Principal Self-Efficacy Beliefs: What Factors Matter?

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Abstract

Self-efficacy beliefs are evaluations people make about their capability to handle specific, future challenges. Self-efficacy belief levels predict actual success. Public school principals face ever-changing challenges. Understanding school principal self-efficacy beliefs and supporting the development of these beliefs is one way supervisors can help the future effectiveness of school principals. There are four main sources of information used to develop self-efficacy beliefs. These four sources of information are: mastery learning, vicarious learning, verbal persuasion, and emotional arousal. This multiple case study research examined the factors that influenced self-efficacy beliefs of elementary school principals prior to facing a personally meaningful challenge. The overall research question was: What Factors Attend to the Domains of Self-Efficacy Belief Formation in School Principals? The purpose of the research was to understand what information influenced the mindsets of principals as they formed their initial self-efficacy beliefs prior to facing a personally meaningful challenge.

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General Audience Abstract

Self-efficacy beliefs are evaluations people make about their capability to handle specific, future challenges. Self-efficacy belief levels predict actual success. Public school principals face ever-changing challenges. Understanding school principal self-efficacy beliefs and supporting the development of these beliefs is one way supervisors can help the future effectiveness of school principals. There are four main sources of information used to develop self-efficacy beliefs. These four sources of information are: mastery learning, vicarious learning, verbal persuasion, and emotional arousal. This multiple case study research examined the factors that influenced self-efficacy beliefs of elementary school principals prior to facing a personally meaningful challenge. The overall research question was: What Factors Attend to the Domains of Self-Efficacy Belief Formation in School Principals? The purpose of the research was to understand what information influenced the mindsets of principals as they formed their initial self-efficacy beliefs prior to facing a personally meaningful challenge.

Dedication

Every child deserves a high-quality public school education. This study is dedicated to public school principals who work tirelessly on their behalf. In order to create and sustain effective schools, principals are leaders of change. Their beliefs inspire and influence others. The work of school principals is both exhilarating and exhausting. This research study is aimed at learning more about how to support principals and their beliefs, which will fortify their courage, passion, and stamina. Principals matter.

"What is the matter, my friends?" she asked kindly.

"Oh, Little Blue Engine," cried the dolls and toys. "Will you pull us over the mountain? Our engine has broken down and the good boys and girls on the other side won't have any toys to play with or good food to eat, unless you help us. Please, please, help us Little Blue Engine."

"I'm not very big," said the Little Blue Engine. "They use me only for switching trains in the yard. I have never been over the mountain."

"But we must get over the mountain before the children awake," said all the dolls and toys.

The very little engine looked up and saw the tears in the dolls' eyes. And she thought of the good little boys and girls on the other side of the mountain who will not have any toys or good food unless she helped.

The she said, "I think I can. I think I can. I think I can." And she hitched herself to the little train.

She tugged and pulled and pulled and tugged and slowly, "I thought I could. I thought I could. I thought I could. I thought I could. I thought I could. I thought I could."

The Little Engine that Could by Watty Piper (1930)

Acknowledgements

First, I must thank my family and friends. You told me that you believed in me and my ability to be successful. You supported me when I had to make sacrifices. Of course, I need to thank my mom, Barbara, for all her love, support, and never-ending encouragement.

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Additionally, I want to thank my new friends at Virginia Tech. I've met some of the most hard-working, dedicated, and thoughtful educators from all around the region. I couldn't have done this without my new buddies. I'm especially going to miss all the text messages that have kept me laughing.

Lastly, I want to thank my dissertation committee. You took my ideas, stretched them out, cut them up, and questioned them. This made my study effective. Thank goodness you told me how much I'd enjoy doing a qualitative study. You were right about that. I especially want to thank my chair, Dr. William Glenn. You are one of the smartest people I've ever met. I appreciate your belief in me and dedication to helping me through this entire journey.

PRINCIPAL SELF-EFFICACY BELIEFS: WHAT FACTORS MATTER?

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Study Background

Human beings have control over their mindset and how they experience situations (Dweck, 2008). According to Dweck (2008), successful people show a flexible mindset and are open to seeing experiences as opportunities to persevere, learn, and develop. Less successful people show a fixed mindset and do not see their own potential to overcome possible challenges and control their future (Dweck, 2008). When authority figures show a flexible mindset, they influence this way of thinking and behavior in their subordinates (Dweck, 2008).

One type of authority figure who exerts a great deal of influence over subordinates is a school principal (Branch, Hanushek & Rivkin, 2013; Gurr, Drysdale & Mulford, 2005). These leaders matter (Sparks, 2005). Gains in student achievement can be directly linked to the overall effectiveness of the school principal (Branch et al., 2013; Eberts & Stone, 1988). Improvements in school climate, which influence student achievement, are directly linked to school principal effectiveness (Gurr et al., 2005; Norton, 2002). A school climate characterized by a culture of trust, support, collaboration, and collegiality comes from the leadership of an effective principal (Gurr et al., 2005). A culture of growth and teamwork also comes from leaders who show flexible mindsets when facing new challenges (Dweck, 2006). Principals influence the mindset, culture, and climate of schools which are linked to student achievement.

School principals help people (Sarros, 1988). Individuals in helping professions are vulnerable to experience high levels of stress and burnout (Sarros, 1988). Oftentimes school principals, because of their focus on helping so many people, are perceived to appear like butterflies on speed drugs as a result of their high stress levels (Connolly, 2007). These stress

levels may lead principals to feel they cannot be successful on future challenges, which could

lead to burnout (Friedman, 2002). As a result, stress and burnout may lead to principal turnover

and retirement of school principals (Beteille, Kalogrides, & Loeb, 2012).

Principal turnover is a concern for the future of public school education. According to

Beteille, Kalogrides, and Loeb (2012), principal turnover rates range from 15%-30% per year

and are most often found in schools with low achieving students, low income populations, and

high levels of minority students. Norton (2002) states that there is a dwindling number of

qualified principal applicants and a crisis in principal turnover rates in the United States of

America. Principal retention must be a national priority due to the rapid rate of effective

principal turnover (Norton, 2002). The largest groups from which principals are recruited are

teachers (Howley, Andrianaivo & Perry, 2005). Yet if principals continue to act in ways that

make the job undesirable, as a result of their stress and beliefs that they cannot successfully

handle future challenges, they will serve as negative models for teachers who may aspire to be

school principals (Howley, Andrianaivo & Perry, 2005). This will negatively affect the pipeline

of potential school principals (Howley, Andrianaivo & Perry, 2005). Thus, supporting principals

in combating high levels of stress, burnout, and beliefs that they cannot handle future challenges,

could result in the retention of effective principals. It could allow principals to serve as better

role models for teachers who are aspiring principals.

One way to support principals is to focus on understanding and influencing their beliefs

before they face future challenges. Whether or not principals believe they can successfully

handle a specific, future challenge plays an important role in their actual success (Tschannen-

Moran & Gareis, 2005). This concept is known as self-efficacy (Bandura, 1977). Self-efficacy

beliefs have a direct influence on effort, persistence, and resiliency in spite of changing job

demands, expectations, and challenges (Tschannen-Moran & Gareis, 2005). According to

Tschannen-Moran and Gareis (2005), positive beliefs allow principals to regulate expectations,

remain confident, pursue goals, and consider multiple strategies so they can successfully adapt to

future challenges. In fact, people with high levels of these self-efficacy beliefs set higher levels

of goals, stay more committed to achieving their goals, and show a greater quality of cognitive

processing, which lead them to actually achieve better results (Zulkosky, 2009).

Statement of the Problem

Very little research exists about principal self-efficacy beliefs (Tschannen-Moran &

Gareis, 2005), but the limited, existing current research shows that self-efficacy beliefs of school

principals directly relate to their actions (Tschannen-Moran & Woolfolk Hoy, 2007). The

research also suggests that the actions taken by principals are related to school climate, culture,

and student achievement (Tschannen-Moran & Woolfolk Hoy, 2007). Additionally, it shows

that positive self-efficacy beliefs of principals are linked to successful schools (Tschannen-

Moran & Woolfolk Hoy, 2007).

Principal self-efficacy beliefs influence self-efficacy beliefs of teachers and students

(Dimmock & Hattie, 1996; Leithwood & Janzi, 2008; Tschannen-Moran & Gareis 2004, 2005).

Teachers' and students' positive self-efficacy beliefs contribute to higher levels of actual

achievement (Tschannen-Moran & Woolfolk Hoy, 2007). Therefore, supporting school

principal self-efficacy beliefs can positively influence the future success schools (Leithwood &

Janzi, 2008). The following figure shows the relationship between principal self-efficacy beliefs

as they influence the beliefs of others and actual achievement.
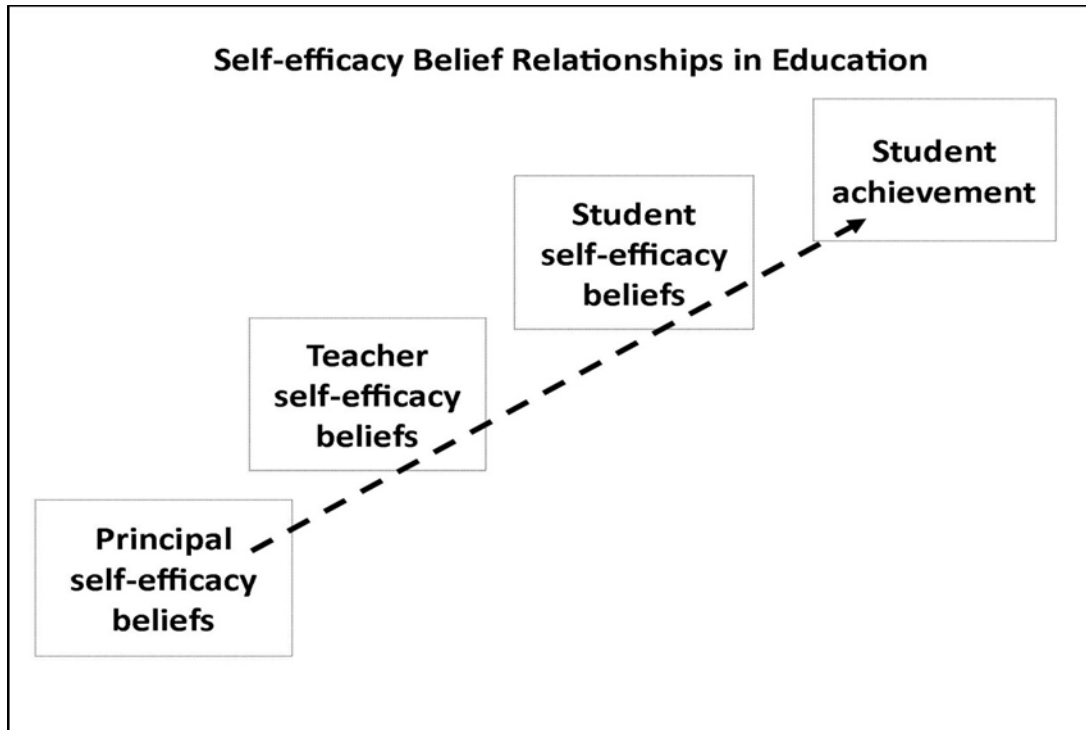
Figure 1. Self-efficacy belief relationships in education. This figure illustrates how self-efficacy beliefs of principals influence self-efficacy beliefs of teachers. Self-efficacy beliefs of teachers influence self-efficacy beliefs of students. Self-efficacy beliefs of students influence their actual achievement.

Purpose of the Study

The purpose of this study was to contribute to the research about principal self-efficacy beliefs. This type of research is important to the field of education because principal self-efficacy beliefs influence self-efficacy beliefs of teachers and students, which leads to their achievement. By learning more about principal self-efficacy beliefs and factors which effectively influence such beliefs, recommendations can be made for how to build principal self-efficacy beliefs. This multiple case study research examined the factors that influenced self-efficacy beliefs of elementary school principals prior to facing a personally meaningful

challenge. The overall research question was: What Factors Attend to the Domains of Self-Efficacy Belief Formation in School Principals? It considered the four sources of self-efficacy belief formation: mastery learning, vicarious learning, verbal persuasion, and emotional arousal. The purpose of the research was to understand how the mindsets of principals are influenced which leads to their self-efficacy beliefs. Since self-efficacy beliefs are strong predictors of actual, future success, this study contributes to the research about how to support principal self-efficacy beliefs.

Need for the Study

Positive self-efficacy beliefs prior to facing specific, future challenges are related to actual success (Bandura, 1977). By understanding the self-efficacy beliefs of school principals and the sources of information that led to these self-efficacy beliefs, successful support techniques can be identified. Learning about the sources of self-efficacy beliefs and the degree to which certain factors influenced such beliefs is critical to building future self-efficacy beliefs. Self-efficacy beliefs of principals strongly predict their actual success. Additionally, because self-efficacy beliefs of school principals are related to self-efficacy beliefs of teachers, students, and actual achievement, supporting the mindset of self-efficacy beliefs in principals is related to supporting the overall success of a school.

Research Questions

The overall research question was: What Factors Attend to the Domains of Self-Efficacy Belief Formation in School Principals? I learned about a personally meaningful challenge faced by each principal and their initial self-efficacy beliefs. I asked questions to understand what sources of information may have led to such beliefs. I asked questions to learn about supports which would have provided additional help to positively influence initial self-efficacy beliefs.

Definition of Terms

There are specific terms used throughout the research which are related to the study's scope.

Critical incident: a major event that was personally meaningful and important to each participant, and, for the purposes of this study, can be compared to other cases as it serves as a particular unit of study and analysis (Patton, 2002).

Emotional arousal: the development of feelings based on physical cues such as stress, fear, and anxiety (Bandura, 1993).

Instructional leadership challenges: challenges faced by a principal related to creating a meaningful vision, leading a positive and supportive culture, supporting change and teacher motivation, and increasing student achievement (Tschannen-Moran & Woolfolk Hoy, 2007).

Mastery learning: learning from successful experiences (Bandura, 1993).

Self-efficacy beliefs: beliefs people hold about their future capabilities to successful handle a challenge (Bandura, 1993).

Social cognitive theory: a behavior theory created by Albert Bandura to explain the cognitive components that work together to motivate future behavior (Bandura, 1993).

Verbal persuasion: words meant to influence the thinking of others (Bandura, 1993).

Vicarious learning: learning from observing others which serves as an indirect experience, such as through videos, simulations, observations, stories, imagined situations, and conversations (Bandura, 1993).

Limitations and Delimitations of the Study

Limitations. This multiple case study methodology research was specific to the participants interviewed. I learned from their memories and perceptions about their own, past experiences. As is true of case study methodology, the findings from this study may not be generalizable to others. I interviewed eight, retired, elementary school principals and sought to understand each case individually. I made connections between and among the cases. I recognize that self-efficacy may be only one factor that influences actual success. This study did not verify or prove actual principal success. Rather, it focused on learning from each principal about one unique, specific, and personally meaningful challenge. I learned about initial self-efficacy beliefs and sources of information that may have influenced these beliefs. I also learned about additional desired supports that may have been helpful to the principals.

Delimitations. This research was limited to learning about the initial self-efficacy beliefs of recently retired public elementary school principals who served in the same, large, suburban school system in the United States of America. By studying retired principals, I sought highly-reflective descriptions about memories.   I learned from authentic recollections from former practitioners who were not concerned about being completely transparent as they shared about their past experiences. I asked participants about personally meaningful challenges; this open-end question allowed for the potential to learn from a wide variety of challenges. The rationale, strengths, and limitations of studying retired principals as opposed to current principals will be more thoroughly discussed in Chapter 3.

