiving IRB approval from Walden University (# 06-02-15-02317120) and the school district approval to conduct this study, I followed specific procedures to ensure that I conducted this study with integrity. The first step in recruiting participants for this study was to contact, via email, the teachers who had been identified by the superintendent of schools as fitting the initial criteria for the study of having served as a public school teacher for 15 or more years. This initial email outlined the purpose of the study, identified criteria for participants, provided assurances of confidentiality for all participants, and asked potential participants to respond to the email. Participants were purposefully selected from this initial group in order to represent primary, intermediate, middle, and high school grade levels. The selected participants were contacted via email to arrange interviews. Prior to data collection, participants were asked to sign an informed consent form that included the purpose of the study, possible uses of the study, and the steps that would be taken to ensure confidentiality. These steps taken for confidentiality included the use of pseudonyms for the school district, the schools, and the participants for the purposes of discussing and publishing results. Only the researcher had access to confidential information in the interview data. No participants withdrew

from the study, but had this occurred, data from participants who withdrew from the study early would have been destroyed and not used in the final results and discussion. Informed consent also included information on how data was archived. Because the data that contained confidential information including the informed consent letters and interview notes, they were stored in a locked file, and they will be destroyed after 5 years.

Summary

This chapter included a description of the methodology that was used in this study. The participants included eight veteran K-12 teachers from one large public school district in a northeastern state with experiences in school reform that have impacted their classroom practices. These participants were interviewed using a semi-structured interview questions designed by the researcher. Follow-up included member checks of the data and interpretation. Trustworthiness of the data was established through selection of participants that maximized representation of different kinds of experiences as a teacher, member checks of the data, analysis of the interview data for convergence and objective evidence, and researcher reflections on potential bias. Ethical procedures to ensure institutional permissions, recruitment of participants, collection of data, confidentiality of data, and secure storage of data was followed according to Walden University's IRB guidelines. The next chapter includes a description of how this methodology was used to determine the results of the study.

Chapter 4: Results

The purpose of this qualitative study was to explore how veteran teachers described their experiences with school reform and changes in classroom practices that occurred over the course of their careers. My intent was to examine the internal and external factors that teachers identified as having both positive and negative influences on their adoption of changes. Using an interview study design, my goal the goal was to develop an understanding of teacher perspectives about school reforms and their personal experiences with change, and to identify emerging themes and discrepant data regarding how, why, and when teachers successfully change their classroom practices. Therefore, the research questions for this qualitative study were: (a) How do veteran teachers describe their experiences with various school reforms and changes in classroom practices that have occurred over the course of their careers? and (b) What internal and external factors do veteran teachers identify as having a positive or negative influence on their adoptions of change?

Chapter 4 presents the results of this study. In this chapter, I describe the setting, the demographics, and the data collection procedures that I followed. In addition, I describe the data analysis process by which I coded the data into constructs suitable for analysis. I also provide a summary of the coding constructs, using participants' interview responses to provide evidence for the findings. I discuss these findings in relation to the research questions by analyzing the data for emergent themes and discrepancies. In addition, I describe specific strategies that I used to improve the trustworthiness of this qualitative research.

Setting

This study took place in a large public school district located in a northeastern state of the United States. In 2014-2015, the total student population for this rural school district was 3,398, and it included three elementary schools, one middle school, and one high school. Approximately 11 years ago, educators in this school district implemented several reforms that impacted the instructional practices of K-12 teachers. These reforms were two-fold: one was the implementation of a full-inclusion learning environment, which meant that all but one special education classroom was closed, and students whose academic and behavioral needs were previously met in special education classrooms were now fully included in regular education classrooms. Although one Life Skills classroom still existed for the most developmentally disabled elementary students, and one behavioral support classroom still existed at the high school, the majority of students with special needs were taught in the same classrooms with their regular education peers. The second reform was the implementation of a balanced literacy approach to language arts education. Balanced literacy is an offshoot of the whole language programs popular in the late 1980s and early 1990s, but attempts to balance the whole language approach with some phonics instruction (K12Reader.com, 2015). Although this reform initially targeted English language arts teachers at the elementary school level, it eventually impacted English language arts instruction for all K-12 teachers, and this reform has been applied to other content areas as well. These reforms related to inclusive classroom environments and to English language arts led to two other important changes: differentiated instruction and the removal of textbooks from the curriculum.

Differentiated instruction involves meeting individual student needs in the classroom through teacher modifications of content, process, and/or product (Tomlinson & Allan, 2000). The implementation of full inclusion and balanced literacy programs led educators in this school district to adopt a differentiated instruction approach to curriculum, and according to participants in this study, within a few years of implementing these changes, school district administrators ordered all textbooks to be physically removed from classrooms in order to prevent teachers from surreptitiously resorting to instructional strategies that they had previously used. These reforms were extended to science and social studies classrooms as well, and to date, the only content area with a textbook-based, commercial curriculum is mathematics. The results of this study reflect the experiences of eight K-12 district teachers who experienced these reforms in curriculum, instruction, and classroom management in the middle of their teaching careers.

Demographics

The participants included eight K-12 teachers in this school district with an average of 21 years of teaching experience. Participants included two men and six women, and they represented secondary English language arts, mathematics, and science teachers, as well as elementary school teachers who provided instruction in all subject areas. More specifically, this study included two primary elementary school teachers (Grades K-2), two intermediate elementary school teachers (Grades 3-5), two middle school teachers (Grades 6-8), and two high school teachers (Grades 9-12). All but one participant had been education majors as undergraduate students and had completed a

master's degrees in education. The one exception was the science teacher who had earned a bachelor's of science degree and a master's degree in imaging science, and who received state certification for teaching through a special initiative by the state to increase the quality of science education by offering a "fast track" to certification. This teacher was currently working on a second master's degree in education. All participants but one had completed post-master's degree credits. The one exception was the participant with the fewest number of years in the profession who planned to pursue more education in the future. At the time the full inclusion and balanced literacy reforms were initiated, educators in this school district also partnered with a local university to offer on-site master's degree programs, and the state department of education began an initiative to improve teaching quality by providing incentives for teachers to pursue postgraduate training. These school district and state initiatives incentivized many district teachers to pursue graduate level work in education, including the teachers who participated in this study.

Data Collection

I began the data collection process by meeting with the superintendent of the selected school district on March 23, 2015 to explain the purpose and procedures of this study and to obtain a signed letter of cooperation, indicating the school district's willingness to be my research partner. Following IRB approval from Walden University, I sent an email invitation to teachers who fit the inclusion criteria. I selected the first eight teachers who fit the grade level clusters and who returned signed consent forms to me. I then scheduled each individual interview. I conducted these interviews during the month

of June 2015. Each recorded interview lasted approximately one hour, and I conducted each one in a private location suggested by each participant. Most participants preferred to be interviewed in their classrooms during non-instructional hours; however, three participants requested a quiet location that was not on district property. Consequently, I conducted two interviews in a restaurant and one in the participant's home. I audio recorded each interview and transcribed the data. Transcription copies were emailed to each participant for member checking. One participant corrected a word choice to better reflect her intended meaning, and one participant clarified information that was difficult to hear on the recording; otherwise, all participants approved their transcripts as an accurate reflection of their intended meanings in responding to the interview questions.