Summary

School principals are critical to school success. Therefore, it is important to learn about how to effectively support them. One way to help school principals is to understand that they

face a variety of ever-changing challenges. With each challenge, principals have initial beliefs about the degree to which they feel they can be successful. This concept is known as self-efficacy. There are four sources of information that lead to self-efficacy beliefs: mastery learning, vicarious learning, verbal persuasion, and emotional arousal. These sources of information influence mindset. When self-efficacy beliefs are high, people are more likely to actually be successful in overcoming specific challenges. This study was designed to contribute to the gap in research that exists about principal self-efficacy beliefs. The overall research question was: What Factors Attend to the Domains of Self-Efficacy Belief Formation in School Principals? The purpose of the research was to understand how the mindsets of principals are influenced which leads to their self-efficacy beliefs. Self-efficacy beliefs are strong predictors of actual success, so it is important to learn about the factors that influence such beliefs. Additionally, because principal self-efficacy beliefs influence teacher self-efficacy beliefs, student self-efficacy beliefs, and student achievement, supporting principal self-efficacy beliefs is critical to school success.

Chapter 2

This chapter focuses on defining self-efficacy, explaining why it matters, and describing the four main sources of self-efficacy. It begins by providing an overview of the overall behavior theory within which self-efficacy is one component. The chapter then defines self-efficacy and explains why it matters. Next, the chapter discusses ways to build self-efficacy and therefore goes into detail about the four main sources of information used to form these beliefs. Information is presented about previous research on self-efficacy and how it has been measured. Lastly, this chapter discusses how school principal self-efficacy has been studied in the past. Two recent research studies are presented as examples of current findings about principal self-efficacy. These research studies draw differing conclusions and serve as a foundation for this study.

Social Cognitive Theory

Self-efficacy is just one element of social cognitive theory which holds that people are not only agents of actions, but are self-examiners of their own functioning (Bandura, 1997, 1993). Social cognitive theory is a way to describe human behavior (Wolters & Benzon, 2009). The theory posits that learning comes from both direct experiences and from observing and interacting with others in a social context (Wolters & Benzon, 2009; Schunk, 2012).

According to Schunk (2012), the precursors to Bandura's social cognitive theory were imitation (copying behavior), latent learning (learning without any type of reinforcement), and social learning (learning based on four variables: behavior potential, expectancy, reinforcement value, and psychological situation). The difference between Bandura's social cognitive theory and previous theories was the additional information that behavior is not simply motivated by a person's internal thoughts and direct experiences (Wolters & Benzon, 2009). In social cognitive

theory, human behavior also comes from context and environment (Wolters & Benzon, 2009).

More specifically, observing and thinking about other people's experiences and supports

influences a person's future behaviors (Wolters & Benzon, 2009; Schunk, 2012). In other words,

self-regulation of behavior and the social environment are key parts of learning (Wolters &

Benzon, 2009; Bandura, 1991; Schunk, 2012). Because of the behavior self-regulation and the

social environment, humans show forethought which then motivates their behavior (Bandura,

1991). Social cognitive theory, therefore, is comprised of a multitude of both internal and

external elements which make up thinking (Kennedy & Smith, 2013). This cognition leads to

actions (Kennedy & Smith, 2013).

There are three basic assumptions behind social cognitive theory (Wolters & Benzon,

2009). First, people learn from "triadic reciprocity" which means when people are thinking,

various internal and external data influence each other such as personal, behavioral, and

environmental factors (Wolters & Benzon, 2009; Bandura, 1993). Second, people have the

ability to control their own behaviors in order to achieve a goal or purpose (Wolters & Benzon,

2009; Bandura, 1993). Lastly, learning is separate from the behaviors that people show as a

result of their learning (Wolters & Benzon, 2009; Bandura, 1993). These assumptions lead to the

theory's four main features: intentionality, forethought, self-reactiveness, and self-reflectiveness

(Bandura, 1993).

Social cognitive theory also considers the resiliency of people as they make connections

between their past experiences of overcoming challenges, experiencing failure, and having

setbacks when facing future new challenges (Bandura, 1993). People use these connections to

develop expectancies and anticipate the new efforts they will need to show in order to

successfully overcome future challenges (Bandura, 1993). Social cognitive theory allows people

the opportunity to mobilize and sustain effort, develop plans and strategies, set goals, anticipate

outcomes, and self-regulate their feelings and behaviors (Bandura, 1993). From these behaviors,

people develop personal standards and self-evaluate their beliefs against these standards

(Bandura, 1977, 1993, 2010).

As previously stated, self-efficacy is just one piece of social cognitive theory (Wolters &

Benzon, 2009; Bandura, 1997). The other four components are: observation learning/modeling,

outcome expectations, goal setting, and self-regulation (Wolters & Benzon, 2009). The

components are illustrated in figure 2. Together, these parts regulate and motivate behavior in an

inter-related way (Bandura, 1997). For example, from observation or direct experiences, people

form self-efficacy beliefs which then influence future behavior choices and goal formulation

based on perceived expectancies (Bandura, 1997).
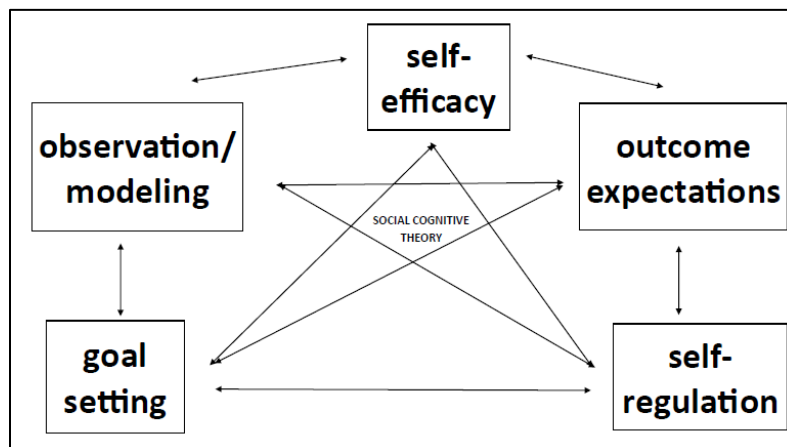
Figure 2. Social cognitive theory.   This figure illustrates the inter-related components of social

cognitive theory.

According to Schunk (2012), there are limitations to social cognitive theory. First, it

does not focus on factors related to human development over time, except for some of the ideas

explored with self-efficacy beliefs (Schunk, 2012). This limits understanding of how cognition changes with age and experience, as related to social cognitive theory (Schunk, 2012). For example, social comparison is often seen as a powerful influence with younger learners as they compare themselves to others which influences their thinking (Schunk, 2012). Second, it does not consider cognitive processes involved with perception, attention, and factors related to memory such as information encoding, storage, and retrieval (Schunk, 2012). Because of this, it does not discuss other mental processes such as reasoning, transferring of information, and problem resolving (Schunk, 2012). As will be presented later in this paper, self-efficacy, for example, is influenced by four sources of information but learners choose which of these to consider and which to ignore. Social cognitive theory does not discuss how such mental processes occur which is critical to any learning related theory (Schunk, 2012). In contrast, behavior theories offer that people can discern discriminative stimuli which they can then choose to ignore or to consider (Schunk, 2012). Additionally cognitive load, which is the amount of activity impacting working memory at a given time, is not discussed in social cognitive theory (Schunk, 2012). Cognitive load is another factor considered when determining how to support learning and motivation (Schunk, 2012). Lastly, there has not been much research about social cognitive theory conducted in Western cultures to understand how it will function internationally (Schunk, 2012).

Self-efficacy

Albert Bandura developed the concept of self-efficacy as one component of social cognitive theory (Bandura, 1977). His work has served as the foundation of self-efficacy research over time (Goddard, Hoy, & Woolfolk Hoy, 2004; Zulkosky, 2009). Self-efficacy has been studied and applied across a variety of domains including psychology and psychiatry

(Coates, Malouff, & Rooke, 2008; Liljeholm, 2012; Malouff, Schutte, & Rooke, 2008), health

care and treatment (Robb, 2012; Warner, Schuz, Knittle, Ziegelmann, & Wurm, 2011), career

choices (Anderson & Betz, 2001; Bandura & Locke, 2003; Hackett & Betz, 1981), business

(Almeida, 2011; Dutt, 2010; Kim & Miner, 2007), nursing (Robb, 2012; Roberts, 2010;

Zulkosky, 2009;), athletes (Gearity & Murray, 2011; Vargas-Tonsing & Bartholomew, 2006;

Zagorska & Guszkowska, 2014), and with athletic coaches (Gearity & Murray, 2011; Myers,

Vargas-Tonsing, & Feltz 2005; Vargas-Tonsing & Bartholomew, 2006).

Self-efficacy has been examined in various ways in the field of education (Bandura

1977; Tschannen-Moran & Gareis, 2004). A great deal of research has been conducted about the

relationship between self-efficacy beliefs and performance achievement of children and learners

(Askew & Field, 2007; Bandura, 1977; Bandura, 1993; Cox, McKendree, Tobin, Lee, & Mayes,

1999; Hampton & Mason, 2003; Jackson, 2002; Tschannen-Moran & Woolfolk Hoy, 2007).

Self-efficacy beliefs have also been widely studied with teachers as related to their effectiveness

(Bandura, 1993; Bautista, 2011; Hagen, Gutkin, Wilson, & Oats, 1998; Plotnic, 2004; Wang,

Ertmer, & Newby, 2004). However, only a few studies exist with school principals as the main

sample, which makes this a promising line of future research (Cranston, 2008; Dimmock &

Hattie, 1996; Fisher, 2014; Leithwood & Jantzi, 2008; Tschannen-Moran & Gareis, 2004, 2005).

Additionally, throughout the wide variety of research on self-efficacy beliefs, few studies focus

on the specific sources of information used to inform self-efficacy beliefs; instead, the majority

of research focuses on self-efficacy beliefs and outcome achievement (Anderson & Betz, 2001).

What is self-efficacy.   Self-efficacy beliefs are those people hold about their future

ability to show the behaviors necessary to successfully overcome a challenge in a specific

situation (Bandura, 1977, 1993). Self-efficacy derives from an internal locus of control

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(Zulkosky, 2009). People who attribute success to their own skill levels are more likely to develop positive self-efficacy beliefs, as compared to those who attribute success to luck or external circumstances (Bandura, 1977). Said differently, self-efficacy is a judgment people make about their own future potential and ability (Margolis & McCabe, 2006). Efficacy expectations vary in size, strength, and their ability to be generalized (Bandura, 1977). Self-efficacy beliefs do not focus on level of competence; instead they focus on self-perception about competence (Tschannen-Moran &Woolfolk Hoy, 2007).

Self-efficacy beliefs influence how people act, think, and motivate themselves (Bandura, 1993; Zulkosky, 2009). This is because self-efficacy beliefs involve cognition, motivation, and decision-making (Bandura, 1993; Zulkosky, 2009). Self-efficacy beliefs promote perceived levels of future control because people regulate their actions in anticipation of the future (Bandura, 1993). From their beliefs, they adjust their level of commitment, perseverance, problem solving, and strategy implementation when facing a specific challenge (Bandura, 1977; Bandura, 1993; Bandura & Locke, 2003). Self-efficacy beliefs also predict what tasks people choose to avoid and how flexible they are as they face new challenges (Bandura & Locke, 2003; Gunzenhauser, Heikamp, Gerbino, von Suchodoletz, DiGiunta, Caprara, & Trommsdorff, 2012).

Self-efficacy is different from other, similar concepts. It differs from hope for success, optimism, self-esteem, self-concept, self-value, and self-worth, which are generalizable outlooks and personality qualities (Goddard et al., 2004; Robb, 2012; Zulkosky, 2009). Rather than being a trait which is stable, self-efficacy beliefs are specific to a particular situation (Fisher, 2011). In contrast to stable traits, self-efficacy is about belief in oneself to successfully show specific behaviors on a specific future task (Goddard et al., 2004; Robb, 2012; Zulkosky, 2009). Additionally, self-efficacy beliefs adjust more easily than the aforementioned outlooks and

qualities (Zulkosky, 2009). Lastly, self-efficacy beliefs are a superior predictor of how a person

will behave on a specific challenge in the future (Bandura, 1993).

Confidence and self-efficacy beliefs are also different from one another (Bandura, 1997).

Confidence is a broad catchphrase about the strength of a person's beliefs (Bandura, 1997).

Confidence is a non-descript term that is not grounded in a particular theory (Bandura, 1997). In

contrast, as previously described, self-efficacy is component of social cognitive theory that

relates to a person's beliefs in their own ability to show behaviors that will result in a desired

result (Bandura, 1997). Self-efficacy has clear determinants, mediating processes, and multiple

effects (Bandura, 1997). With self-efficacy, people consider their own capabilities to show

specific behaviors and a degree of strength in their beliefs (Bandura, 1997).

Additionally, motivation also differs from self-efficacy (Bandura, 1993). Motivation

may be influenced by self-efficacy beliefs (Bandura, 1993). Self-efficacy beliefs lead to mental

assessments of expectancy beliefs, attributes of cause-and-effect beliefs, and theories about

potential goal setting and achievement (Bandura, 1993). As a result of self-efficacy beliefs,

motivation is developed (Bandura, 1993). Motivation may also be influenced by other factors

such as goals, values, and self attributes (Schunk, 2012).

Why self-efficacy matters.   Self-efficacy beliefs focus on future-oriented judgments

about one's capabilities which then lead to their actual behaviors (Goddard et al., 2004). Because

ability is not fixed, self-efficacy beliefs have a major influence on future success because they

lead to action or inaction (Bandura, 1993; Dweck, 2008). In other words, behavior is influenced

as a result of self-efficacy beliefs (Margolis & McCabe, 2006). Success requires not only

specific skill sets, but also high levels of belief about the ability to be successful on a specific

task (Bandura, 1993). Self-efficacy beliefs are related to how people attribute success and failure along with the intensity and quality of their emotional reactions and feelings (Zagorska & Guszkowska, 2014). Lastly, as previously explained, self-efficacy beliefs relate to motivation, success, and self-regulation (Zagorska & Guszkowska, 2014).

It is important to note that self-efficacy judgments and beliefs are not necessarily accurate assessments of future capabilities (Goddard et al., 2004). Self-efficacy will not lead to success if people do not possess the skills that are actually needed to face challenges (Schunk, 2012). Humans may overestimate or underestimate their own abilities (Goddard et al., 2004). This impacts their choices and perseverance (Goddard et al., 2004). Overestimating one's capabilities most positively impacts one's actual future performance (Goddard et al., 2004; Zulkosky, 2009). Yet, self-efficacy beliefs have an independent effect on attainment level (Bandura, 1977; Bandura & Locke, 2003). Self-efficacy beliefs are a superior predictor of the behaviors that people will show in unfamiliar situations (Bandura, 1977; Bandura, 1993; Bandura & Locke, 2003). Bandura (1977) found that the higher the levels of self-efficacy beliefs, the higher the level of successful future performance.

Self-efficacy beliefs are also a strong predictor of the coping skills a person will show during a difficult task, even when the person does not anticipate anxiety and stress prior to a given situation (Bandura, 1977; Bandura & Locke, 2003). This is important to note because when anticipatory anxiety is removed, self-efficacy beliefs surpass past performance as a predictor of future performance (Bandura & Locke, 2003). In conclusion, self-efficacy beliefs serve in cognitive and behavioral regulatory roles (Bandura & Locke, 2003).

Effect of self-efficacy. As previously stated, positive self-efficacy beliefs lead people to feel they can produce behaviors that will lead to future success (Dimmock & Hattie, 1996). People are affected by how strongly they feel they can overcome a new challenge (Bandura, 1977). Self-efficacy beliefs can bolster or hamper motivation (Bandura, 1993) and lead to aspirational and strategic thinking when people face difficult problems that need to be solved (Bandura & Locke, 2003). Additionally, goal setting is strongly influenced by levels of self-efficacy beliefs; higher levels of efficacy beliefs lead to the establishment of more challenging goals and stronger levels of commitment and perseverance (Bandura, 1993; Zulkosky, 2009). Lastly, self-efficacy has been shown to have a major influence on creativity (Bandura & Locke, 2003).

In contrast, feelings of fear and anxiety when facing a specific challenge may lead to low self-efficacy beliefs (Bandura, 1977). Low levels of self-efficacy beliefs lead people to avoid specific tasks or show less persistence, flexibility, and adaptability in their behaviors as they face new challenges (Bandura, 1993). People are less motivated when they have low self-efficacy beliefs (Margolis & McCabe, 2006). Low self-efficacy beliefs can be devastating to psychological well-being and can produce a self-fulfilling prophecy about failure and learned helplessness (Margolis & McCabe, 2006).

When pursuing difficult challenges, people have to override a lot of dissuading negative feedback if they are to achieve their goals; if they have self-doubt they can become quitters rather than survivors in the face of challenges (Bandura & Locke, 2003). People with low self-efficacy beliefs may "throw in the towel" prior to exerting the necessary effort to overcome challenges as a maladaptive coping method (Hagen et al., 1998, p. 169). They may be less willing to try new tasks, therefore depriving themselves of opportunities to be successful and

experience mastery learning from new challenges (Hagen et al., 1998). Hagen et al. (1998)

identify this as a possible "chicken and egg" problem because people with low self-efficacy

beliefs may not engage in the behaviors needed to attempt and then overcome perceived

challenges which will limit their opportunity to positively benefit from the sources of efficacy

beliefs (p. 171).

How to build self-efficacy in others. The key to building self-efficacy in others is to

help them learn new behaviors and/or how to modify maladaptive behaviors (Zulkosky, 2009).

According to Bandura (1993), in order to build self-efficacy beliefs, environments must promote

ability as acquirable skills. When people see their own progress and monitor personal

accomplishments, this promotes their learning from mastery experiences, which is the strongest

source of efficacy beliefs (Bandura, 1993). Environments that promote social comparison and

competition do not lead to the development of positive self-efficacy beliefs (Bandura, 1993).

Leaders have the opportunity to create environments designed to help people build their self-

efficacy beliefs (Zulkosky, 2009).

To create positive self-efficacy beliefs in others, processes that focus on the sources of

self-efficacy beliefs should be put into place (Bandura, 1977). First, induction processes that

focus on sources of building self-efficacy beliefs should be used (Bandura, 1977). Next,

removing external supports should take place in order to build internal, personal self-efficacy

beliefs (Bandura, 1977). Lastly, self-directed mastery learning experiences should take place to

bolster self-efficacy and allow it to be generalized for personal efficacy (Bandura, 1977).

Sources of Self-Efficacy Beliefs

As previously stated, there are four main sources of self-efficacy beliefs: mastery learning, vicarious experiences, verbal persuasion, and emotional arousal (Bandura, 1977; Bandura, 1993). In other words, a person can gain self-efficacy beliefs by doing a task successfully, observing someone else doing it, receiving positive feedback, and by relying on their emotional arousal prior to engaging in a new challenge ahead (Zulkosky, 2009). Each of the four sources of efficacy can lead to cognition and expectations formations, which then lead to the development of beliefs (Bandura, 1977, 1997). When considering the four sources, mastery learning, verbal persuasion, and emotional arousal are direct sources while vicarious experiences are indirect sources (Zulkosky, 2009). As depicted in figure 3, these four sources of information inform initial self-efficacy beliefs and motivate future action (Bandura, 1977, 1997).
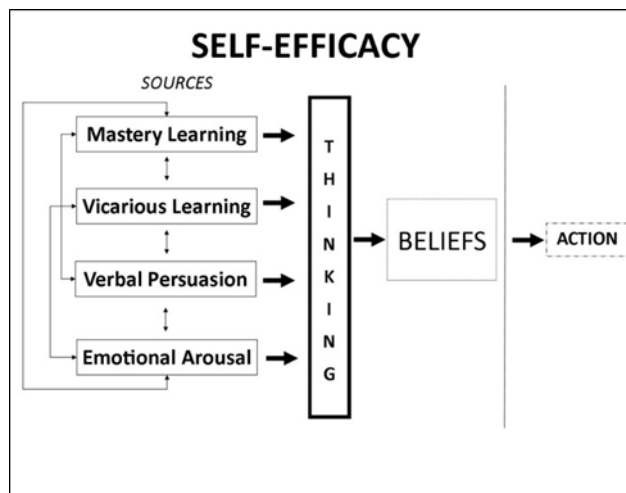
Figure 3. Self-efficacy. This figure illustrates how sources of efficacy lead to cognition, belief formation, and then results in action.

In general, mastery learning is considered to be the most significant source of efficacy beliefs (Bandura, 1977; Bandura, 1993; Tschannen-Moran & Woolfolk Hoy, 2007). Yet studies

have found various degrees to which all four sources or combinations of them work together to influence efficacy beliefs (Kennedy & Smith, 2013; Tschannen-Moran & Woolfolk Hoy, 2007). Tschannen-Moran & Woolfolk Hoy (2007) state that early-on in learning, sources other than mastery learning are the most powerful because people do not have a lot of past experiences. As people gain more mastery experiences, though, this source of efficacy becomes the most influential in motivating behaviors as compared to the other sources of efficacy beliefs (Tschannen-Moran & Woolfolk Hoy, 2007). Research on efficacy often times does not attempt to focus on a specific source of self-efficacy beliefs; sources of efficacy are integrated and interrelated (Kennedy & Smith, 2013). Learners do not weigh the sources of efficacy separately and equally; learners make decisions as to which sources to ignore, which sources to choose, and the degree to which each source influences future actions (Bandura 1997; Kennedy & Smith, 2013). Clark, Evans and Wegener (2011) note that the level of cognitive processing may be a critical factor in understanding how sources of self-efficacy influence beliefs. Their findings suggest that higher levels of cognitive processing serve as stronger influences on behavior as related to these four sources of efficacy beliefs (Clark, Evans, & Wegener, 2011). This is an important point in parallel research about the role of self-reflection in developing capabilities which emphasizes the use of self-reflection to deepen understanding and improve future behavior choices (Drago-Severson, 2012).

Source One: Mastery Learning Mastery learning is considered the most effective and important source of both individual and collective self-efficacy beliefs (Bandura, 1997; Goddard et al., 2004). Cognition that results from successfully accomplishing a task is called mastery learning (Bandura, 1977). Successfully accomplishing a task because of specific behaviors leads one to increase these behaviors when attempting future tasks (Hackett et al., 1981). This learned

success then leads to positive self-efficacy beliefs because people have directly experienced

performance accomplishments as a result of their behaviors (Zulkoksy, 2009).

Mastery learning builds high levels of self-efficacy beliefs as people face new challenges

ahead, based on their past successful experiences (Zulkoksy, 2009). In educational situations,

such as nurse training, mastery experiences can take the form of simulation-based practice

learning along with a clinical practicum that teaches specific skills in order to increase self-

efficacy beliefs (Roh, Lim, & Issenberg, 2014). When faced with new challenges, people learn

new information as they practice and persist in order to successfully overcome difficulty

(Bandura, 1997). Thus, people can learn and change their efficacy beliefs when success is

experienced, even if they have faced past failure in similar tasks (Bandura, 1997).

Patterns of past failure may lead to lower levels of self-efficacy beliefs and may

negatively influence a person's choices when facing new, future challenges (Zulkosky, 2009).

Hampton & Mason (2003) found that weakened efficacy beliefs may result from repeated failed

experiences which leads to people limiting their own choices, levels of success, and persistence

in future challenging or stressful situations.

How mastery learning works.   Mastery learning, also known as enactive mastery

experience, is effective because of its authenticity (Bandura, 1997). Efficacy beliefs are changed

as a result of the mental processing that takes place following people's successful experiences

with tasks (Bandura, 1997). People consider a variety of factors when they have such successful

experiences, which lead to adjustments of efficacy beliefs (Bandura, 1997). According to

Bandura (1997), these factors include people's preconceptions about their own ability, how

difficult they believe the task will be, how much effort they put forth in order to accomplish the

task, how much outside support they receive to accomplish the task, the context of the successful experience, their pattern of past success and failure with past experiences, and the way their minds organize memories with their mastery experience. This is important to understand as one realizes that simply having success on a challenging task does not necessarily lead to changes in efficacy beliefs; how people connect successful experiences to a variety of factors is what leads to changes in efficacy beliefs (Bandura, 1997).

In order to build mastery experiences as a source of self-efficacy beliefs, strategies such as modeling, performance desensitization, exposure to new experiences, and self-instructed performance can be used (Bandura, 1977). Bandura (1997) explains that providing information about strategies, along with an understanding of the rules associated with new tasks are ways to support mastery experiences. Schunk and Rice (1987) found that just because children were given instruction about strategies did not mean they would apply them in the future on their own. People need to be taught that the strategies they are given will be useful as a part of their learning from mastery experiences (Schunk & Rice, 1987). People also need to break down challenging tasks into small pieces and then organize information in a hierarchical manner in order to learn from mastery experiences (Bandura, 1997). Schunk and Rice (1987) found that when learners applied strategies that were taught to them and then experienced success, their beliefs were then validated. This led them to believe in their own capabilities (Schunk & Rice, 1987). Also important, people need to be convinced that they have control over situations in order to be successful so they can learn from their own experiences (Bandura, 1997).

The findings of Brannick, Miles and Kisamore (2005) show a potential downside risk when considering mastery learning as a source of efficacy beliefs. Unlike Bandura's findings, Brannick et al. (2005) found that if learners think they have mastered a specific skill set, they

may exert less effort in the future, which could then influence their future experiences to master challenges. Experiences lead people to calibrate their performance (Brannick et al., 2005). Experiences are also used to align future beliefs with expectations of future ability to perform successfully (Brannick et al., 2005).

How mastery learning is used. Self-efficacy beliefs are positively changed when people reflect on past successes and make-meaning from such reflections (Bandura, 1997). They think about these experiences as they consider the future capabilities (Bandura, 1997). Researchers have shown that by allowing people to practice skills, they will develop mastery experiences which will increase their self-efficacy beliefs in the future (Roh et al., 2014). For example, Roh, Lim, and Issenberg (2014) found that when training people in CPR skills using simulations and coursework, people increased their performance levels and self-efficacy about their ability to be successful at implementing CPR, as compared to their baseline levels of knowledge, beliefs, and skills. Learners reported that the opportunity to practice CPR skills through the simulation served as a vital component to their belief formation about their future ability (Roh et al., 2014). Learners gained proficiency and mastery experiences through this simulation practice (Roh et al., 2014).

Another way to build learning from mastery experiences is to have people chart their efficacy beliefs before and after specific tasks, as well as their performance levels (Chen, 2002). Reflecting on the skill preparation that preceded engagement in new tasks can support cognition about abilities (Chen, 2002). When studying students' mathematics achievement, Chen (2002) found that prior math success was a significant source of self-efficacy beliefs. Past experiences led students to accurately calibrate their perceptions about future performance (Chen, 2002).

Chen (2002) also found that students over-estimated their performance abilities but this was unrelated to their self-efficacy belief levels in spite of their actual skill levels (Chen, 2002).

As previously mentioned, Chen (2002) suggests that in order to support success, people should be asked to judge their efficacy levels and graph these results, prior to engaging in a new task. Then, they should be asked to chart their achievement as compared to their efficacy belief levels (Chen, 2002). When learners reflect on their performance, they should also think about skill-building techniques used to prepare for challenges (Chen, 2002). This type of record keeping and reflection will help increase cognition and future formulation of efficacy beliefs (Chen, 2002).

Hirschfeld and Bernerth (2008) found initial performance had a significant relationship with the physical and mental efficacy of new athletic teams. This led them to conclude that in order to build efficacy beliefs for the future, teams must experience success in order to show positive efficacy beliefs and effective skills in the future (Hirshfeld & Bernerth, 2008). They also noted that when teams did not experience initial success, leaders were needed to ensure more opportunities (Hirshfeld & Bernerth, 2008). Over time, more instruction and feedback are needed so that teams turn failure into success, which has been shown to improve self-efficacy beliefs and performance (Hirshfeld & Bernerth, 2008). Failing once can lead to feedback about skills and the introduction of interventions to improve performance in the future (Hirshfeld & Bernerth, 2008). More practice will lead to mastery learning which will serve as an efficacy source for the future (Hirshfeld & Bernerth, 2008).

Source Two: Vicarious Learning

Vicarious learning means that one can watch the experiences of others and make connections between behaviors and consequences (Dutt, 2010; Masia & Chase, 1997; Roberts, 2010). This can take place through: observing a model, symbolic modeling, watching videos of oneself, or through cognitive self-modeling which means imagining oneself performing a specific task (Bautista & Uludag, 2011). Observation serves as a positive or negative reinforcement for a person's own self-efficacy beliefs as people assess their potential for success in the future as compared to someone else's experience (Falcone, 2012). By observing others and the consequences of behaviors, vicarious learning allows observers to create knowledge about behaviors and to determine how they should behave in the future (Bandura, 1963; Manz, 1981; Voit, 2005). The observer can avoid mistakes experienced by the model and determine which behaviors are acceptable and successful (Almeida, 2011).

How vicarious learning works. Vicarious learning sets up expectations in the minds of observers as to what will be the result of their showing similar behaviors in the future (Manz, 1981). Vicarious learning is an indirect, associative learning process that evokes an emotional response in the observer (Askew & Field, 2007; Roberts, 2010). It creates behavior conditioning in the mind of the observer which leads to the development of self-efficacy beliefs (Askew & Field, 2007; Roberts, 2010). Vicarious learning experiences are thought to be effective because they focus on behaviors, rather than on attitudes and beliefs, in order to create new learning by the observer (Manz, 1981). Manz (1981) also offers that vicarious learning experiences coupled with reward (tangible, success) are more likely to result in imitation of behaviors and persistency in demonstrating new behaviors by observers, as compared to learning from observation of failure and a lack of reward for behaviors. When a person expects success, more effort and

perseverance will be put forth in order to experience the same success that was learned

vicariously (Manz, 1981). This ability to influence the development and growth of self-efficacy

beliefs makes vicarious learning an effective approach to behavioral change (Manz, 1981).

With interpersonal conflict resolution, vicarious learning may be better than direct

learning experiences in changing self-efficacy beliefs (Braver & Rohrer, 1978). This is because

observers of interpersonal conflict are detached from the conflict (Braver & Rohrer, 1978). They

can see the behaviors and actions of the models more clearly than those who are actually

involved in the conflict (Braver & Rohrer, 1978). The models engaged in the direct experience

might not be able to understand the impact of their own decisions because of their emotional

engagement in the conflict (Braver & Rohrer, 1978). Braver and Rohrer (1978) suggest that

observers are dispassionate so they are better able to see mistakes shown by the models as the

problem continues over time during the observation (Braver & Rohrer, 1978).

In order to mediate thinking about vicarious observation, some researchers believe that

discussion and questioning should be used to support reflection about observations in order to

support learning from these experiences and promote the internalization of thoughts from the

indirect experiences (Cox, 1999; Roberts, 2010). Such conversations can be led by peers,

experts, or facilitators (Cox, 1999). Drago-Steverson (2012) also promotes using such dialogue

and self-reflection as a method of increasing internalized learning based on vicarious learning.

How vicarious learning is used. There are many strategies that can be used to create

vicarious learning experiences. For example, observers can watch videos or films (Bautista,

2011; Manz, 1981), experience direct observation of peers, models, or experts (Bandura, 1963;

Malouff et al., 2008; Manz, 1981), use computer-based learning methods (Cox, 1999), consider

case studies (Cranston, 2008), observe daily modeling by a manager (Manz, 1981), learn through

formal training sessions (Manz, 1981), read or hear stories (Malouff et al., 2008; Manz, 1981;

Roberts, 2010), or can engage in lessons-learned reflection experiences (Voit, 2005). Vicarious

experiences can also take place as people use their imaginations to create experiences and make

meaning (Manz, 1981).