Data Analysis

I used a modification of the Van Kaam method of analysis for phenomenological data that Moustakas (1994) recommended. First, I listed participant statements that were relevant to their experience with changes in their classroom practices, a process Moustakas called horizonalization. I included each statement in this list if it contained information that provided clarity in understanding how the participant experienced change and if it could be identified and labeled. These statements became what Moustakas called the invariant constituents. Second, I clustered the invariant constituents into thematic groupings. The groupings were made using the four main constructs of EI theory (Goleman, 2011), which included (a) self-awareness, (b) self-management, (c) social awareness, and (d) relationship management, and the five main constructs of system thinking (Senge et al., 2012) which included (a) personal mastery, (b) mental

models, (c) shared vision, (d) team learning, and (e) systems thinking. The clustered invariant constituents that repeatedly showed up in the coding process became the themes of the participants' experiences with school reforms and changes in classroom practices. Third, I validated the invariant constituents and themes by checking them against the transcribed records for compatibility. Fourth, I constructed individual textural descriptions of each participant's experience using transcription evidence, and fifth, I constructed a structural description of the individual experiences. Finally, I used the textural-structural descriptions and invariant constituents and themes to develop a composite description of the experiences with school change experiences by this group of teachers as a whole. I found evidence of only one discrepancy that emerged from the data analysis that challenged the results of this study. This participant identified the same internal and external factors as the other participants, but had a more negative perspective about whether or not these school reforms had ultimately resulted in improved teaching and student learning.

The EI construct of self-awareness included evidence of emotional self-awareness, accurate self-assessment, and self-confidence. Participant statements that I coded for self-awareness included statements regarding strengths and weaknesses in implementing reforms, confidence in their ability not only to teach but to use their professional judgment when adapting to changes, and statements indicating an understanding that their attitudes towards school change shifted over time and impacted how successful they were at implementing reforms. The construct of self-management included self-control, transparency, adaptability, achievement, initiative, and optimism.

Participant statements most often fell into these sub-categories of adaptability and initiative as participants described how they adapted district reforms so they were workable in the classroom and initiated their own changes in order to meet student needs. I found that statements regarding achievement were relatively rare because participants were more likely to reflect on how they were also reassessing themselves as teachers than they were to tout their achievements. The construct of social awareness included empathy, organizational awareness, and service orientation. Participant responses that I coded under this construct fell in the sub-category of empathy as participants described trying to understand and meet student needs. Finally, the EI construct of relationship management included inspiration, influence, developing others, being a change catalyst, conflict management, and collaboration. Of these sub-categories, only collaboration emerged as an important theme in implementing change.

I coded the systems theory construct of personal mastery when participants made statements indicating they had employed self-discipline to set and achieve goals. I coded this construct in relation to only three participant statements. I coded the construct of mental models if participants reflected on how their own thoughts and feelings or the thoughts and feelings of others impacted their response to change initiatives. Only one participant revealed an understanding about how mental models impacts teacher interaction with change. I coded the systems theory construct of shared vision when participants described having a shared sense of purpose with colleagues or district administrators when implementing reforms. This construct emerged frequently either in the context of participants believing that they had a shared vision with district

administrators or a disconnect in vision. The systems construct of team learning also emerged as a strong influence on how teachers implemented change. Team learning included how district educators promoted collaboration, discussion, and decision making. Like shared vision, I coded statements for team learning if participants believed that the district was successful at fostering it or if participants described team learning as lacking in the district. Finally, I coded the construct of systems thinking when participants made statements that indicated an understanding of the interdependency of factors that influence the implementation of change and/or described implementing change as a process. Systems thinking was the most frequent construct to emerge from the data, indicating that veteran teachers had a strong grasp of the change process and a strong understanding of the many different factors involved in an organizational system. I present a more detailed analysis of participant statements under each of these constructs in the results section of this study.

Evidence of Trustworthiness

To improve the trustworthiness of this qualitative research, I used specific strategies that Merriam (2009) recommended to enhance the constructs of credibility, dependability, transferability, and confirmability. I enhanced the credibility of this study through the use of member checks by asking participants to read the transcripts of their interview and the tentative findings of this study to make sure my analysis and interpretation of their experiences "rings true" (Merriam, 2009, p. 217). I also used the strategy of saturation, which occurred when the data indicated that participants

experienced similar factors influencing implementation of change in their classroom practices.

Reliability or dependability occurs if the findings are consistent with the data (Merriam, 2009). I enhanced the reliability of this study by using the strategies of reflexivity, maintaining an audit trail, and the peer review process. Reflexivity required that I describe my own experiences and biases that may have influenced how I interpreted the data (Merriam, 2009). It also required that I engage in self-monitoring to ensure that I considered discrepant data or alternate explanations for the phenomena I described. I created an audit trail by maintaining a detailed account of the research process, particularly in relation to how the findings for this study emerged from the data analysis process.

I enhanced the transferability of this study through the use of the strategies of maximum variation and rich, thick description. I used maximum variation by selecting participants from a wide range of grade levels and experiences with school reform, and I used rich, thick description to present the setting and the essence of the experiences these veteran teachers had with school reform. In addition, I described the results of this study in detail.

Confirmability is related to the objectivity of qualitative research. I enhanced the objectivity of this study by using the strategy of reflexivity, which Merriam (2009) describes as engaging in self-reflection in order to identify factors that influence a researcher's interpretation of the data. The factors I explored were my own experiences with school change, which may have resulted in biases, values, and assumptions that

impacted how I viewed the data. Reflecting and acknowledging these factors as I presented the results of this study increased the confirmability of my conclusions about the patterns and themes that emerged from other teachers' experiences.

Results

I present the results of this study in relation to the following research questions: (a) How do veteran teachers describe their experiences with various school reforms and changes in classroom practices that have occurred over the course of their careers? (b) What internal and external factors do veteran teachers identify as having a positive or negative influence on their adoptions of change? I analyzed these results through the conceptual lens of EI theory (Goleman, 2011) and systems theory (Senge, 2012).

In relation to how veteran teachers described their experiences with various school reforms and resulting changes in their classroom practices, participants most frequently discussed the school district's movement towards a full inclusion environment approximately 10 years ago and the differentiation in instruction that full inclusion entailed. Participants reported that these reforms were followed closely by changes in their classroom management practices, some of which were initiated because of a change in philosophy in how to respond to discipline problems and some due to the wide range of abilities the full inclusion classrooms presented. All of the participants noted curricular changes, but the only curriculum change that they described as substantial was the change to balanced literacy in English language arts instruction and the subsequent removal of textbooks from the classroom. In addition to these changes, middle and high school teachers noted that block scheduling necessitated changes to their classroom practices

because the switch from 45-minute sessions to 90-minute blocks required them to modify the use of a lecture format for instruction. Elementary school teachers teach in self-contained classrooms, so block scheduling was not a factor in their practice.

The interview data revealed participants were impacted by both internal and external factors when attempting to implement changes to their classroom practices. These factors are discussed below under the constructs of EI theory, which are (a) self-awareness, (b) self-management, (c) social awareness, and (d) relationship management, and the constructs of systems theory, which are (a) personal mastery, (b) mental models, (c) shared vision, (d) team learning, and (e) systems thinking. The participants in this study experienced instructional change over a number of years, and therefore, their responses to school reforms changed over time as they identified how these changes to their classroom practices benefitted students as they felt more competent and confident in implementing these reforms. The internal factors that teachers identified as having a positive influence on implementing change in their classroom practices were self-awareness, self-management, and social awareness, particularly in terms of self-assessment, self-confidence, adaptability, initiative, and empathy. The external factors that teachers identified as having a positive influence on implementing change in their classroom practices were shared vision and team learning. Participants also identified systems thinking as an external factor that positively influenced changes in their classroom practices as they reflected on their experiences with school change over the course of their careers.

Participants cited a variety of obstacles that had a negative influence on their adoption of change. Some participants identified the lack of collaboration with peers as having a negative influence on their adoption of change, but they did not identify themselves as lacking the EI competency of relationship management as a cause for this obstacle, but rather pointed to deficits in their colleagues as the cause for the lack of collaboration. Other participants identified the lack of shared vision and team learning as obstacles to their adoption of change. Participants also frequently mentioned the specific obstacles of lack of time for planning, lack of aide support for special needs students, and a lack of adequate resources as having a negative influence on their adoption of change.

Emotional Intelligence Theory

The coding of teacher responses using the constructs of EI theory revealed high levels of self-awareness, self-management, and social awareness among teachers as they reflected on how they successfully implemented both mandated and self-initiated changes in their classroom practices. Within these broad EI constructs, specific competencies were more evident than others. Participants most often noted the self-awareness competencies of self-assessment and self-confidence, the self-management competencies of adaptability and initiative, and the social awareness competency of empathy, specifically for students. articipants discussed the EI construct of relationship management in terms of collaborating with colleagues, but participants did not made statements that indicated they were aware of how to manage their relationships with colleagues. Instead, participants discussed whether or not they believed they had a strong team and how that belief impacted their implementation of change in classroom practices.

Participants who believed that a lack of collaboration was an obstacle cited either problems on the part of their peers or lack of systemic opportunities to meet with colleagues; therefore, I coded most statements about collaboration under the systems theory construct of team learning. In this section, I describe the themes that emerged from the data regarding internal factors related to EI theory that impacted teacher implementation of change in classroom practices.

Self-awareness. The EI theory construct of self-awareness included emotional self-awareness, accurate self-assessment, and self-confidence. Veteran teachers who were successful at changing their classroom practices made statements that demonstrated they understood their own strengths and weaknesses in the classroom. For example, one teacher acknowledged that she found changes in reading instruction difficult because of a lack of resources, but she believed she had a strong background in grammar and was able to compensate by making her own instructional materials. Another teacher believed that his comfort with trying new instructional strategies was both a strength and a weakness; he believed that this risk taking helped him implement change but also led to some confusion at times because he tried to change too much too often. Participants also believed they had the self-confidence to adapt or adjust mandated changes that were not quite working for students or to initiate changes on their own that they thought would improve student learning. All participants had initiated changes on their own, and six out of the eight participants admitted to adapting mandated reforms in order to make them work. In the words of one teacher, “I trust my professional judgment and feel like I know my students better than the building or district level administration does.” In addition,

teachers who spoke positively about the reforms they had experienced over the years evinced high levels of emotional self-awareness. They described their first reactions to change, understood that their attitudes would help them be successful or not, and discussed how their feelings about a particular reform changed over time. One teacher noted, "Any kind of change involves a kind of pendulum shift," while another teacher noted the importance of attitude, "*Choosing* the way to view it [change] as, 'Okay, here's an opportunity to reflect on what I've been doing in my classroom'…rather than as, 'Here we go again.'" This self-awareness and self-confidence was also evidenced when teachers described their failures to implement mandated changes. Even though no teacher admitted to completely ignoring a district school reform, six out of eight participants described situations in which they struggled to implement a reform with fidelity. As one teacher reported,

> To truly see the effectiveness of an initiative, you need to implement it correctly, and that's what I wanted to do, and I was invested in doing these lessons and doing them the way they were designed to see if they would give the students the best benefit. But what that did was that it took the power out of my hands in making decisions and choices for the children in my classroom….and I will do it differently the next time because now I have that bigger vision.

Thus, the participants in this study demonstrated high levels of self-awareness by acknowledging personal characteristics that both aided and prevented them from being successful at implementing change in classroom practices. They also demonstrated self-

confidence in using their professional judgment to implement these mandated reforms with success.

Self-management. Teacher participants also demonstrated high levels of self-management, specifically in the sub-categories of adaptability and initiative. In addition to adapting district reforms so that they were more manageable, all participants described how they had taken the initiative to make changes in classroom practices that they believed improved their teaching. These initiatives included curriculum initiatives, instructional practices, and classroom management strategies. Without exception, the reason they gave for implementing these initiatives was to meet student academic and/or social-emotional needs. For example, teachers added computer programs to supplement the district curriculum, created classroom management systems that promoted positive student behaviors, and designed creative curriculum units in order to engage students. Participants were enthusiastic in describing these initiatives; they clearly took pride in the changes they had implemented on their own.

Social awareness. Teachers demonstrated high levels of empathy, which is a sub-category of the EI skill of social awareness. This empathy was most evident in the participants' focus on meeting student needs. Throughout the interviews, participants talked about student needs as the initiative behind adopting self-initiated changes, resisting mandated reforms, and adapting or "tweaking" reforms so that they worked better. Participants described how they supplemented the curriculum to meet student learning needs, such as adding computer programs to enhance learning or providing more one-on-one conference time for reading. However, teachers also implemented classroom

management activities to improve students' social and emotional learning, including simulated economic rewards systems, a program called Responsive Classroom, and improved communications with parents. One teacher described a change that he made to classroom management procedures by developing his own discipline procedures. He added, "It [discipline] needed to be something the kids could understand and have meaning for them." Teachers also reported removing instructional strategies from their classroom when they perceived a mandated reform as detrimental to students. For example, secondary school teachers noted that the practice of placing lower reading level students into guided reading groups in front of their more able peers was perhaps effective at the elementary school level, but led to embarrassment for older students who then refused to learn. These teachers also revised the district instructional strategies to prevent low performing students from feeling stigmatized. One teacher confessed, "So a lot of teachers, myself included, go in the room, we shut the door, and we do what we think is best for kids." Thus, the empathy that participants demonstrated for their students included not only an awareness of the academic supports individual students needed to be successful in the classroom but also of the social-emotional supports that they needed.

Relationship management. The EI skill of relationship management did not appear as often in the coding as the other EI skills. One interview question specifically asked teachers about how working with colleagues impacted their adoption of change, and all participants acknowledged that collaboration with peers could be a positive influence on successfully changing classroom practices, but only half of the participants indicated that they collaborated with a team of colleagues, particularly at the course level.

One teacher noted, “I think that’s one of the unique things about education, is that it is *not* a competitive profession, or shouldn’t be, at least.” Two other teachers believed that different educational philosophies prevented them from working well with their teammates, and another participant blamed personality differences for the tension within her grade level team.

Participants who did have collaborative experiences with their teaching teams noted that the district did not schedule time for collaboration. Two participants believed that district staff did not want teachers to collaborate, although the reasons given for this statement were unclear. Although participants demonstrated empathy toward students and their learning needs, no one talked about positive relationships with students as an influence on how they implemented change in their classrooms. This result might be due more to the focus of the interview questions themselves than to any lack of relationship management skills on the part of the teachers who participated in the study; however, it is noteworthy that this EI competency appeared lower than the other three competencies, based on the coding of participants’ statements.