Vicarious learning experiences should have follow up including individual conversations,

future trainings, application to real-world situations, and group reflection/processing to discuss

concerns about attempts to use the newly acquired behaviors (Manz, 1981). These

recommendations are similar to Roberts (2010) and Drago-Steverson (2012) who found

conversations and self-reflection to be key elements that support the necessary mediating of

thinking that promotes learning from vicarious experiences.

Research on vicarious learning also points to qualities that models should have in order to

increase the effectiveness of the learning by the observer (Manz, 1981). Models should be

similar to the observers, have a significant status in the eyes of the observer, and be seen as

credible/likeable by the observer (Almeida, 2011; Dutt, 2010; Malouff et al., 2008).

Manz (1981) noted that vicarious observation of a model who is not successful, receives

negative consequences, or appears to be fearful will lead to fear in the observer which could lead

to future patterns of avoidance by the observer. In fact, most research on vicarious learning

experiences focuses on learning from successful models (Kim, 2007). Denrell (2003) also points

out the under-sampling of failure used in vicarious learning experiences. He advocates for the

need to use near-failure and failure models to strengthen vicarious learning in contrast to much

of the current research on this topic (Denrell, 2003). Studying only successful stories can be

misleading, cause observers to overestimate the potential of specific behaviors, erroneously

conclude that only creative and radical methods lead to success, and may cause an

oversimplification of their beliefs that specific behaviors will only have positive outcomes

(Denrell, 2003). Kim (2007) also notes that by looking at models who experience failure,

observers are better able to extract behavior, actions, and interpretations as they learn from this

experience.

Researchers caution that the length of the impact/enduring effects of vicarious learning

depends on the specific observer and the behaviors being observed (Askew & Field, 2007;

Coates et al., 2008; Malouff et al., 2008). Liljeholm et al. (2012) and Plotnick (2004) offer that

vicarious learning, coupled with goal setting, leads to increased success of learning from the

experiences. This combination creates habits in observers that are the ultimate indicator of

behavioral change in observers who learn through vicarious experiences (Liljeholm, 2012).

When studying efficacy beliefs of pre-service primary grades science teachers, Bautista

(2011) found that coupling vicarious learning experiences through coursework and modeling,

with mastery experiences through practice teaching, led to increased levels of self-efficacy

beliefs. This was in comparison to experiences where pre-service teachers only engaged in

learning specific instructional strategies or science content information (Bautista, 2011).

Cognitive self-modeling and symbolic modeling were the two strongest sources of vicarious

experiences in this study (Bautista, 2011). Vicarious learning techniques took place through the

writing of lesson plans, discussion of self-created lesson plans, and by observing their professor

model lesson plans (Bautista, 2011). Some learners also watched their practicum teacher teach

science or other content-area lessons as vicarious learning experiences (Bautista, 2011). Lastly

the pre-service teachers learned from watching videos where experienced teachers engaged in

continuous professional development (Bautista, 2011). This allowed the pre-service teachers to see experienced educators talk about their craft with others in the same profession (Bautista, 2011).

Source Three: Verbal Persuasion

According to Bandura (1977), verbal persuasion is when people are led to believe they can be successful at something through the power of suggestion, even if they have experienced difficulty with it in the past. It is also referred to as social persuasion (Goddard et al., 2004). Verbal persuasion takes the form of verbal interactions from others about the quality of performance and prospects for success in the future (Tschannen-Moran & Woolfolk Hoy, 2007; Warner et al., 2011). Verbal persuasion may be given through words that appeal to the emotions of a person, leading to emotional arousal which is another source of self-efficacy beliefs (DeSteno et al., 2004). Verbal persuasion may also come in the form of giving directions, suggestions, and advice (Zulkosky, 2009). Pep talks, praise, and encouragement are also considered forms of verbal persuasion (Goddard et al., 2004; Meyers et al., 2005; Zulkosky, 2009). Performance feedback that is specific from a supervisor or colleague, or that comes from a conversation among peers, may also be another form of verbal persuasion (Goddard et al., 2004).

How verbal persuasion works. Verbal persuasion is readily available, convenient, and frequently used as a way to build efficacy beliefs (Gearity & Murray, 2011; Vargas-Tonsing & Bartholomew, 2006). Verbal persuasion influences self-efficacy levels and effort, performance, level of enjoyment of a task, and tolerance for pain (Lamarche et. al., 2014). When performance is socially evaluated through verbal persuasion, this influences both self-efficacy beliefs and how an individual changes future behavior (Bandura, 1993). Encouragement and persuasion can

increase efficacy beliefs, while discouragement or lack of encouragement can decrease efficacy beliefs (Hackett & Betz, 1981). Verbal persuasion, in the form of telling people they are normal or better than their peers, is a more effective approach to building positive efficacy beliefs as compared to telling people they are worse than others or abnormal (Lamarche et al., 2011).

When the message-giver is viewed as trustworthy and credible, verbal persuasion has more of a chance to positively impact self-efficacy beliefs (Goddard et al., 2004; Lamarche et al., 2011; Margolis & McCabe, 2006). Bandura (1977) suggests that the influence of verbal persuasion can greatly vary based on the perceived credibility, level of prestige, expertise level, assuredness, and level of trustworthiness of the person giving the verbal persuasion. Schyns (2004) notes, for example, that employees who are encouraged about their abilities by peers and supervisors will be more willing to try new tasks and behaviors.

Various researchers have studied the use of verbal persuasion by people of authority on subordinates (Gearity & Murray, 2011; Schyns, 2004). Supervisors impact employee's efficacy beliefs through their level of verbal motivation and encouragement when employees are handling particularly challenging tasks (Schyns, 2004). Gearity and Murray (2011) found that ineffective athletic coaches, another type of authority figure, attempted to use negative verbal persuasion, in the form of criticism, to athletes as a source of motivation. They found that this usage of verbal persuasion damages efficacy beliefs because it leads to self-doubt (Gearity & Murray, 2011). Negative verbal persuasion also resulted in challenge avoidance, reduced levels of effort, and difficulty managing emotional arousal (Gearity & Murray, 2011; Meyers et al., 2005). Jackson (2002) found that students who received an encouraging note from their professor, another type of authority figure, experienced increased levels of self-efficacy beliefs. Students who received a neutral note, however, showed no change in self-efficacy levels (Jackson, 2002).

Tschannen-Moran and Gareis (2005) found that verbal persuasion from supervisors was a significant source of principal's self-efficacy beliefs. Leithwood and Janzi (2008) suggest that central office personnel have an influence on principals. Central office personal can give verbal persuasion through encouragement to school principals who are facing challenges (Leithwood & Janzi, 2008). When such district leaders are perceived as credible, trustworthy, and experts, the self-efficacy beliefs of principals can be positively influenced (Leithwood & Janzi, 2008).

Clark et al. (2011) studied the perceived credibility or level of celebrity status of the person delivering persuasive messaging, along with level of cognitive processing, to understand their relationship to efficacy belief development in consumers. The research looked at the influence of verbal persuasion through advertisements of products by celebrities using this technique to influence consumer behaviors (Clark et al., 2011). When interest, and therefore motivation to think, is low, verbal persuasion is more likely to influence beliefs. If the consumer does not have much interest in the product being advertised, the learner will spend less time thinking about it, and verbal persuasion by a celebrity endorsing the product will be more influential on the consumer's beliefs (Clark et al., 2011). If the product is considered to be very relevant, consumers will be more motivated to think about the product, and the celebrity persuasion will not have a significant impact on the beliefs of the consumer. In a different study, the researchers found that if consumers found the persuasive messages to be credible, they had positive expectations about the messaging regardless of their belief in the person delivering the persuasive message (Clark et al., 2011). Lastly, Clark et al. (2011) found that that when consumers had spent time thinking about a persuasive message, and then they learned that the source of the persuasive message was credible, they gained more confidence that their own self-efficacy beliefs were valid.

Limitations of verbal persuasion. Verbal persuasion, when used alone, may have limitations in terms of creating an enduring source of self-efficacy (Bandura, 1977). Goddard et al. (2004) found that social persuasion has its limitations in creating lasting effects, yet it may be successful as it works to counter setbacks that may lead to self-doubt which could interrupt necessary persistence. Margolis & McCabe (2006) found that if a person has experienced failure in the past, future verbal messages may not be very persuasive as a source of efficacy for the future. Warner et al. (2011) concluded that self-efficacy was not predicated by persuasive arguments, even though verbal persuasion is so widely used. Verbal persuasion had the weakest correlations to self-efficacy belief levels (Warner et al., 2011). Some studies have actually shown no relationship between verbal persuasion and self-efficacy beliefs; other studies have shown a negative relationship between the two (Warner et al., 2011).

Tschannen-Moran and Woolfolk-Hoy (2007) found that among novice teachers, verbal persuasion was not significantly related to teacher self-efficacy nor was it a predictor of self-efficacy beliefs. Additionally, verbal persuasion did not influence experienced teachers who were thought to be more heavily influenced by past mastery experiences (Tschannen-Moran & Woolfolk-Hoy, 2007). Mellor et al. (2006) studied the impact of verbal persuasion and gender. They found that the relationship between verbal persuasion given by women to women resulted in higher levels of self-efficacy beliefs as compared to women with men giving the feedback or men receiving the persuasion by women (Mellor et al., 2006). Additionally, self-efficacy beliefs were stronger for men receiving verbal persuasion from men as compared to men receiving verbal persuasion from women or women receiving verbal persuasion from men (Mellor et al., 2006). Therefore, according to Mellor et al. (2006), gender similarity is seen as a factor in determining the effect of verbal persuasion on self-efficacy beliefs.

Verbal persuasion may backfire (Warner et al., 2011). Although it is frequently used, when relying on it as a source of efficacy beliefs for motivation of health-related activity in older people, verbal persuasion may actually lead people to struggle and feel like the message giver is trying to exert control over them (Warner et al., 2011). In addition, if these older people have a social network of peers who do not engage in health-related activity and lack models who show health-related behaviors, this social reinforcement may be more powerful than specific attempts to use verbal persuasion to bolster their positive efficacy beliefs (Warner et al., 2011). Also found as a cautionary note, positive verbal persuasion may lead people to choose to engage in more risky behaviors in the future as they over-estimate their capabilities (Lamarche et al., 2014). Verbal persuasion needs to be used with care because it can create a mismatch between perceived ability and ability that can be detrimental if the choice of behavior is too difficult for the person (Lamarche et al., 2014).

Lastly, the relationship between verbal persuasion and other sources of efficacy beliefs is also considered by researchers (Bandura, 1997; DeSteno et al., 2004). As previously mentioned, some researchers believe that verbal persuasion and emotional arousal, two sources of efficacy beliefs, are linked (Bandura, 1997; DeSteno et al., 2004; Hagen et al., 1998). Hagen et al. (1998) found verbal persuasion used along with videotaped vicarious experiences was an effective way to build positive efficacy beliefs of preservice teachers as related to classroom management. Lamarche et al. (2011) concluded that verbal feedback is more influential on tasks where mastery experience is more difficult to assess.

Source Four: Emotional Arousal

Learners rely on emotional cues as they consider their own potential to be successful in the future (Kennedy & Smith, 2013). People use emotions as sources of information about their

environment and as they form their expectations about the likelihood of specific events and actions (DeSteno et al., 2004). This emotional arousal is a source of self-efficacy beliefs (Bandura, 1977, 1993). Emotional arousal can be defined as how a person responds to their own levels of anxiety and stress (Bautista, 2011). It is also known as somatic and affective states, sometimes referred to as mood (Warner, 2011). People experience different emotions and these emotions vary in how they influence future thinking and motivation (DeSteno et al., 2004). Positive and negative affective states bias expectancies based on the mood created (DeSteno et al., 2004).

How emotional arousal works. Turner, Goodin, and Lokey (2012) explain that a person responds emotionally when they have appraised a situation as being relevant and meaningful to them; they will then attach an emotion to the appraisal which will trigger how they think about, cope with, and deal with the situation. These emotion appraisals, in turn, will influence self-efficacy and will motivate future actions (Turner, Goodin, & Lokey, 2012). Emotional and cognitive processes are intertwined processes that happen unconsciously and instantly (Turner et al., 2012).

Kennedy and Smith (2013) found that stimuli for emotional states can be both internal and external as individuals attach meaning to their feelings. Cognitive processing of information allows individuals to interpret their emotional responses as internal stimuli (Kennedy & Smith, 2013). External stimuli of emotional responses can come from feedback from others, seeing measurements of quantifiable success, or observing others (Kennedy & Smith, 2013). Efficacy expectations are then formed when people judge their own level of vulnerability and anxiety to stress and new situations ahead (Hackett, 1981).

Emotional states can be correlated with feelings of control, which leads to efficacy beliefs and behavior choices (Turner et al., 2012). According to Turner et al. (2012), primary control over a situation is a feeling of direct control and leads to self-efficacy beliefs. Secondary controls may also lead to efficacy beliefs experienced by a person (Turner et al., 2012). One type of secondary control may be the belief in a benevolent, mediating control (Turner et al., 2012). Another type of secondary control may be belief in an expert (Turner et al., 2012). People who rely on such secondary control resources feel these other controls are handling a situation on their behalf (Turner et al., 2012). Those who believe in secondary controls may be better equipped to handle negative emotions (Turner et al., 2012). This leads to stronger efficacy beliefs because such feelings are oftentimes connected with overall feelings of peace and satisfaction (Turner et al., 2012).

Both positive and negative emotional states can influence individual and collective efficacy beliefs (Goddard et al., 2004). People feel competent and experience positive efficacy beliefs if they do not experience negative emotional arousal when thinking about a challenge ahead of them (Warner, 2011). These positive emotions lead to a freeing effect, along with feelings of excitement and enthusiasm (Turner et al., 2012). Positive emotions also lead to feelings of pleasure or joy which makes a person feel capable and competent, resulting in positive self-efficacy beliefs (Tschannen-Moran & Woolfolk Hoy, 2007). In relation to athletes, Zagorska and Guszkowska (2014) found that when athletes were in a positive mood and a controlled state of arousal, their self-efficacy beliefs increased.

People experience negative emotions if the situation threatens goal achievement which may lead them to feel sad, anger, or fearful (Turner et al., 2012). Feelings of stress and tension in anticipation of a new endeavor may lead a person to feel vulnerable which will influence their

efficacy beliefs (Kennedy & Smith, 2013). Negative emotions can lead to feeling depressed, defeated, confused, and feeling unsettled, which all are sources of negative self-efficacy beliefs (Turner et al., 2012). These negative feelings may lead a person to feel a lack of sense of control, which impacts self-efficacy beliefs, as previously stated (DeSteno et al., 2004; Tschannen-Moran & Woolfolk Hoy, 2007). Physiological signs including pains, fatigue, aches, rapid heart rates, and sweating can lead to negative emotional states and reduced levels of self-efficacy (Baker, Cote, & Hawes, 2000; Bandura, 1993; Warner, 2011). Tension and anxiety may be psychological cues that also lead to negative emotional states thus causing low levels of self-efficacy beliefs (Zulkosky, 2009). Emotional arousal can also take the form of feeling viscerally agitated, tense, fearful, overwhelmed, and lead people to feel they do not have the skills to cope with a specific task ahead (Bandura, 1977). These feelings may lead to low self-efficacy beliefs resulting in avoidance behavior (Bandura, 1977).

How emotional arousal is used. Emotional arousal can be used through techniques including: attribution, relaxation-biofeedback, symbolic desensitization, and symbolic exposure (Bandura, 1977). Reducing physiological arousal can raise self-efficacy beliefs because when people perceive threats, they often times feel fearful and defensive which results in self-protective beliefs and behaviors (Bandura, 1977). It is important to note that negative emotions can be either activating or deactivating (Turner et al., 2012). Small levels of anxiety can lead to motivation and positive self-efficacy beliefs about overcoming challenges, yet as previously explained, large amounts of anxiety can lead to preventive action and low levels of self-efficacy beliefs (Turner et al., 2012).

Leithwood and Janzi (2008) found that leaders can impact emotional arousal of employees in positive ways. Leaders can set a vision that is inspirational, which then, in turn,

positively impacts the emotional arousal and self-efficacy beliefs of others (Leithwood & Janzi, 2008). Quinn and Quinn (2009) refer to this psychological way of feeling and thinking as "lift" (p. 3). Lift is a feeling of positive attitudes in others that can be influenced by leaders who are purpose-centered, internally directed, empathetic to the feelings and needs of others, and open to believing in improvement (Quinn & Quinn, 2009).

Kennedy and Smith (2013) found that working in a highly collaborative and supportive environment can impact emotional state and therefore the efficacy beliefs that follow. This is because high levels of positive efficacy may result from positive internal and external emotions gained from working as part of a team in a collaborative environment, such as through a Professional Learning Community model in education (Kennedy & Smith, 2013). This collaboration builds a strong sense of community and may influence emotional state and efficacy beliefs (Kennedy & Smith, 2013). Collaboration in high-efficacy environments is related to high levels of efficacy beliefs in individuals, while collaboration in low-efficacy environments is related to low levels of efficacy beliefs in individuals (Kennedy & Smith, 2013).

Regulation of emotions can take place as a way to influence this source of efficacy beliefs (Gunzenhauser et al., 2012). People who are skilled with emotional reappraisal may be better able to regulate negative feelings and focus on positive perspectives when faced with challenges (Gunzenhauser et al., 2012). Managing emotional arousal consists of two parts: managing negative emotions and expressing positive emotions (Gunzenhauser et al., 2012). This leads to building positive self-efficacy beliefs (Gunzenhauser et al., 2012). According to Gunzenhauser et al. (2012), women are better able to regulate their emotions yet they are more susceptible to negative feelings. Men, though, may show more anger as an emotional response which then influences efficacy beliefs (Gunzenhauser et al., 2012).

Mindfulness may be a way to regulate emotions (Luberto, Cotton, & McLeish, 2012). According to Luberto, Cotton and McLeish (2012), mindfulness is nonjudgmental awareness of present moment experiences which is believed to promote positive mental health. Mindfulness may lead to coping self-efficacy as a passive emotional response as it allows a person to gain personal locus of control (Luberto et al., 2012). This feeling of control leads to stronger efficacy beliefs (Luberto et al., 2012).

Development of Self-Efficacy

Childhood experiences. As a component of social cognitive theory, self-efficacy develops during the course of a person's life span (Bandura, 1997). For example, various experiences in a person's childhood can influence future self-efficacy beliefs (Bandura, 1997). In their formative years, adults help children gain knowledge about what they can and can't do (Bandura, 1997). This adult support influences the ability of children to be self-reflective about their potential capabilities (Bandura, 1997). According to Bandura (1997), self-efficacy beliefs replace external guidance as people develop the cognitive capabilities to reflect. Parent influences begin in infancy (Bandura, 1997). Parents shape mastery learning experiences, model behaviors, and provide verbal persuasion for their children (Bandura, 1997). Families set the environment in which people are raised while they develop initial self-efficacy beliefs (Bandura, 1997). Home environments are critical in a person's future appraisals of their potential capabilities (Bandura, 1997). Thus, social and cognitive development and self-efficacy belief formation is strongly shaped and influenced throughout a person's life-cycle by family through developmental pathways as they negotiate challenges and are influenced by various sources of information used for self-efficacy belief formation (Bandura, 1997).

Core beliefs.   Additionally, because humans seek to control their lives through the choices they make, self-efficacy beliefs influence intentional behaviors people take (Bandura, 1997). Such beliefs lead to their aspirations, choices, effort, and emotions related to consideration of future behavioral choices (Bandura, 1997). People behave in ways that align with their personal standards and beliefs (Bandura, 1997). According to Bandura (1997), they do not exert behaviors which are misaligned with such personal standards.

Career pursuits.   Lastly, career aspirations and choices are often influenced by self-efficacy beliefs (Bandura, 1997). According to Bandura (1997), career development and pursuits are influenced by self-efficacy beliefs, as well as the other components of social cognitive theory. People who have low self-efficacy beliefs do not pursue career paths where they feel they may fail or have doubts about their perceived ability to be successful (Bandura, 1997). Perceived efficacy influences the level of engagement and interest in career tasks and the amount of personal satisfaction people feel in activities related to their occupation (Bandura, 1997). Bandura (1997) explains that possible career interests and then actual career pursuits are influenced by self-efficacy beliefs. The patterns people experience in their lives influence the types of activities they feel they can do which then leads to the kinds of jobs they choose for themselves (Bandura, 1997). During their careers, people achieve various milestones of success which influences their future self-efficacy beliefs in their occupations (Bandura, 1997).

How Self-Efficacy Has Been Measured

Efficacy expectations are typically measured separately from performance (Bandura, 1977). When people are asked to recall and report their own memories about past experiences, this is a valid way to measure sources of efficacy because memories impact the development of beliefs (Anderson & Betz, 2001). Warner et al. (2011) state that sources of self-efficacy are

typically studied as a behavior change technique rather than as a psychological construct where the four sources are measured against each other. Many studies use quantitative rating scales to learn about the beliefs of individuals (Fisher, 2014; Kennedy & Smith, 2013; Tschannen-Moran & Gareis, 2004). Some researchers offer that it is important to separate out the sources of efficacy in both quantitative and qualitative research in order to allow a focus on specific behaviors that lead to efficacy beliefs (Kennedy & Smith, 2013). With this, researchers have the ability to explore how individuals reconcile incongruent information they receive from the multiple sources of efficacy, especially in the area of teaching, learning, and school reform (Kennedy & Smith, 2013).

Efficacy has been measured by groups of people and their collective beliefs (Kennedy & Smith, 2013). As previously mentioned, in education, Professional Learning Communities focus on collaboration as a key driver of student achievement (Dufour & Eaker, 1998). This collaboration and socialization can build collective efficacy and individual teacher efficacy (Kennedy & Smith, 2013). Professional Learning Communities build sources of efficacy by influencing emotional arousal, mastery experiences, vicarious experiences and verbal persuasion people experience from their collaboration with others (Kennedy & Smith, 2013). Levels of collaboration also influence perceptions of sense of community which have been related to teacher efficacy levels (Tschannen-Moran & Woolfolk Hoy, 2007). In one study, sense of community was identified as the greatest single predictor of teacher efficacy levels, according to Tschannen-Moran and Woolfolk Hoy (2007).

Limitations in Studying Sources of Efficacy Beliefs

At times it may be difficult to separate out sources of self-efficacy beliefs as they may influence each other in ways that cannot be controlled by researchers (Bautista, 2011). For

example, in education, some research has attempted to control for the influence of mastery and vicarious learning experiences by selecting participants who are pre-service teachers (Bautista, 2011). Since such teachers have not yet been officially employed as teachers, the researchers attempt to work with participants who have not had mastery and vicarious learning experiences (Bautista, 2011). Yet the researchers note that individuals have a variety of background experiences including those which serve as sources of other efficacy beliefs which are difficult to control for (Bautista, 2011). In addition, individuals have experiences during the research period outside of the study which may influence efficacy sources such as emotional arousal and verbal persuasion (Bautista, 2011). It appears that in order to attempt to control for limited past mastery experiences, children, pre-service professionals such as teachers (Bautista, 2011; Hagen et al.,1998) and nurses (Roh et al., 2014), or usage of novel physical tasks are used in design methodology. Hagen et al. (1998) suggest that when studying vicarious experience and verbal persuasion, it is difficult to fully understand these sources of efficacy beliefs on experienced teachers because of their past mastery experiences. When researching emotional states and physiological cues, past experiences may be activated in people's memories which then make it difficult to uncouple positive mastery experiences with positive emotional feelings as a source of efficacy beliefs (Warner et al., 2011). Gallagher, Schoemann, and Pressmen (2011) identify that levels of anxiety may stem from past mastery experiences which could buffer efficacy beliefs or which could cause a person to feel threatened if they have not been successful in the past. They also found that mastery experiences are predictive of levels of anxiety, a feeling associated with the emotional arousal source of efficacy beliefs (Gallagher et al., 2011).

Related theories may also contribute to self-efficacy beliefs. For example, motivational theory may impact actions along with sources of efficacy beliefs (Clark et al., 2011). Concepts

such as power variables, credibility perception, and majority/minority status may influence sources of persuasion when researchers attempt to isolate the influence of verbal persuasion on self-efficacy beliefs (Clark et al., 2011). Concepts of control theory and pressure may come into play when understanding the influence of persuasion on beliefs as well (Warner et al., 2011). Appraisal theories could also be intertwined with emotional arousal and sources of physiological cues (Warner et al., 2011). Confidence may be correlated with performance which could impact whether or not people exert enough effort resulting in mastery experiences, as a possible source of future efficacy beliefs (Brannick et al., 2005). Confidence can also be gained over time as people develop more skills which are related to self-efficacy beliefs (Brannick et al., 2005). McCollum and Kajs (2009) examined the relationship between efficacy and goal orientations which may also be related to motivational theory and efficacy beliefs.

Self-Efficacy Beliefs of School Principals

In education, there has been little research conducted about the self-efficacy beliefs of principals; it has mostly been studied with students, teachers as individuals, or groups of teachers which is studied as collective efficacy (Dimmock & Hattie, 1996). Because little is known about the self-efficacy beliefs of leaders, even less is known about the antecedents of their self-efficacy beliefs (Leithwood & Janzi, 2008). Understanding principal self-efficacy beliefs is a promising gap in the research with a great deal of potential (Tschannen-Moran & Gareis, 2004; Wade & Guarino, 2006). Dimmock and Hattie (1996) suggest that self-efficacy of principals is more of a state, rather than a trait, and therefore it needs to be considered in situation specific ways, rather than as a generalizable concept in terms of the overall personality of principals.

The little research that does exist relating to this topic finds that the self-efficacy beliefs of principals influence the self-efficacy beliefs of individual teachers, of collective efficacy of

faculties, and of students (Dimmock & Hattie, 1996; Leithwood & Janzi, 2008; Tschannen-Moran & Gareis 2004, 2005). Positive efficacy beliefs of students and teachers leads to greater achievement (Tschannen-Moran & Woolfolk Hoy, 2007). When strong leaders inspire staff, maintain effective disciplinary procedures, create a shared sense of purpose, provide resources for teachers, and buffer disruptions, teachers indicate higher levels of self-efficacy beliefs (Tschannen-Moran & Woolfolk Hoy, 2007). Self-efficacy beliefs of teachers are supported when principals are strong role models of expected behaviors, support innovation, are responsive to the needs of the staff, and reward effective performance (Tschannen-Moran & Woolfolk Hoy, 2007). Leaders can support the development of self-efficacy beliefs through goal setting and progress monitoring, task directing, and setting vision (Leithwood & Janzi, 2008).

The actions of school leaders who face challenges are influenced by their own self-efficacy beliefs (Leithwood & Janzi, 2008). Sense of efficacy has an important role in how principals face the demands of their jobs and meet the expectations of them (Tschannen-Moran & Gareis, 2005). Principals with high levels of self-efficacy are flexible, persistent, and willing to try new strategies (Tschannen-Moran & Gareis, 2005). They remain calm and confident as they face challenges and difficulties and show resilience in the face of setbacks (Tschannen-Moran & Gareis, 2005). Principals with high levels of self-efficacy beliefs are better able to face change and are more likely to view change as a positive light, because they feel they have more control over their own ability to be successful through their own behaviors (Dimmock & Hattie, 1996). Because they can cope with change, this leads highly-efficacious principals to be better equip to help others cope with change and it can predict whether the change will ultimately be successful (Dimmock & Hattie, 1996). When facing change, highly-efficacious principals model

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how to embrace change and provide encouragement to others as a result of their high efficacy beliefs, which then positively influences the efficacy beliefs of others (Schyns, 2004).

Conversely, principals with low levels of efficacy beliefs are more likely to blame others for failure and rigidly persist in their course of action even when facing challenges (Tschannen-Moran & Gareis, 2005). Principals who do not show positive attitudes towards change may have lower levels of self-efficacy which lead them to experience self-doubt, negative beliefs about their ability to cope with the change ahead, and lack the ability to believe they can lead others through the change ahead (Dimmock & Hattie, 1996). This can lead to stress, resistance to change, and negativity in principals (Dimmock & Hattie, 1996). Leaders who struggle with self-efficacy beliefs may be inconsistent in their problem solving skills and may lower their aspirations for people in their organization (Leithwood & Janzi, 2008). Low levels of self-efficacy has also been named as a major reason principals choose to leave the profession of education and why some schools fail to improve from organizational change (Dimmock & Hattie, 1996).

In order to build self-efficacy of leaders, school districts have a critical role (Leithwood & Janzi, 2008). District leadership strongly influence self-efficacy beliefs of principals by creating conditions that are supportive and enhance the work of school leaders, as perceived by school leaders (Leithwood & Janzi, 2008). District leadership provides professional development opportunities to collaborate with other leaders and supports the management of instruction, which can influence self-efficacy beliefs (Leithwood & Janzi, 2008).

Tschannen-Moran and Gareis (2005) studied the concept of cultivating efficacy in school principals. Demographic variables such as race, school setting (urban, suburban, rural), school

level (elementary, middle, high), and socio-economic status of the students were not significantly

correlated with efficacy levels of principals (Tschannen-Moran & Gareis, 2005). It is of note

that although the bivariate correlations found no relationship between gender and efficacy, in a

regression analysis, self-efficacy beliefs were significantly predicted by gender (Tschannen-

Moran & Gareis, 2005). Women had self-efficacy beliefs that were slightly higher than men

(Tschannen-Moran & Gareis, 2005). The next finding was that there was a significant

relationship between self-efficacy levels of principals and their perceived quality of their

preparation program and its usefulness (Tschannen-Moran & Gareis, 2005). Financial resources

and teaching material resource availability were also related to principal self-efficacy

(Tschannen-Moran & Gareis, 2005). Also, facilities quality was slightly related to efficacy

(Tschannen-Moran & Gareis, 2005). Additionally, support from central office and the

Superintendent were correlated with principal self-efficacy beliefs, along with support from

colleagues in the same building being strongly correlated with principal self-efficacy beliefs

(Tschannen-Moran & Gareis, 2005). The strongest correlations were seen between levels of

teacher support and principal self-efficacy beliefs, along with strong correlations with staff

support (Tschannen-Moran & Gareis, 2005). Both student and parent support were also

positively correlated with principal self-efficacy beliefs (Tschannen-Moran & Gareis, 2005).

Principals with high levels of self-efficacy beliefs were more likely to indicate that they were

satisfied with their role as a school principal as compared to those with low self-efficacy beliefs

(Tschannen-Moran & Gareis, 2005). Lastly, in this study, years of experience as an

administrator were not significantly related to principal self-efficacy levels (Tschannen-Moran &

Gareis, 2005).

This finding differs from Fisher's (2014) research. Fisher's (2014) results yielded a statistically significant relationship between years of work experience and levels of self-efficacy beliefs of principals. Principals with one year of experience had higher levels of self-efficacy beliefs than those with two through six years of experience and those with six through ten years of experience (Fisher, 2014). In fact, principals in their first year of the job had the highest levels of self-efficacy beliefs as compared to all other years of experience (Fisher, 2014). Then, self-efficacy beliefs dropped in the second year and were found to be the lowest in years six through ten (Fisher, 2014). After year ten, levels of self-efficacy beliefs rise, though they never reach the highest levels as compared to those experienced in year one (Fisher, 2014). Fisher (2014) found some relationships between demographics and self-efficacy levels. Self-efficacy beliefs of married principals were higher than those who were divorced (Fisher, 2014). Divorced principals were found to have the lowest levels of self-efficacy beliefs (Fisher, 2014). Single and widower principals were in between the two (Fisher, 2014).