Systems Theory

Interview statements that I coded for systems theory constructs revealed that veteran teachers had a strong understanding of the change process and the complex, interdependent factors that interact to create what Senge et al. (2012) called a learning organization. Participants noted that a shared vision was a necessary component in the district implementing the reforms of full inclusion and differentiated learning models. They also recognized the importance of team learning, not only from the standpoint of

collaboration, but also in terms of how a risk-taking environment allowed them to embrace new instructional strategies. Finally, participants who spoke positively about the changes that had occurred in the district over the past 11 years also demonstrated systems thinking by discussing the dynamics of change and how their attitudes and feelings changed over time as they went through the change process.

Personal mastery. Senge et al. (2012) defined personal mastery as the discipline to set and achieve realistic goals. Of the five disciplines that Senge et al. identified as imperative for an organization to learn and change, personal mastery was the second lowest construct that participants discussed. Only two participants discussed implementation of change in terms of being goal-oriented or of having personal discipline. One of these participants attributed this skill to her “Type A personality," and claimed that if “we’re doing something, you know, I’m all in. I can’t do something half-heartedly. I have to do it. I can’t let things sit and wait.” The other participant also discussed goals and having the discipline to achieve them, but her reasons for implementing changes in classroom practices were much different. This teacher talked more about wanting to please others and not let them down, which made coding her statements as personal mastery skills difficult. However, later this participant discussed the need to implement curriculum with fidelity in order to know for sure if it worked. She also discussed her commitment to implement curricular reforms according to district expectations for a full year before deciding to either adopt, adapt, or reject the reform, depending on her assessment of it after trying it for a year. When asked about the personal characteristics that were important to implementing change in classroom

practices, participants cited open-mindedness, engagement in respectful dialogue about change, strong commitment, a willingness to work with others, a cooperative attitude, flexibility, persistence, patience, tolerance, forbearance, resilience, and an attitude that embraces change. As one teacher said, "Just coming to grips with the reality that curriculum development is never really finished. It is never really finished; it really is something that should always be evolving and changing and being assessed." Despite finding evidence that teachers believed these positive personal characteristics were a factor in why they were successful in implementing change, I was not able to conclude that personal mastery was an important factor for teachers in implementing changes in their classroom practices.

Mental models. Senge et al. (2012) described mental models as being able to reflect on how personal thoughts and feelings impact the interactions of individuals with others and their subsequent actions. The construct of mental models appeared only a few times during the coding process. Only two participants made statements that indicated that they understood how their own emotions could impact their implementation of instructional change. One participant discussed how having her decision making authority taken away concerning a new language arts curriculum impacted her perceptions of a new curriculum and her ability to feel invested in it. Another participant discussed the importance of understanding that ongoing change is the very nature of education and that teachers who think otherwise will end up frustrated because they will always be fighting to keep classroom practices and curricula from changing. The remaining participants were less reflective on how their own emotional states impacted

their adoption of instructional change; instead, they were more likely to focus on outside factors such as time, colleagues, materials, and technology to explain how, why, and when they were successful or stymied at changing their classroom practices.

Shared vision. A shared sense of purpose, or shared vision (Senge, 2012), was a factor in teacher beliefs that they had successfully changed their classroom practices. Teachers frequently cited sharing the same vision, or buying in, to a change initiative as a reason for implementing change; however, they also cited disagreeing with the district's vision as the reason behind failing to implement a mandated reform or tweaking it. The district's full inclusion and differentiated instruction initiatives provided instances of both reactions. When asked why the district initiated these reforms, one participant reported, "We got [administrators] who really believed in this whole balanced literacy thing," and another participant noted, "I believe this district prides themselves [sic] on being forward-thinking and up on the latest research and best practices, and brain-based decisions." Participants often described the changes in their beliefs about these reforms. Even though six participants expressed initial resistance to the new district vision, all but one expressed positive attitudes towards the changes they had made in their teaching over the past 10 years as a result. As one teacher reported, "I do think that the [district] philosophy has changed the direction of my instruction in a good way." Statements such as this highlighted the importance of shared vision to implementing change. Even though not all teachers shared the district's vision of full inclusion and differentiated instruction using resources other than textbooks, participants who grew to share the district's vision spoke most positively about implementing the reforms.

Teachers also believed that creating a shared vision was a long process. As one teacher put it, "There was a period of, what I'm going to call for lack of a better term, *reindoctrination*, that maybe was necessary, in order to get people to recognize that some of this change was needed." Another teacher noted that the reforms were all-encompassing, adding:

> It touches all three; it's instructional, curricular, and classroom management because with this [full inclusion], you *have* to change the curriculum, you *have* to adjust your instructional practices, and you have to be very aware and focused on classroom management. You *have* to be proactive in order to manage these things.

All participants acknowledged that the magnitude of the change that the district initiated was difficult, and it is still an ongoing process. However, seven participants had grown to appreciate the positive aspects of the full inclusion and differentiated instruction reforms and the necessity to adapt, tweak, or revise parts of the reforms that they believed were not working to meet student learning needs. One teacher noted, "There's been some frustrations, but once you work through it [change], I think good things come out of it." Another teacher commented on the benefits to student learning: "When everyone expects more from kids, they give it…you just set the bar, and they jump." Several participants expressed pride in their accomplishments after they had embraced a shared vision of differentiated instruction. As one teacher reported,

> When you have created the curriculum that you're implementing, you take a real sense of pride in and ownership of it to the point where I now feel like if someone

were to give me a textbook and say, 'Here, teach this,' it would almost feel like cheating.

This teacher's statement is indicative of the interaction of factors that influenced how teachers in this study implemented changes in their classroom practices. When teachers could understand the benefits to student learning, they were more likely to embrace reform, and as their success in implementing these reforms grew, they also grew in their acceptance of the vision that district administrators had developed. Although not all participants expressed unbridled enthusiasm for the district's vision, seven of the eight participants shared the district's vision for implementing full inclusion and the instructional strategies it entailed.

Team learning. At times, the codes that I constructed for team learning seemed to mimic relationship management codes, but some key differences emerged. While both constructs involved collaboration, relationship management statements were concerned with conflict management and influencing others, and team learning was related to the organizational structure that promoted collaboration and created an atmosphere in which risk taking and trying new curriculum and instructional strategies was encouraged. Therefore, statements teachers made about how the district promoted collaboration, dialogue, and discussion-based decision making, as well as the freedom to make changes at an individual level, were identified as team learning indicators. I found some disparity among participants' responses about whether or not team learning had contributed to their successful implementation of instructional change. While all participants recognized the importance of implementing change successfully, only half of the participants believed

district administrators had created an atmosphere that fostered team learning. Most of these teachers believed that administrators did not provide enough time for teams of teachers to talk and collaborate on ideas. However, one participant believed that this lack of time was deliberate because administrators did not trust teachers to work together without administrative supervision.