Summary

Self-efficacy beliefs are thoughts held by a person, in anticipation of a new, specific challenge ahead. The beliefs center around the people's expectancy about their ability to successfully handle the new challenge (Bandura 1977, 1993). These beliefs motivate the behavior and actions the person takes when facing this future challenge (Bandura, 1977, 1993). Self-efficacy beliefs are predictive of actual future success (Bandura 1977, 1993).

Self-efficacy is one component of social cognitive theory (Bandura, 1977; Wolters & Benzon, 2009). People with high levels of self-efficacy beliefs are more likely to have high aspirations, choose more difficult tasks in the future, persevere in these tasks, and achieve success in these tasks (Bandura, 1993). People with low levels of self-efficacy beliefs have low

aspirations, are less likely to engage in challenging tasks ahead, and are less motivated to pursue

and persevere with new tasks (Bandura, 1993).

Self-efficacy beliefs come from various sources of information (Bandura, 1977, 1993).

The four sources of self-efficacy beliefs are: mastery learning experiences, vicarious learning

experiences, verbal persuasion, and emotional arousal (Bandura, 1977, 1993). Mastery learning

means learning through past success (Bandura, 1977, 1993). Vicarious learning means learning

from the experiences of others or from imagining oneself in a given situation (Bandura, 1977,

1993). Verbal persuasion means relying on words of encouragement and feedback to influence

beliefs (Bandura, 1977, 1993). Emotional arousal means using emotional cues and physiological

signs to influence thinking (Bandura 1977, 1993). These four sources influence cognition which

then leads to future behavior choices (Bandura, 1977, 1993). Although self-efficacy has been

studied across a variety of disciplines, most of the research about self-efficacy focuses on the

relationship between self-efficacy beliefs and outcome achievement, rather than on the four

specific sources of information that lead to self-efficacy beliefs (Anderson & Betz, 2001).

Self-efficacy beliefs of school principals influence the self-efficacy beliefs of teachers

and students (Dimmock & Hattie, 1996; Tschannen-Moran & Gareis, 2007). Higher levels of

self-efficacy beliefs of teachers and students have been correlated to higher levels of success

(Bandura 1977, 1993; Tschannen-Moran & Gareis, 2007). A promising gap in the research is

understanding principal self-efficacy beliefs (Leithwood & Janzi, 2008; Tschannen-Moran &

Gareis, 2004; Wade & Guarino, 2006). Superintendents and central office personnel can support

principal efficacy by creating the context needed to build positive sources of efficacy in

principals (Leithwood & Janzi, 2008). In fact, one study of principals found a significant

relationship between their perceptions of the effectiveness of their preparation programs with

their self-efficacy levels (Tschannen-Moran & Gareis, 2005). This indicates that principals see a

relationship between formal learning experiences and self-efficacy levels (Tschannen-Moran &

Gareis, 2005).

Chapter 3

Self-efficacy beliefs are expectancy beliefs people hold about their ability to handle specific, future challenges. Self-efficacy beliefs are the mindset people have about their potential to be successful on a challenge. There are four sources of information used to form self-efficacy beliefs. They are: mastery learning, vicarious experiences, verbal persuasion, and emotional arousal. In education, much research has been conducted about teacher self-efficacy beliefs, student self-efficacy beliefs, and collective staff efficacy beliefs. But, there is a gap in the research about principal self-efficacy beliefs. The limited research about principal self-efficacy suggests that principal self-efficacy influences teacher efficacy, student efficacy, and school achievement. Because self-efficacy is a predictor of actual success, it is essential to understand what leads to positive self-efficacy beliefs. Learning more about principal self-efficacy beliefs and the factors that positively serve as sources of information for such beliefs is an important opportunity for further research. Effective principals lead to successful schools.

This research study examined the factors that influenced self-efficacy beliefs of former elementary school principals prior to facing a personally meaningful challenge. The overall research question was: What Factors Attend to the Domains of Self-Efficacy Belief Formation in School Principals? Each principal selected and told the story of a personally meaningful challenge, discussed how it was resolved, and shared about their initial self-efficacy beliefs when they first learned of this challenge. The former principals then discussed the sources of information that influenced their mindset and initial self-efficacy beliefs. I designed the study to seek information about what factors led to the initial self-efficacy beliefs of the retired principals. The former principals also shared ideas as to what supports would have helped positively influence their initial self-efficacy beliefs. The purpose of this research design was to understand

how the mindsets about initial self-efficacy beliefs are influenced by various sources of information.

Research Questions

The research questions used in this study focused on learning about the sources of information that influenced the self-efficacy beliefs of principals, prior to their facing a personally meaningful challenge. A multiple case study methodology was used to understand the experiences of eight retired, elementary school principals. As will be explained further in the next section, a single issue is often the focus of a multiple case study methodology (Stake, 2006). The issue binds the cases together (Stake, 2006). For this research, the issue of interest was factors that influence principal initial self-efficacy beliefs. A critical incident theory guided the research methods used in this study.

Multiple case study methodology considers several cases that are studied individually and then compared to one another (Stake, 2006). The main research question was: What Factors Attend to the Domains of Self-Efficacy Belief Formation in School Principals? Through the multiple case study, I learned about a personally meaningful challenge each former principal faced. This was the critical incident I sought to understand. I also learned about each principal's initial beliefs about their ability to successfully handle the challenge. These are called self-efficacy beliefs. I learned about the various factors which led to these initial self-efficacy beliefs and considered their relationship to the four sources of information that influence self-efficacy beliefs: mastery learning, vicarious learning, verbal persuasion, and emotional cues. I also learned about desired supports of the principals. Both multiple case study methodology and critical incident theory will be discussed in more detail in this chapter.

Research Design

The following section describes the research design used in this study. It details the theory and methodology that was implemented and discusses why the study was designed in this manner. It also describes the conceptual framework that guided the research. This section explains the characteristics of the selected participants and discusses strengths and limitations in this selection. The chapter also outlines the process and procedures I used for the interview, data analysis, storage of the data, and the techniques used to ensure an ethical and valid study.

Critical incident theory.

The data collection method used in this qualitative research focused on a critical incident faced by each participant. Specifically, the critical incident was a self-selected and described personally meaningful challenge the participant faced as former elementary school principal. A critical incident is an important, self-contained unit of analysis which is a major event or experience (Patton, 2002). Using critical incidents is also known as critical case sampling and is powerful because it yields important data that makes a point in a dramatic manner (Patton, 2002). Critical incident theory was appropriate for this research because critical incidents often times deal with humans who become empowered to overcome constraints and challenges (Creswell, 2013). At times, critical incidents may cause epiphanies in people and may result in lessons learned about organizations (Patton, 2002). Learning about an experience that was challenging for the principal was what I wanted to study in my research so that I could understand their initial beliefs about their ability to successfully handle the challenge and the sources of information that may have led to these initial beliefs.

Researchers who focus on critical incidents design their methodology in specific ways. I used the term "personally meaningful challenge" to elicit information about the critical incident discussed in each case. Participants reflected on their own experiences and the conditions of the critical incident. They shared ideas for other supports could have been helpful. The research question themes were specifically designed to elicit information about the initial self-efficacy beliefs of the participants and the sources of information that may have led to the formulation of such beliefs. By using this critical incident theory as the framework for the research, I compared data across cases to identify similarities and differences. Critical incident theory also allowed me to analyze the data based on the specific research question themes so that I could better understand the factors that influenced self-efficacy beliefs.

Multiple case study methodology.

I used a multiple case study methodology. According to Stake (1995), educational research often uses case study because it allows the researcher to examine the unique qualities of people's experiences and seek commonalties and patterns in these experiences. By using a predominantly qualitative method of study, the study was flexible and open, which allowed me to freely explore the subject issue: principal initial self-efficacy beliefs (Patton, 2002). The purpose of case study is to refine understanding rather than discover new meaning (Stake, 1995). Case study methodology is not meant to be a sampling research that represents the experiences of those who were not studied (Stake, 1995). Case study methodology is used to better understand the unique qualities of each case (Stake, 1995). Multiple case study research is used when cases have a common link but take place in different settings (Stake, 2006). This was an important element of my research. I wanted to learn about the experiences of multiple former principals to understand their experiences and consider any commonalities. The data from the

specific cases was analyzed and then compared among cases to identify consistencies and relationships between the data (Patton, 2002). The participants were selected based on a common link, while their experiences took place in different settings, as will be described in future sections of this chapter.

The first part of this multiple case study research focused on data collection and analysis about each individual case: the experience of a former elementary school principal. I sought to understand each case for its unique and particular features (Stake, 2006). Specifically, demographic data was collected about each participant. This information included their gender, years of total experience as a principal, and information about the quantity of schools where they had served as principal and the length of time for each service. I also asked if they would serve as a principal next school year, if given the opportunity. Lastly, I learned about their self-efficacy beliefs as rated by the Principal Self-Efficacy Scale (Tschannen-Moran & Gareis, 2004). More information will be provided in future sections about this tool. The majority of the data was collected through a one-on-one interview I conducted with each former principal. I learned about a personally meaningful challenge each principal faced. Then, I learned about each principal's initial self-efficacy beliefs about their perceived ability to be successful in handling this challenge. I learned about the factors that led to these initial self-efficacy beliefs. I also learned about other supports they felt would have been helpful to positively influence their initial self-efficacy beliefs. More information will be provided in future sections about how each case was analyzed and the processes used to understand each case.

The second part of this multiple case study research compared the cases among each other and the research question themes. It compared findings about each case to the rest of the cases. It identified commonalities and similarities presented in the data. Specific methods for

such comparisons and analysis were used. More information will be provided in future sections about how the multiple cases were analyzed and the processes to make assertions and findings.

Demographic data. Eight retired, elementary school principals from a common, large suburban school system were the participants for this research study. As previously stated, the main source of data for this study came from interviews with each former principal. Prior to each interview, descriptive data was collected about each principal. This descriptive data included information about gender, years of experience, results on a modified version of the Principal Self-Efficacy Survey (PSES), and a response to the question, "If you were asked to be an elementary school principal again next year, would you accept?" Due to personal constraints of time and interview style, one former principal was unable to complete the PSES prior to the interview (Appendix G: Demographic Data - Retired, Elementary School Principals).

The Principal Self-Efficacy Survey (PSES), developed by Tschannen-Moran and Gareis (2004), is an 18-item scale whereby principals rate how likely they are to be successful in handling a variety of challenges (Appendix E - Principal Self-Efficacy Scale). For this study of former principals, the directions for the scale were modified to account for this being given to people who were not currently serving as principals. Tschannen-Moran and Gareis developed the PSES as an adaptation of the Teacher Self-Efficacy Scale by Tschannen-Moran and Woolfolk Hoy in 2001 (Tschannen-Moran & Gareis, 2004). At first, the PSES had 50 items that were aimed at learning about a multitude of aspects of principal leadership. It was field tested with ten former principals. Then, it was given, along with questions related to demographics, to 544 public school principals in the state of Virginia. A factor analysis was used to cut the 50 original items to 18 items which allowed three subscales to emerge: self-efficacy to handle management, self-efficacy for instruction, and self-efficacy for moral leadership (Tschannen-

Moran & Gareis, 2004). These three categories were used as part of the analysis of each case to categorize the types of challenges considered in this research.

According to Tschannen-Moran and Gareis (2007), an independent sample t test revealed that this scale did not find gender, race, or years of administrative experience to be correlated with principal self-efficacy beliefs. An analysis of variance was conducted and did not reveal relationships between principal self-efficacy beliefs and the following factors: school level, school setting, or percentage of students receiving free and reduced meals. A factor analysis was conducted about six interpersonal support categories and found that building level support from teachers, staff, parents, and students, along with district level support, and principal preparation did have a positive relationship with principal self-efficacy belief levels. Bivariate correlations of continuous variables were conducted and found a significant relationship between principal self-efficacy beliefs and building level support, a moderate relationship to the quality and usefulness of principal preparation and district-level support, and a slight relationship to the racial-minority status of the principal. Lastly, a regression analysis was used and found that the strongest relationships between principal self-efficacy belief levels were building level supports, followed by principal preparation, and district level support. It found only a slight relationship between self-efficacy beliefs and race and gender.   The regression analysis did not find a relationship between principal years of experience as an influence on self-efficacy. As previously stated, in this research, the PSES will be used as part of the demographic statistics collected about each retired principal.

Interview.   Following the collection of descriptive information, including the PSES, I conducted a one-on-one interview with each retired, elementary school principal. An interview protocol consisting of open-ended questions was used during the interviews in order to solicit

this information (Patton, 2002). By using the open-ended questions, I was able to collect a wide

array of information from each former principal. (Appendix D: Interview Protocol, Retired,

Elementary School Principals). The interview focused on a personally meaningful challenge, the

degree to which each principal felt the challenge was successfully resolved, and information

about initial self-efficacy beliefs. Then, I was able to collect data about the sources of

information which may have led to these initial beliefs and desired supports. At the end of each

interview, I collected data about each principal's reaction to his or her self-efficacy rating and

subscale ratings from their Principals Self-Efficacy Survey (PSES). I also learned other

information that the former principal wanted to add to the interview. As will be presented in

Chapters 4 and 5, the open-ended nature of the questions on the interview protocol allowed the

former principals to provide a great deal of information about what it is like being an elementary

school principal and the emotions that accompany the position.

Conceptual framework. As previously explained, there are four sources of information

that lead to self-efficacy beliefs. These are: mastery learning, vicarious learning, verbal

persuasion, and emotional arousal (Bandura, 1997). For this study, the four sources of

information served as the conceptual framework through which I created the interview protocol

and analyzed the data from each case. First, I worked to understand each case for its unique

features and qualities as related to the conceptual framework. This helped me make meaning

about the factors that influenced the mindset of each principal prior to their facing their

personally meaningful challenge. Then, I used the conceptual framework to make connections

between and among the various cases in this multiple case study research (Stake, 1995). The

themes from the conceptual framework helped me make meaning from the data I collected in

each case (Stake, 2006).

Participants. In the next section, a great deal of detail will be provided regarding the selection of participants for this research. In professional organizational structures, leaders such as school principals can oftentimes be expected to be omnipotent experts with positive attitudes towards the accomplishment of any and all goals. I predicted that discussions about initial self-efficacy beliefs and the factors that influenced such beliefs could reveal self-doubt and fear about facing new challenges. Therefore, careful consideration was given to selecting participants for this research study.

My goal in selecting participants was to ensure they would provide truthful data that would contribute to the gap in research about principal self-efficacy beliefs. One concern I had about the selection of participants was whether current principals would trust the process enough to be honest about their feelings. When considering initial self-efficacy beliefs, I hypothesized that some initial beliefs may have been based in fear, doubt, and negativity. I was unsure as to whether current principals would be willing to share such feelings since, as previously mentioned, they are expected to successfully handle all challenges. I did not want this to limit my research and negatively influence my findings. In addition, I was concerned about the busy work schedules of principals and their potential lack of available time to participate in this research study. Such hectic work schedules could lead to a limited level of reflectiveness about the past, inability to identify sources of information that may have led to initial self-efficacy beliefs, and unwillingness to share genuine feelings. Further, personally meaningful challenges often require multiple years of work to accomplish and oftentimes do not have a clear end point. This would make it difficult to determine whether or not the challenge was resolved and the degree to which it was successfully resolved. Because of these concerns, as will be described in the next sections, the participants selected for this research study were recently retired,

elementary school principals. The following sections detail the strengths and limitations of using such participants, as well as the hypothesized strengths and limitations of learning from current principals.

Strengths of studying retired, elementary school principals. There were numerous benefits to studying retired, elementary school principals. Retired principals were able to be dispassionate reflectors about their past and the challenges faced. Because they were not currently dealing with the various challenges of the principalship, they were willing and able to reflect on their experiences in a deep and meaningful way, without the stress that comes from serving as a school principal and without any concerns for their future career. In addition, because they are retired, they were not fearful of any pressure to speak in inauthentic ways that masked their feelings, emotions, and opinions. They spoke in frank, honest, and candid ways about their perceptions of the past and they were all very willing to share additional information. The recently retired principals spoke freely without any apparent fear of consequences or concerns about vulnerability and exposure. There was little professional career risk. The retired principals appeared to be comfortable sharing their memories and beliefs, forthcoming about personal and professional struggles, and they appeared to feel safe in authentically sharing without concern about their future employment status and reputations. The retired, elementary school principals were eager to make recommendations for what supports they wished they had received as a result of the reflection about their initial self-efficacy beliefs. The retired principals were able to make the time for the interview and steps taken prior to the interview, during the interview, and following the interview. Some participants were able to make the time to self-reflect prior to the interview as they considered the interview protocol in advance. Only one person had challenges with previously scheduled time commitments so the collection of

demographic data was adjusted to ensure there was enough time for the main part of the

interview. Lastly, the retired, elementary school principals appeared to be genuinely interested

in helping this research study and engaging in the various components of the data collection.

They wanted to share their stories and leadership journeys. Many expressed interest in the

results of the research and excitement about contributing to this gap in research.

Limitations of studying retired, elementary school principals. There were limitations

to studying retired principals. Because they were not currently in the position, their memories

may have been distorted based on the time lapsed from the actual situation which occurred in the

past. In addition, their current beliefs could have been altered based upon their having left the

principalship. These beliefs could have been more grandiose or more self-defeating. Readers of

this research may doubt that the data collected from retired, elementary school principals is as

authentic and applicable to the challenges and supports of current principals, since the data came

from people who no longer serve in the roles who may have faced different pressures and

challenges as compared to present day principals. Because leadership challenges faced by

principals change rapidly, limitations could include whether the conclusions found in this dataset

are applicable, valid, and reliable. The limitations of studying retired principals also included

challenges in access to these principals as I relied on personal, non-public email addresses to find

participants for this study. Many retired principals contacted for participation were unable to

make the time for the interview due to new family and life commitments or were unwilling to

participate due to other reasons that are unknown to me.

Consideration of studying currently serving elementary school principals. It is

important to acknowledge the possible benefits of learning from current principals. First,

experiences of sitting principals could have been recalled with greater detail and accuracy and

may have relied less on long-term memory. Current principals may have been better able to

identify their beliefs and recognize the supports from their supervisors as influencers of their

self-efficacy beliefs. Locating current principals may have been easier than locating retired

principals since work email addresses and phone numbers would have been public information

used to find participants for this study.

Limitations of studying currently serving elementary school principals. There could

also have been limitations to studying current elementary school principals. Although it may

have been easier to locate these professionals, it may have been difficult for them to commit the

time necessary to fully engage and participate in this research due to the large demand of their

positions. Current principals may have been less willing to honestly share their beliefs or discuss

the supports or lack of supports received from supervisors. They may have been fearful that

their sharing of information of their beliefs could negatively expose their vulnerabilities about

facing challenges. They may have been more grandiose about their beliefs and behaviors, in

their desire to create a positive impression about their self-efficacy beliefs. It may have been

difficult for them to be honest with themselves and admit that they had doubts about their ability

to handle future challenges, since, as principals they are expected to be able to handle any

challenge that comes their way in spite of its complexity and newness. Lastly, currently serving

principals may not have been able to truly talk about a personally meaningful challenge and how

it was resolved because they could have been in the midst of dealing with it or unable to judge

that a particular challenge would be one that would rise to the caliber necessary for this study.

Conclusion about selection of participants. While it is apparent that there were

strengths and limitations to studying retired, elementary school principals as compared to those

who are currently serving in the role, I felt that advantages that the retired leaders brought to the

quality of the data collection in this research outweighed the concerns.   In order to counter such concerns, I found participants who retired within six years of the interview date. Two participants retired in 2010, less than six years prior to the interview date. Both continue to work for the school system – one as a substitute teacher and one as an acting principal. Four principals retired in 2013, less than three years prior to the interview date. One retired in 2014, less than 2 years prior to the interview date, and one retired less than a year before the interview date. The years of principal experience ranged from 6 to 27 years. Three of the participants served in more than one school. All but one principal spoke about challenges they learned about in their first year as a new principal to a specific building and all spoke about challenges that lasted more than one year.

Identifying Participants

As previously mentioned, I de-identified the participant names, school names, and the school system in which the retired principals worked. The participants served in a common suburban public school system. A snowball sampling method was used in order to find retired, elementary school principals from the large suburban school system where they had previously worked. I found participants by asking those whom I knew and interviewed to help me recruit other potential participants (Patton, 2002). Additionally, I reviewed public lists of retirement ceremonies hosted by the school system and identified potential participants. I used my personal contacts to locate personal email addresses of these potential participants. At times, I reached out to potential participants using private social media communication methods and requested their personal email addresses to solicit their participation in the study.

Interview Process and Procedures

The following section will discuss the interview process and procedures I used for this study. First, I emailed each principal to solicit their participation in this research study (Appendix A: Approved Email to Retired, Elementary School Principals). I attached the letter (Appendix B: Approved Letter – Retired, Elementary School Principals) and IRB forms (Appendix C: IRB Approval Form) to the email. As the date and time for the interview was confirmed, I emailed the interview protocol to six of the eight participants (Appendix D: Interview Protocol, Retired, Elementary School Principals). One person indicated she did not want to have the questions in advance of the interview therefore these were not sent to her (Principal Alice) and one interview date/time was finalized the night before the interview which was held less than 12 hours from the interview time, therefore there was not time to provide her with the protocol prior to the actual interview (Principal Michelle). Two participants, Principal Marsha and Principal Sally, came to the interview with advance prepared notes from which they spoke. The other participants seemed to have reviewed the questions prior to the actual interview and therefore had a plan as to what they would share in the interview.

Seven face-to-face interviews took place in a location selected by the participant. Five of these took place in the homes of the participants, one took place in a public library, and one took place in my office. The last interview was conducted via telephone. Seven participants gave their written consent prior to the interview taking place; one provided verbal consent since the interview did not take place in person.

The interview process began with seven participants taking the PSES. As they took the survey, I began to observe and scribe their results in order to calculate mean scores for the subscales and overall scale. As previously mentioned, due to scheduling constraints, one

participant was unable to take the PSES. After the PSES was completed, the seven participants

were given a copy of the interview protocol to review as I completed the calculation of PSES

scores. (Appendix F: Principal Self-Efficacy Scale (PSES) Scoring Guide). Next, I asked all

participants to share information relating to the descriptive data that was collected. I wrote down

this information as they shared. I wrote it on the Descriptive Data template (Appendix A:

Descriptive Data – Retired, Elementary School Principals).

I then conducted the interviews using the interview protocol. The interviews were

recorded using an Etekcity 2-in-1 8GB Mini Portable Rechargeable Digital Audio Voice

Recorder. Additionally, I took notes during the interview. Stake (1995) recommends using an

audio recorder and note taking by the interviewer in multiple case study research. The audio

recording allowed for a transcription to be made of the verbatim information as it was shared by

participants to ensure accuracy in my data collection (Evers, 2011). I transcribed four of the

interviews and a professional transcriber was paid to transcribe the other four. I read the

transcriptions in my effort to re-live each interview experience prior to coding and analyzing the

data collected. This gave me time to think about the information collected, notice repetition of

words, phrases, or ideas from the interviews, and consider information that I missed during the

actual interview. Throughout my analysis and writing process, I re-read the transcriptions

multiple times to deepen my thinking about the data (Evers, 2011).

During the interview, I used the interview protocol and prompts included on the protocol

as needed. I paraphrased responses to ensure I had an accurate understanding of what

participants meant when answering the questions. Paraphrasing allowed participants to clarify

information and add to their answers. It also allowed me to ensure I understood the essence of

what they were communicating with their words and word choice. At times, when references

were made about concepts I did not know, I asked for explanation to ensure I understood. Many

of the participants spoke to me using educational jargon and acronyms, making assumptions that

I knew about the people, structures, programs, and processes about which they were referring.

This allowed the interviews to be flexible, while following the protocol.

Data Analysis Process and Procedures

In multiple case study methodology, each individual case must be studied and understood

for its unique characteristics and features (Stake, 2006). Then, the cases can be compared and

contrasted to each other (Stake, 2006). The following procedures were followed to analyze the

data collected. First, demographic data was transferred from the interview (Appendix G:

Demographic Data – Retired, Elementary School Principal) into a larger table whereby all the

data could be seen on one spreadsheet (Appendix H: Table Organizing Demographic Data

Information). Next, transcriptions of each interview were made to have a verbatim account of

each interview. I made four transcriptions and the other four were made by a professional

transcriber. The audio recording files and transcriptions were transmitted through email. Three

participants wanted the opportunity to review the transcription before it was used as part of the

study. Five participants waived this right. After each transcription was made, I reread the

transcription to re-familiarize myself with the case and to relive the interview experience. From

this, I wrote each case in a narrative form (Patton, 2002). The narrative combined information

from the descriptive data and the interview data to create a story that described the experience of

each principal in a holistic way (Patton, 2002). I told the story of each case and used specific

quotations from the transcription to emphasize key quotations and phrases used by the

participants (Appendix I: Case Narrative Template). Following the writing of all eight

narratives, I reread the transcriptions to ensure the narratives contained similar information and

were written in similar ways and revised the narratives to include important information which I may have missed the first time I wrote the narrative. Writing these narratives helped me begin to understand each case for its unique qualities and features as I produced it in a new format and style. It helped me process the information for future meaning-making as I worked to understand each person's reality and perceptions (Stake, 1995).

As previously mentioned, the next step was to analyze each case for thematic emergence in order to understand each case fully. I looked for meaning and consistencies among the data as per certain categories (Patton, 2002). Each case was analyzed as it related to the conceptual framework themes (Appendix J: Themes Template). For each case, I used the Themes Template to summarize specific details from the data as related to each of the four sources of information that lead to self-efficacy beliefs. Next, I completed an analysis of the themes which helped me understand the predominance of the themes in each person's experience (Appendix K: Analysis of Themes Template). For each case, I used information from the narrative and the themes template to analyze the predominance of each theme in each case. I also identified information that was unique to the particular case as compared to the other cases. The Analysis of Themes Template allowed me to generate findings that were important to each specific case as I worked to understand it for its unique features.

Following my analysis of each interview and my work to fully understand them, I sought to determine how each case related to the others. I also sought to understand the degree to which the findings from each case were important to themes in the conceptual framework. Stake (2006) explains that researchers in multiple case study analysis should not focus on the degree to which a case is similar to a theme, but rather the researcher should seek to understand the degree to which the finding is important to the theme. In order to accomplish this, I analyzed the

findings and themes of each case and compared these to each other (Appendix L: Analysis of Findings and Themes Matrix-Single).

The analysis of findings and themes matrix allowed me to take the conceptual framework and understand the degree to which each finding was important to the theme. This then led to my future statements and assertions. I was able to understand the degree to which each case served as an example of the themes and conceptual framework model as I sought to understand the issue of principal self-efficacy (Stake, 2006). This process allowed me to continue to learn about each case and its unique qualities and to see the inter-relatedness among and between each the themes and the cases. I then took each Analysis of Findings Themes Matrix and compared all eight cases to one another (Appendix M: Multiple Cases Analysis of Findings and Theme Matrixes). By considering how each case related to each other, I was able to make meaning by comparing and contrasting the cases against one another. Using the frameworks allowed me to focus on my conceptual framework and for flexibility as information was presented that was not part of the anticipated themes. At times, when such new information was not unique to just one case, I was able to better see the various cases in which such new information emerged.

Data Storage

Specific data storage procedures were used in order to protect the data and maintain its confidentiality. I followed the expectations of me as set forth by the Virginia Tech Institutional Review Board (Appendix C : IRB Approval Form). My data was collected on a laptop computer which was password protected. The laptop computer was secured at all times and, when not in use, was kept in an environment that is locked to others. Files were stored on a secured server which can only be accessed by me and which is backed up each evening. Second copies of all electronic files were also saved on an external hard drive which was stored in a separate location

from the computer. All documents signed by participants and the written account of descriptive data were scanned into electronic files which were also saved like the others. The audio recordings were also saved on the secured server and external hard drive. The names of participants were coded and the key was stored in a location separate from the laptop computer and external hard drive. All paper copies and materials were saved in a secured location in my home. All paper and electronic files will be destroyed no sooner than three years after the publication of this dissertation. Names of participants will never be shared by me.

Ethics

Possible ethical concerns of this study were considered and I took actions to dissuade any such issues related about the ethics of my research. First, I followed the expectations of me as established by the Virginia Polytechnic Institute and State University Institutional Review Board (Appendix C: IRB Approval Form). Next, each retired, elementary school principal had a clear understanding of the purpose of the research study and the data sources that were used prior to their agreeing to participate in the study (Appendix B: Approved Letter – Retired, Elementary School Principals). All were informed both verbally and in writing of their right to withdraw from the study at any time.

During the interviews, I built rapport with each retired principal to make them feel comfortable and safe. My goal was to ensure they did not feel any type of judgement from me and for them to know I was fully committed to listening to understand them. I explained my interview protocols and procedures to ensure they understood the serious nature of confidentiality for my dissertation's research. Throughout the interviews, I used paraphrasing to ensure I accurately understood the meaning of their words from their perspective and intention. At times, when personal memories triggered tears and difficult emotions, I showed compassion

and made sure the participants were willing to continue the interview in spite of such memories and triggers. I did not want participants to feel embarrassed, anxious, fearful, or uncomfortable in any way. After each interview, I reminded the participants of the techniques I used to keep their identity confidential and anonymous. Each participant was given the opportunity to fact-check the transcription, which is also known as member checking. Five participants waived this right and three participants took advantage of this opportunity prior to their data being used in this study.

An ethical concern about relying on the memories of retired principals may come into question by the reader. As previously mentioned, although there are limitations involved, it is the hope that honest and authentic data was collected in these interviews. It is also of note that this concern could have been the same if currently serving principals served as participants. Providing the interview protocol in advance allowed the former principals ample time to think about what memories they shared in order to prepare and provide the most detailed account possible in the research.

The purpose of having each retired, elementary school principal select what they felt was a personally meaningful challenge was also intended to promote the ethics of this research. While I considered setting the delimitation of a challenge faced during the last year of the principalship in order to possibly promote ethics of the interview, I realized that a challenge which was personally meaningful may not have occurred in that last year of service. I also considered asking only about challenges related to instructional leadership. Yet I determined that this could limit my ability to collect high-quality data if the principal was restricted in selecting a powerful example to discuss. By asking each retired, elementary school principal to recall and describe a personally meaningful challenge, the retired principals were able to self-

select a challenge without any limitations to their memories. This allowed them to share what they knew they could talk about and recall with a level of certainty about their memories of the details.

Validity

According to Patton (2002), it is critical that validity and confidence are established in qualitative studies. The next section will describe the techniques I used to promote validity of my research which was mostly qualitative in nature. These techniques were: interview protocol, peer debriefing, member checking, and a reflexive journal. My goal was to ensure that if my research were conducted by a different researcher, similar data and findings would be yielded if the researcher followed the same overall techniques.