Participants who believed that district administrators fostered an environment of team learning shared experiences in which all views were heard. One teacher who thought the reforms had merit but needed to be adjusted to fit the needs of secondary school students noted, “I feel like we’re in a place where we can have that dialogue with our administration,” and added, “There’s a fair amount of autonomy in my district, in terms of teachers being able to choose how they want to meet certain standards.” Another participant echoed this sentiment by commenting, “I’m free to think about what needs to be done and made the changes myself without having to conform to someone else’s guidance or expectations.” The differences in these team learning experiences among participants appeared to be largely attributed to building administrators. Participants talked about district mandates, how they were communicated, and what the expectations were, but in every case, they noted that the implementation of these mandates was the responsibility of building principals, and therefore, the attitudes of these principals towards change, team learning, and risk-taking set the tone for how staff members collaborated, implemented new instructional strategies, and communicated honestly about needed adjustments. Participants who worked with principals who built strong team

learning environments were the most positive about implementing change in their classroom practices.

Systems thinking. The final construct for analysis was systems thinking. Participants who made statements demonstrating an understanding of the interdependency of various factors in the school system and of the change process itself coded high on systems thinking. Almost every participant in this study demonstrated a clear understanding of how implementing a substantial change in classroom practices is a process, and they identified many of the systemic factors that influence the success or failure of a change initiative. With one exception, all participants reported that implementing comprehensive and complex reforms, such as full inclusion, differentiated instruction, and balanced literacy, was difficult and frustrating. They described the tendency to revert to old, comfortable practices, the efforts to resist elements of the reforms, and the mistakes they made as they tried to adhere to district expectations. They also described how they gradually accepted the reforms, adjusted them as needed to fit student learning needs, and became proficient at this new way of teaching. Finally, participants acknowledged that these reforms had merit and that looking back, they now recognized that these reforms had improved their instruction. Participants in the study were well aware of the systemic factors that impacted their adoption of change. The supports that they believed they needed to be successful in making instructional changes were complex. Although all participants named multiple supports, one participant summed it up best by saying:

> It's important that you have inservice; it's important you have time to try them [reforms] out; it's important that you have collaboration with other teachers; it's extremely important that you have planning time, and it's important that you not feel like you're being held accountable for something that you haven't learned how to use yet.

This teacher paused, and then added, "I think it's also important that teachers have buy-in. If teachers don't help choose programs or new initiatives, then, you know, they don't take ownership over it." In a concise way, this participant reflected on what every other participant touched upon, which is that the implementation of school reform is a complex undertaking, and multiple systemic factors need to be in place in order to foster an environment that creates positive instructional change. The ability of the participants to demonstrate systems thinking when describing their experiences with change supports Rodriguez's (2013) contention that teachers become masters of their craft because they utilize systems thinking to understand student learning as a dynamic system. The participants who described the change process as a complex interaction of parts of an organizational system and who described their own reactions as part of that system were also more positive about the district's reform efforts and their ability to implement the changes effectively.

The most dominant finding in the analysis of the interview data was the dedication the participants believed they had towards improving their teaching, even years into their careers. Although implementing changes in their classroom practices was not easy, even when the change was self-initiated, these teachers still spoke

enthusiastically about how they were continually looking for ways to better meet student needs. As one teacher put it, to be an effective teacher, one must engage in "perpetual professional readjustment." Another teacher added, "I think good classroom teachers are always changing and looking for new things." Contrary to what some studies, the media, and the public may think about public school teachers, these participants had not lost their optimism, willingness to work hard, and love for their craft. One participant summed up what it felt like to constantly seek improvements in classroom practices, "I feel like it's the Holy Grail. If I can just find that *one* thing…everything will fall into place." Searching for changes in classroom practices that truly made a difference to students was still a goal for the veteran teachers in this study.

Table 1 is a summary of the internal and external factors that participants most frequently reported as having positively and negatively influenced changes in their classroom practices.

Table 1

Findings Related to Internal and External Factors

Positive Internal Factors	*Positive External Factors*
Self-awareness *Self-assessment *Self-confidence	Shared vision *Belief in full inclusion *Belief in differentiated instruction *Belief in meeting student needs
Self-management *Adaptability *Initiative	Team learning *Opportunities for collaboration
Social awareness *Empathy for students involves interdependent, complex factors, including personal responses to change	Systems thinking *understanding that change process
Negative Internal Factors None reported	*Negative External Factors* *Lack of shared vision *Lack of a team learning culture *Lack of time, support personnel, and resources

Summary

This chapter focused on the results of the study. In this chapter, I presented a description of the setting of the study, relevant participant demographics, and the data collection and data analysis procedures that I followed. In addition, I discussed the strategies that I used to improve the trustworthiness of this qualitative research. I presented the results of the data analysis in relation to coding for EI and systems theory constructs and emerging themes.

Results for this study indicate that the internal factors that participants identified most frequently as positively influencing changes in their classroom practice were self-awareness, self-management, and social awareness, particularly in relation to self-assessment, self-confidence, adaptability, initiative, and empathy. The external factors that participants identified most often as positively influencing changes in their classroom practices were shared vision, a culture of team learning, and systems thinking in relation to the change process. Without exception, participants who described experiences of a positive school environment that supported these external factors reported feeling positive about school reforms and the resulting changes to their classroom practices and enthusiastic about continuing to improve their craft. Participants did not identify any internal factors as having a negative influence on implementing change, but they did identify the lack of the external factors of shared vision and team learning as having a negative influence on their ability to implement change. These findings support the conceptual framework of EI theory and systems theory for this study and extend the knowledge of current literature regarding teacher implementation of reforms by

demonstrating that despite obstacles, teachers can and will implement changes in their classroom practices with energy and enthusiasm. These results will be in the final chapter of this dissertation, which also includes recommendations for future research and implications for social change.

Chapter 5: Discussion, Conclusion, and Recommendations

The purpose of this qualitative study was to explore how eight veteran teachers from a rural northeastern public school district in the United States described their experiences with school reform and changes in their classroom practices that occurred over the course of their careers. The eight veteran teachers had each taught in a public school system for at least 15 years, and their average teaching experience was 21 years. The goal of this study was to develop a deeper understanding of these teachers' perspectives about school reforms and their personal experiences with changes in their classroom practices in order to identify factors that positively and negatively impacted these changes. Using the constructs of EI theory (Goleman, 2011) and systems theory (Senge et al., 2012), I analyzed teacher experiences with school reforms and changes in classroom practices in order to understand how internal and external factors positively and negatively influenced changes in their classroom practices.

Summary of Findings

The first key finding of this study was that participants who spoke positively about implementing changes in their classroom practices were more likely to make statements that reflected the EI skills of self-awareness, self-management, and social awareness. Specifically, they demonstrated high levels of self-assessment, self-confidence, adaptability, initiative, and empathy. The other key finding was that the external factors that positively influenced change in classroom practices for participants were shared vision, team learning, and systems thinking in relation to understanding the change process. Participants did not report any internal factors as having a negative

influence on their ability to implement change; however, participants did report that a lack of the systems factors of shared vision and team learning were a negative influence on their ability to implement change. They also reported a lack of planning time, support personnel, and curriculum resources as impeding the implementation of change. These findings indicate that teachers need competencies related to both emotional intelligence and systems thinking to successfully implement changes in their classroom practices. The findings also indicate that education administrators need to ensure systemic supports are in place before initiating school reform.

Interpretation of Findings

The research questions guiding this study were (a) How do veteran teachers describe their experiences with various school reforms and changes in classroom practices that have occurred over the course of their careers? (b) What internal and external factors do veteran teachers identify as having a positive or negative influence on their adoptions of change? In order to answer these questions, I analyzed the data through the conceptual lens of EI and systems theory constructs. My analysis of the data revealed that the EI constructs of self-awareness, self-management, and social awareness were the most frequently mentioned in teacher statements. My data analysis also revealed that veteran teachers were aware of the need for shared vision and team learning in creating what Senge et al. (2012) have called a learning organization. In addition to these findings, data showed that veteran teachers who had positive experiences with school reform had a strong understanding of systems thinking in relation to understanding the change process

and the complex, interdependent factors that interact to make the implementation of change in classroom practices successful.

EI Constructs

Participants identified the internal factors of self-awareness, self-management, and social awareness as positively influencing changes in their classroom practices. In particular, veteran teachers were open about describing their perceived strengths and weaknesses in relation to implementing changes in their classroom practices, and they reported confidence in their abilities to assess reform initiatives, implement them when appropriate, and adjust them when necessary for the good of the students under their care. Many of the teachers were also aware that their attitudes towards implementing changes in their classroom practices shifted over time as they became more comfortable with paradigm shifts related to instructional practices and felt more competent at implementing reforms. These teachers acknowledged that some of the reforms they initially resisted had merit, and acknowledged that it was their own journey through the change process that made the difference in the successful implementation of changes in their classroom practices. Teacher social awareness statements were almost exclusively related to awareness of student needs. They reported that their adoption or resistance to changes in their classroom practices was directly related to their empathy for students and the students' academic, social, and emotional needs. The EI construct of self-management was also evident in teacher statements regarding their beliefs in their own adaptability and initiative. Teachers reported adapting reforms that needed tweaking in order to better meet student needs. All participants talked about changes in classroom

practices that they had initiated on their own, as well as how they implemented district-mandated reforms in order to better meet student needs. Several participants mentioned flexibility as a key skill required to successfully implement change.

Systems Theory Constructs

Rodriguez (2013) suggested that master teachers are by nature systems thinkers. My analysis of the data supported this claim, and revealed that teacher participants were aware of the systems theory constructs of shared vision, team learning, and systems thinking and their importance to the successful implementation of change. Participants frequently mentioned the systems theory construct of shared vision. Although they noted that they often shared the same vision for reform with administrators, at times participants discussed ways that their visions for student learning differed from that of administrators. These differences in vision negatively impacted the implementation of reforms. The systems construct of team learning also emerged as a strong influence on how teachers implemented changes in their classroom practices. Participants who had opportunities to learn with colleagues spoke positively about their experiences in implementing classroom change. Finally, participants reported a strong understanding of systems thinking in relation to the change process and the internal and external factors that positively and negatively impacted their implementation of classroom change. They articulated the idea that change is difficult even under the best of circumstances, and that persistence in the face of that difficulty made the difference in whether or not they were successful in implementing changes in their classroom practices.

Current Research

The findings of this study support findings in other current research which has shown that the factors impacting whether or not teachers are successful in changing their classroom practices are complex and interactive (Austin & Harkins, 2008; Craig, 2012; Givens et al., 2010; Guhn, 2009; Hannay & Earl, 2012; Williams et al., 2012). No single factor was shown to ensure successful implementation of school reforms, but teacher perception of how the reforms impacted students was critical to whether teachers faithfully implemented the reform. This finding supports Thornburg and Mungai's (2011) claim that teacher concerns about whether or not school reforms actually benefits students is a major barrier to implementing change. Six of eight of the participants in this study stated that if they did not believe the change initiative benefitted students, then they resisted implementation. The other two participants were not as openly resistant to reforms, even when they disagreed with them, but they tried to minimize any negative impact on students and were just as likely as their six colleagues to implement their own change initiatives that supplemented the district mandate.

Several current studies pointed to quality professional development as essential for teachers in successfully implementing change (Frank et al., 2011; Gibson & Brooks, 2012; Johnson et al., 2010; White et al. 2012). Although participants in this study acknowledged that professional development could have a positive influence on their ability to implement change, they did not reach consensus as to whether or not the district had provided quality professional development. The lack of consensus about whether or not quality professional development was provided by the district may have been due to

the different subject areas and grade levels that participants represented in this study, and the fact that only two participants in each grade level cluster were included. The literature also suggested that teacher self-efficacy is critical for implementing school reform (Kaniuka, 2012; Pyhalto et al., 2011), which supports my finding that veteran teachers in this study reported feeling self-confident in implementing changes in their classroom practices. Veteran teachers also described feeling more confident in their ability to implement district reforms implemented a decade ago, but they were also confident in describing how and why they had completely resisted certain changes.

School culture has been linked to successful school reform (Craig, 2012; Eargle, 2013; Melville et al., 2012; Waldron & McLeskey, 2010). Researchers have suggested that a collaborative environment, school leadership, and a climate that encourages risk-taking helps teachers implement changes in their practices (Craig, 2012; Eargle, 2013; Higgins, 2012; Melville et al., 2012; Pescarmona, 2010; Waldron & McLeskey, 2010). The results of this study support these conclusions. The elements of school culture that support change fall under the category of team learning in systems theory. Some participants spoke of building principals who supported their attempts to implement change by understanding that initial attempts may include mistakes, while other participants recounted experiences in which school leaders inhibited implementation of change by failing to listen to teachers' concerns and by not respecting their professional judgment about the practices that best met student needs. Participants who worked with building leaders who understood that change might involve failure spoke of their willingness to initiate and try new strategies, even if those strategies did not work.

Teachers in this study also spoke frequently about collaboration. Teachers who described strong collaboration with peers also spoke more positively about their ability to implement school district reforms, while teachers who did not work with supportive peers were more likely to voice frustration at implementing reforms. Participants reported that working collaboratively helped reduce the time they needed to prepare materials and lesson plans and helped them brainstorm and trouble-shoot solutions to problems they encountered when implementing a new program.

In other supporting research, Hannay and Earl (2012) found that systems theory constructs, such as creating a shared vision and team learning were important conditions for teachers to reconstruct their professional knowledge. Veteran teachers in this study frequently made statements indicating that these two factors were important to their implementation of classroom change. Higgins et al. (2012) also found that psychological safety was an important factor in organizational learning. Although psychological safety was not one of the constructs that I used to analyze the interview data of this study, several teachers mentioned that they felt a certain degree of freedom to try new instructional strategies and lessons without fear of failure and that this freedom helped them embrace change. Participants were divided about whether or not building leaders created a risk-taking environment, and as a result, they felt safe to experiment with changes in classroom practices. Participants who reported that building leaders created a risk-taking environment were more likely to express positive feelings about implementing change.

This study expanded on the literature regarding teacher implementation of school reforms because it focused on veteran teachers who described multiple experiences with school change. Previous studies focused on one specific reform (Craig, 2012; Dingle et al., 2011; Waldron & McLeskey, 2010) or on barriers to reform (Thornburg & Mungai, 2011) or did not include veteran teachers in the sample who had experienced years of school reform (Kocoglu, 2011; Potter, 2011; Tait, 2008). This study focused on how veteran teachers with experience in reforms related to curriculum, instruction, and classroom management strategies over many years described changes that they made to their classroom practices. This study provided an opportunity for participants to describe those changes that stood out in their memories, rather than to focus on one reform initiative. The findings of this study did not confirm or refute what other researchers found in regard to the implementation of school reforms. However, this study was unique because participants expressed positive attitudes towards school change. It appeared that district educators had succeeded, for the most part, in creating a shared vision with participants about how to improve student learning. This conclusion was based on participants' descriptions about how their grade level teams and departments worked together to implement reforms.

What became clear during the interviews was how committed these teachers were to their craft. Even after 15 or more years of teaching, not one participant indicated that they preferred to stick with tried and true methods of instruction or familiar curricula. Although they acknowledged the hard work involved in implementing new classroom practices, they were willing to do what it took to implement it. Participants in this study

demonstrated what Rodriguez (2013) referred to as "dynamic interventionists" (p. 79); that is, they believed that they implemented changes in their classroom practices in response to the needs of students. Because veteran teachers in this study had experience with various reforms, they were able to describe these experiences with a degree of self-reflection that was not evident in the studies presented in Chapter 2. The participants in this study believed that their frustrations, resistance, eventual adoption, and enthusiasm about various changes in their classroom practices were all a part of a normal change process.

Change Process

A finding that emerged from the interview data was that the change process the participants described matched the change process that White et al. (2012) described in their study of teachers implementing change and that Jellison (2006) described as a *J-curve*. According to Jellison, the path of organizational change takes a predictable path. The first stage of that path is a period in which employees are entrenched in familiar patterns. When a change is first introduced, there is fear and resistance, followed by a gradual implementation that is fraught with mistakes. Finally, employees embrace the change as they become more comfortable and competent at what they are doing. For most of the participants, the *J-curve* of change reflected their experiences with school reforms over the course of their career. This finding warrants further study.

Interpretations Based on EI Theory

An analysis of veteran teacher statements about implementing change using the constructs of EI theory was useful because such analysis provided a way to identify

internal factors that influenced the adoption of change. However, conclusions regarding EI constructs were limited. Data analysis indicated that the emotional competencies of self-awareness, self-management, and social awareness, particularly in relation to self-assessment, self-confidence, adaptability, initiative and empathy, were the most important internal factors in participants' ability to implement changes in their classroom practices. However, I cannot conclude from the data that the other competencies were not important, only that the interview questions did not elicit as many statements that indicated that other EI constructs were factors. As Garner (2010) noted in an analysis of the influence of emotional competencies on teaching, the definitions and descriptions of EI competencies vary considerably, and no one test has been found to be superior in measuring EI, making comparisons of studies and conclusions about the importance of EI to teaching quality difficult. Although this study relied on teacher statements indicating they used some EI skills to implement changes in their classroom practices, I did not test these skills using a quantitative measure. In addition, the data from this study cannot be used to determine whether participants began their teaching career with these EI competencies already in place or whether they developed self-assessment skills, self-confidence, adaptability, initiative, and empathy over the course of their careers. Le Cornu (2013) suggested that positive relationships with colleagues and supervisors could help early teachers develop the EI competencies of resilience and confidence, but more research is needed to determine whether or not EI competencies for beginning teachers are predictive of later success in adapting to change and in becoming effective teachers.

Interpretations Based on Systems Theory

Analysis of the data using systems theory was more revealing. In addition to statements that indicated veteran teachers understood how the change process worked and their iterative role in that process, teachers who spoke most positively about implementing changes in their classroom practices were also the ones who made statements that indicated their awareness of how systems thinking positively influenced these changes. These teachers believed that they understood and valued the importance of shared vision and team learning. However, these beliefs did not mean that they always embraced change. To the contrary, they often described feelings of frustration and resistance to the reforms they had tried to implement over the years. However, teachers with a strong sense of shared mission believed that their negative feelings were a normal part of the change process, and they expressed pride in how they grew as teachers as they implemented and fine-tuned changes to their classroom practices.

Two participants also indicated an understanding of the systems theory construct of mental models. These two teachers were even more reflective and positive about their experiences with school reform than the others. They were particularly articulate in describing how their own emotional states impacted their adoption of change. The fact that only two participants made statements that reflected a change in mental models was not surprising. Senge et al. (2012) acknowledged that understanding and using mental models is a skill that needs to be taught in institutions that strive to become learning organizations. This participating school district, like most public districts in the country, has limited professional development time, and spending that time learning about mental

models would be difficult when faced with more immediate reform initiatives, such as the full inclusion, balanced literacy, and differentiated instruction. Despite these challenges, these two teachers who recognized the importance of their own emotional and thought processes provided some insight into the potential importance of this construct in understanding why some teachers may be more successful at implementing change than others.

In summary, the results of this study of eight veteran teachers in one rural northeastern school district in the United States suggested that educators in school districts that are trying to implement school reforms should strive to become what Senge et al. (2012) termed "learning organizations" in order for the reforms to be successful. Becoming a learning organization means that educators must create an environment that support teachers in embracing, not just accepting, change as part of the ongoing quest to improve student learning. Creating a learning organization means going beyond providing adequate professional development for teachers; despite what may be constraints on educators' time, the results of this study suggested that time spent developing a shared vision, opportunities for collaboration, and providing guidance on how to use mental models and understand the change process could result in teachers better implementing reforms in classroom practices that result in improved student learning. In addition, the results of this study suggested that school cultures that encourage self-assessment, self-confidence, adaptability, and initiative, as well as self-reflection and professional judgment in implementing changes in classroom practices may foster EI competencies in teachers that lead to improved teaching and learning.

Limitations of the Study

The limitations to the study were related to the research design for this study, including the potential for researcher bias and limited transferability due to a small sample size and a single research site. Researcher bias was a potential limitation because I was employed as a teacher in the participating district for over 15 years and experienced the same reforms in curriculum and instruction that participants described during the interviews. As such, the potential existed for a biased interpretation of the data. In order to address this potential bias, I used specific strategies such as reflexivity to improve the trustworthiness of this study by maintaining a reflective journal in which I wrote my own answers to the interview questions and thought about my assumptions, dispositions, and biases before interviewing the teachers in this study. I also reflected on the following questions after conducting the interviews: What responses resonated with my own feelings? Which responses were a surprise to me? I also paid careful attention to statements and attitudes that were discrepant from my own experiences in order to ensure that I fully represented them in the analysis and discussion of the findings. By using the strategy of member checking, I confirmed that the interview transcripts were accurate and that respondents agreed with my description and analysis of their experiences.

Another limitation of this study concerned limited transferability due to a small sample size and a single research site. Although I took steps to ensure the dependability of the data and my conclusions, transferability of the results was limited by the sample population and size. The eight participants represented a range of grade levels and came from diverse backgrounds, but they all worked for the same school district over the past

15 years, and therefore, their experiences with implementing changes in their classroom practices may reflect particularities of this school district and how it initiates and supports reforms. Even though analysis of the data revealed that teachers who successfully implemented these changes believed that internal factors related to self-assessment, self-confidence, adaptability, initiative, and empathy and the external factors of shared vision, team learning, and systems thinking, findings also indicated that teacher implementation of change is a complex and individualistic endeavor. The study did not determine if teachers started their careers with strong EI skills or if they developed them over time. This limitation in the study design means that no conclusions can be made regarding causation. It is also not clear from this study if teachers with strong EI skills are able to implement changes in their classroom practices more successfully or if systemic supports that foster a learning organization result in teachers developing the EI skills needed to successfully implement these changes.

Recommendations

Recommendations for future research include expanding the number of participants and school districts in order to further validate the results of this study. Future studies might also include using instruments to test teacher EI competencies to determine whether or not teacher perceptions of their EI skills correspond with test results that produce an EI score. Future studies could also include school administrator perceptions about the five systems theory disciplines of personal mastery, mental models, shared vision, team learning, and systems thinking to understand how school leaders create an environment that Senge et al. (2012) described as a learning organization.

Researchers could also conduct additional case study research on unique reforms, such as this school district's implementation of a textbook-free philosophy across all content areas. Teachers reported that this reform, along with full inclusion, was the most drastic change they experienced over the course of their careers. Therefore, case studies that explore the implementation of these reforms could include an in-depth analysis of teacher perceptions about this implementation as they reflect on the change process, comparing their current beliefs about the reform to their previous beliefs when the reforms were first initiated. This type of study, which would also include observations of how teachers have implemented these reforms and documents related to these initiatives, could be of value to school administrators and other educators in implementing new reforms.

Implications

The results of this study have the potential to make a positive impact on educators in public school districts who implement school reforms. The results suggested that if educators create a learning organization through shared vision, team learning, and systems thinking, teachers will be better supported in their attempts to implement reforms. The results also suggested that educators who provide teachers with professional development to help them understand mental models and change dynamics may result in teachers who are better prepared to address the negative factors that influence the changes they make to their classroom practices. Evidence that EI competencies such as self-assessment, self-confidence, adaptability, initiative, and empathy also impact the successful implementation of changes in classroom practices may have implications for school district educators, both in hiring practices and in designing professional

development opportunities. The findings of this study did not determine if teachers started their careers with strong EI skills or if they developed them over time; however, school district educators should consider looking for evidence of an applicant's EI skills during the hiring process. In addition, by creating a learning organization environment, educational leaders could enhance teachers' abilities to use EI competencies in collaborating with peers, using professional judgment in designing and evaluating curricula, instructional methods, and classroom management strategies, and therefore, they may take the initiative in implementing changes in their classroom practices in order to improve student learning. The results of this study suggested that by creating learning organizations, educators create environments in which teachers are more open to change in general, more likely to be committed to implementing reforms over a long period of time, and more enthusiastic about implementing these changes to improve student outcomes.

Conclusion

The reflections of the participants in this study on how the major reforms in their school district changed them as teachers was fascinating to me as a researcher, and at times, quite inspiring to me as a fellow educator. I was struck by how deeply these teachers reflected on their craft, how they needed to slowly accept a significant paradigm shift and then embrace a new educational philosophy, and how they were more enthusiastic about change in general and confident in their abilities to initiate change as a result of their experiences. The participants in this study refuted the claim often made that veteran teachers are resistant to change (Ravitch, 2001; Tyack & Cuban, 1995;

Thornburg & Mungai, 2011). Without exception, the teachers in this study were still engaged in becoming better educators and committed to implementing changes in their classroom practices when they perceived change was needed to better meet students' needs. When their administrators supported them through quality professional development, adequate collaboration time, and respect for their professional judgment, these teachers believed that change in classroom practices can and does happen in public schools.

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Appendix A: School District Letter of Cooperation

Diane Van Bodegraven

March 31, 2015

Dear Ms. Van Bodegraven,

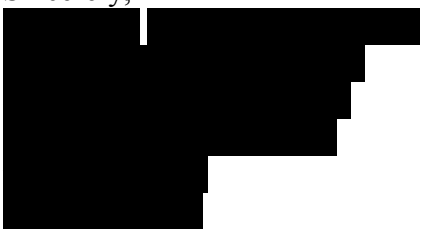
Based on my review of your research proposal, I give permission for you to conduct the study titled "Implementing Change: How, Why, and When Veteran Teachers Change Their Classroom Practices" within the [redacted]. As part of this study, I authorize you to contact district teachers via email in order to extend an invitation to participate in the study and to obtain informed consent. I also authorize you to interview selected participants during non-instructional hours in their home schools regarding their experiences implementing change in their classroom practices and to ask them to review the tentative findings for their plausibility. Individuals' participation will be voluntary and at their own discretion.

We understand that our organization's responsibilities include providing names of district teachers who have at least 15 years of public school experience, email addresses for these teachers, and access to buildings and conference rooms for the purpose of interviewing. We reserve the right to withdraw from the study at any time if our circumstances change.

I confirm that I am authorized to approve research in this setting and that this plan complies with the organization's policies.

I understand that the data collected will remain entirely confidential and may not be provided to anyone outside of the student's faculty/staff without permission from the Institutional Review Board (IRB) at Walden University.

Sincerely,



Appendix B: Letter of Invitation

Date

Dear _____,

As part of the requirements for earning a doctoral degree in education from Walden University, I am conducting a study about how veteran teachers describe their experiences with school reforms and changes in classroom practices. I am particularly interested in the factors they believe have positively or negatively impacted their implementation of change in the classroom. Participation in this study will involve an interview lasting approximately one hour and a follow-up to verify that the information collected during the interviews is accurate.

You are being asked to participate because you have been identified as having 15 or more years of experience teaching in the public school system. If you participate in the study, you will receive a $30.00 Amazon.com gift card for your time.

Participation is voluntary. If you choose to participate, you have the option of withdrawing from the study at any time. All information collected during the interviews will be kept strictly confidential. The results of the study will be published in my dissertation, and pseudonyms will be used to protect the identity of the school district, the schools, and the participants. Upon completion of the study, all data will be kept in a secure location for a period of 5 years and destroyed.

If you are interested in participating in this study, please complete the attached consent form and return it to me via email within two weeks. I will select the first two participants from each grade level cluster (primary, intermediate, middle school, and high school) who send me a signed consent form in the enclosed self-addressed stamped envelope. If you are selected for the study, I will contact you to arrange for a convenient interview time.

If you have any questions, please feel free to contact me at my email address: [redacted]

Sincerely,

Diane Van Bodegraven
[redacted]

Appendix C: Interview Questions for the Oral Questionnaire

Demographic Information

1. How many years have you been teaching?
2. What grade levels and subjects have you taught?
3. In how many and what types of schools have you worked?
4. What is your post-high school educational background?

Initial Interview Questions

1. What instructional, curricular, and/or classroom management reforms have you been expected to implement by your school district over the past ten years?
2. What instructional, curricular, and/or classroom management reforms have you implemented on your own?
3. Why were these changes initiated?
4. What conditions were important in helping you implement these changes?
5. What personal characteristics do you feel were important in helping you implement these changes?
6. What kind of professional development did you receive to help you make changes in your classroom practices?
7. What kinds of support, other than professional development, have you received in implementing changes in your classroom practices?
8. How has working with colleagues impacted your adoption of changes in your teaching practice?

Follow-up Interview Questions

9. What kids of obstacles have you faced in making changes in your classroom practices?
10. Did you ever fail to implement changes in your classroom practices that were required or that you wanted to change? If so, what factors do you believe prevented you from making these changes?
11. What changes that you made in your classroom practices have had the most positive impact on student learning and which have had the most negative? Why?
12. Is there anything you would like to add to help me better understand how, why, and when you have implemented changes in your classroom practices?