Interview protocol. I used an interview protocol to promote validity (Stake, 1995). An interview protocol is a form that allowed me to control the activities of the interview through a common set of questions that will be asked of each participant (Creswell, 2013). The protocol consisted of six, substantial questions that allowed for common information to be shared by all participants and recorded by me in an organized manner (Creswell, 2013). Each interview followed a common pattern and yielded data which could be compared across cases. Because my protocol included open-ended questions, I also developed and included specific probing questions as subsets of one specific question. I used these questions to help ensure all four elements of the research question themes were addressed during the interviews. The open-ended questions were general, yet focused on the themes of this research study (Patton, 2002). I conducted a pilot testing of the interview protocol with a current principal who is a member of my doctoral cohort. After the interview, I explained my intentions and she helped me refine my

thinking so that I could clarify the wording of certain questions. As previously mentioned, six of the eight participants received the actual interview protocol at least three days in advance of the interview (Appendix D: Interview Protocol of Retired, Elementary School Principals). As previously mentioned, one did not want the opportunity and one, due to time constraints, did not receive the protocol in advance. The other six participants had the protocol in advance which allowed them the opportunity to prepare for the interview. Some took advantage of this and brought written notes to the interview.

Peer debriefing. Another technique I used to promote validity was peer review, which is also known as peer debriefing (Creswell, 2013). I asked peers in my doctoral cohort to read my work and ask me questions to challenge my thinking throughout my process of research. These peers were also in the process of proposing and conducting research for their dissertations. All are practicing principals and assistant principals. At times, they were given specific texts to read along with raw and analyzed data from my research. They were asked to draw their own conclusions from the data and compare it to assertions and findings I made. Sometimes they confirmed my work, other times they asked questions or provided their own interpretations of the data for my consideration. Other times I used the peers to listen to challenges I was facing during the data collection, analysis, and writing process of the dissertation. They offered emotional support, ideas, and questions to help me when I was stuck, frustrated, or overwhelmed. They also shared their own struggles to help me understand that having such emotions during the process was common to the process of working on a dissertation. At times, after communicating with these peers, I also completed a reflexive journal entry to help me process my new learning about my data and myself, and to help me control for bias. The use of my reflexive journal will be described later in this section.

Member checking. I used member checking to contribute to the validity of the study. Each retired principal was given the option to read the transcription of their interview prior to it being used in the study. All participants were given the option to delete or add any information to the raw transcription. According to Creswell (2013), member checking is a way to ensure the validity of data collection because it leads participants to verify accuracy. Three participants wanted to exercise this right. None actually made changes to the transcription. I emailed all participants an electronic copy of their PSES scale and ratings, along with the document where I noted the descriptive statistics.

Reflexive journal. Validity was also ensured through my keeping of a reflexive journal throughout the research process. A specific protocol was used for each journal entry (Appendix N: Reflexive Journal Protocol). The protocol probed my thinking to increase my level of reflection beyond a simple summary of what was happening. I used the reflexive journal to acknowledge and control for my own biases and to enhance the credibility and quality of my research (Patton, 2002). Researchers must be fully present and committed to listening when working with interviewees. They must fight the urge to think about themselves, their own past experiences, and their own distracting thoughts while conducting interviews. I recorded my thoughts, reflections, and emotions in my reflexive journal in order to eliminate bias from my research and findings. I made entries about once a week during my research and analysis stages.

Researcher Background and Qualifications

According to Stake (2006), different researchers can come to different conclusions when considering the same data. Therefore, it is important for me to identify information which may have influenced the way in which I made meaning from the data I collected in the research. I was a public school special education teacher for five and ½ years. During this time, I began to

understand how the self-efficacy beliefs of my students served as a contributing factor to their

achievement. I was also a coach of first-year teachers and I started to observe how their self-

efficacy beliefs influenced their successes and failure. Next, I became a public school Assistant

Principal where I served for four years and where I continued to observe how the self-efficacy

beliefs of my teachers influenced their mindset and how various supports could influence initial

self-efficacy beliefs of individual teachers and teams of teachers. Following this, I served as a

public school principal for a little more than five years. During this time, various data sets

revealed that the self-efficacy beliefs of staff were high and exceeded those beliefs of staffs of

other schools in the same division. As the principal, I experienced a variety of self-efficacy

belief levels in coping with the various challenges that I was expected to face. After this, I

served as a central office administrator for two years. In this role, I supported the needs of 22

schools in one geographic area, with a primary focus on supporting the principals. It became

apparent to me that principals had a variety of initial self-efficacy beliefs when facing

challenges. Currently, I am a central office administrator overseeing facilities planning. In this

role, I support principals as they lead work whereby capacity challenges must be resolved.

Lastly, throughout my career I've maintained relationships with retired principals who have

shared with me great insights about their experiences. They oftentimes have a clear

understanding of the supports that positively influenced their effectiveness and strong opinions

about the supports they wanted from their supervisors.

My experiences as a teacher, assistant principal, principal and central office administrator

lead me to be qualified to conduct such research on principal self-efficacy beliefs in my desire to

understand the factors that lead to such beliefs. Creswell (2013) notes the importance of

clarifying researcher bias. My past experiences contributed to how I came to understand the data

I collected, in spite of efforts to promote validity and ethics. As previously detailed, I employed a variety of methods to control for my personal biases. At the same time, by sharing my background, the reader of this research also has a sense of the experiences that contributed to the way in which I made meaning from the data collected in this research.

Summary

In order to learn what factors influence principal self-efficacy beliefs, I conducted research for my dissertation using a multiple case study methodology. I designed my research to help me understand the particular aspects of multiple principals' experiences as each faced a personally meaningful challenge. My overall research question was: What Factors Attend to the Domains of Self-Efficacy Belief Formation in School Principals? I designed the methods to help me learn about the challenges faced by multiple principals and their initial self-efficacy beliefs about their ability to successfully handle these challenges. I employed methods to learn about and understand what led to these beliefs and to seek information about what other supports would have helped influence these beliefs.

My research design and strategies used to conduct this research and make meaning from the data promoted validity, ethics, security, and confidentiality. I considered a variety of strengths and limitations about the selection of participants for my research. Based on such consideration, I interviewed retired, elementary school principals as the participants in this study. I used critical incident theory to learn about a personally meaningful challenge each principal faced. My methods allowed me to make meaning about each individual case as I sought to understand it fully based on its unique qualities and features. Then, based on my research design, I analyzed the cases to understand their relationship to the conceptual framework research themes and to compare and contrast them to each other.

I established clear boundaries, limitations, and delimitations in my research design. My goal was to present accurate findings and assertions based on the collected data. My past background and experiences make me qualified to conduct such research because I, myself, am a former principal and I currently support principals as they face new challenges. My purpose for this research was to responsibly contribute to the current gap that exists about principal self-efficacy and the factors that influence such beliefs.

Chapter 4

Chapter one introduced the important role of school principals: leaders of student achievement. It also discussed the variety of challenges principals are expected to successfully handle. Supporting school principals in handling such challenges is critical to school success. One way to support principals is to influence their self-efficacy beliefs prior to their facing challenges. The higher a person's self-efficacy beliefs, the more likely the person is to actually be successful. There is a gap in the research about school principal self-efficacy beliefs. This research study contributes to this gap in the research and is based on the overall research question: What Factors Attend to the Self-Efficacy Beliefs of Principals?

Chapter two discussed self-efficacy and the four sources of information used to form self-efficacy beliefs. It presented various ways each source of information works. Chapter two also explained how self-efficacy beliefs have been measured and it identifies the limitations in studying self-efficacy beliefs. Lastly, chapter two concluded with information from the limited research about school principal self-efficacy beliefs.

In chapter three, the purpose of the study was presented. Multiple case study analysis was explained as a research methodology used to better understand critical incidents in the lives of multiple people. This type of research allows for comparison among cases from which assertions are made. Chapter three discussed the selection of participants and explained the limitations and delimitations of this selection for this research study. It then detailed the data collection techniques, data analysis methods, and strategies used to ensure research validity.

This chapter will contain the findings from my multiple case study research. I will first share information about each of the eight principal participants and explain their personally

meaningful challenges. Next, I will compare the cases to each other. I will present information about the initial self-efficacy beliefs of each principal. From here, I will detail findings related to the four main sources of information used to form these initial self-efficacy beliefs. I will then identify additional sources of information that led to initial self-efficacy beliefs. Lastly, I will explain supports desired by the principals which they felt could have enhanced their initial self-efficacy belief levels.

Research Design

As previously discussed, this research was designed to answer the following question: What Factors Attend to the Domains of Self-Efficacy Belief Formation in School Principals? Self-efficacy beliefs are those held by people about their ability to produce desired results as a consequence of their actions (Bandura, 1997). In order to answer this question, eight retired, elementary school principals were interviewed about a personally meaningful challenge they faced as school principals, their initial self-efficacy beliefs prior to facing the challenge, and the factors which may have influenced these initial self-efficacy beliefs. Additionally, each retired principal was asked about what additional sources of information would have been helpful to positively influence their initial self-efficacy beliefs. Demographic information was also collected about each principal.

The following sections present information from the individual case studies in the order in which the interviews were conducted. First, demographic information will be presented. Then, each following section will present findings from each case. The former principal's challenge will be described to include information about when it occurred, what it was, how it was resolved, and the degree to which each principal felt it was successfully resolved. Next, I will identify the type of challenge as related to the three leadership areas identified by

Tschannen-Moran and Gareis's Principal Self-Efficacy Scale (2004): management, instructional

leadership, and moral leadership. Following this, I will tell about each principal's initial self-

efficacy beliefs. Then, sources of information that may have led to these initial self-efficacy

beliefs will be shared as analyzed through the lens of the contextual framework of source of

information that lead to self-efficacy beliefs: mastery learning, vicarious learning, verbal

persuasion, and emotional cues. Findings will also be described about additional supports which

the principals would have liked to receive to help their initial self-efficacy beliefs. Lastly, I will

provide additional information shared at the end of each interview by the retired principals.

Demographic Information

One male and seven female retired, elementary principals participated in this study. Each

of the eight retired, elementary school principals retired within the past six years from a common

suburban school system. These retirees served between six and 27 years as elementary school

principals. Five of the participants served as principal in one school, while the other three had

served in two, three, and five schools, respectively. When asked if they would accept an

elementary school principal job next school year if offered, three retired principals said they

would accept this assignment and five said they would not, as shown in Table 1.

Table 1

Demographic Data about Participants

Participant	Gender	Retirement Year	Total Years as Principal	Principal Again	Years of Service in Each School				
					School 1	School 2	School 3	School 4	School 5
Principal Marsha	F	2015	11	NO	11				
Principal Sally	F	2013	6	NO	6				
Principal Hannah	F	2013	13	YES	13				
Principal George	M	2010	26	NO	7	3	11	2	3
Principal Stephanie	F	2013	24	YES	14	1	10		
Principal Frances	F	2010	20	NO	5	15			
Princpal Alice	F	2014	27	NO	27				
Principal Michelle	F	2013	8	YES	8				

Before the interview, seven of the eight principals took the Principal Self-Efficacy Scale

(PSES) by Tschannen-Moran and Gareis (2004). One principal was unable to complete the scale

due to time and logistical constraints. The Principal Self-Efficacy Scale uses a nine point rating,

with nine representing a feeling of having a great deal of control and seven representing a feeling

of having a quite a lot of control. As presented in Table 2 below, all seven principals rated

themselves overall between 7.0 and 8.4. Mean scores for three categories of efficacy beliefs

were compiled based on efficacy for management, instructional leadership, and moral leadership.

These sub-scale ratings ranged between 6.5 and 8.7. Three participants ranked efficacy for

management as their strongest area of self-efficacy beliefs and four rated this category as lowest.

Two principals ranked instructional leadership as their top area, one person rated it equal to

moral leadership efficacy, two ranked it second, and two ranked it third. Moral leadership

efficacy beliefs was the top rank for one participant, was equal to instructional leadership for one

participant, was second for four participants, and was last for one participant.

Table 2

Principal Self-Efficacy Scale (PSES) Mean and Rank

Participant	Total Mean	Management		Instructional Leadership		Moral Leadership	
		Mean	Rank	Mean	Rank	Mean	Rank
Principal Marsha	7	6.5	3	7.8	1	6.8	2
Principal Sally	7.9	7.6	3	8	T1	8	T1
Principal Hannah	8.4	8.6	1	8.5	2	8.1	3
Principal George	7.1	6.6	3	7	2	7.6	1
Principal Stephanie	7.8	8	1	7.5	3	7.8	2
Principal Frances	8	7	3	8.6	1	8.5	2
Principal Alice	7.9	8.7	1	7	3	8.2	2
Principal Michelle	n/a	n/a	n/a	n/a	n/a	n/a	n/a

Personally Meaningful Challenges – Individual Cases

Each retired, elementary school principal selected and shared a personally meaningful challenge they faced as a principal. The following section describes each participant's personally meaningful challenge and presents information as to how the challenge was resolved. It also identifies the category of the leadership challenge, as compared to Tschannan-Moran & Gareis's (2004) Principal Self-Efficacy Survey (PSES).

Marsha. Principal Marsha learned about her challenge as soon as she arrived to her school in her first year as a principal, without any prior experience. Her challenge was to improve the culture of the school, specifically the community involvement in the school. When she first arrived, she never saw parents in the school. "I was on a mission to build culture involving everyone and a culture of hope and optimism," Marsha explained. She said, "To build community involvement, bring parents into the school, was a passion of mine." She was shocked at the lack of parent involvement and she believed that in order to have a successful school, she needed to bring families into the school so that staff could better understand the

community and its challenges which would lead to stronger partnerships with parents and result in student success.

Principal Marsha sought to resolve this challenge by implementing new actions such as conducting home visits as part of the staff's culture and by opening and fortifying a parent resource center in her school facility. The resource center was different from those in other schools. It was located in the front of the building, as compared to in a trailer like in other schools. It welcomed all family members including parents, grandparents, aunts, uncles, and siblings who would come in strollers that were lined up in the school's hallways during times the parent resource center was busy. It was meant to be a safe place where families could come, feel a sense of belonging and community towards each other and the school, get to know one another, and learn new information that would be helpful to them in raising their school-aged children. Principal Marsha felt like there was success as she faced her challenge of supporting the culture of the school and getting the community involved. She recognized progress made towards this mission but also said, "I can't tell you that it was 100% resolved because its, as you well know, leadership is like a journey."

Principal Marsha successfully implemented the parent resource center and it was even featured on a school system news program. She heard from parents about how important the family center was for them to have a place to talk to other parents about their experiences attend specific programs. According to the Principal Self-Efficacy Scale Scoring Guide (Tschannen-Moran & Gareis, 2004), a principal's work building a vision and sharing enthusiasm for that vision is part of their instructional leadership work. Additionally, labor that promotes positive images of the school and the values of the community are components of moral leadership.

Sally. Principal Sally's personally meaningful challenge was to build and support a highly effective program for students with autism. Facing this challenge started when she was the assistant principal at the school where she became the principal three years later. The challenge continued throughout her six years as the principal. When she arrived and began to assess the quality of the program for students with autism, she had no prior experiences with such programs and students. Principal Sally realized that the staff and community seemed to believe that the program was successful because the students were not hurting each other, were treating each other well, and seemed to be happy.

In her second year as an assistant principal, Principal Sally continued to observe the autism program and realized there were problems. Staff were teaching the same lessons, using the exact same texts, singing the exact same songs, and using the exact same instructional strategies as they had used the year before with the exact same group of students. She also listened to the stories of the families and came to better understand the struggles and challenges they faced because of their children's lack of independence. Principal Sally realized, "The two people who were in charge of that class taught [the students] how to keep their hands to themselves, how to stand in line. These were really important things…But I never saw anybody challenge their thinking or their intellectual development."

Because of these concerns, Principal Sally knew things needed to change. She began to research and have staff implement new instructional methods and curriculum, hire staff who had successful experiences teaching students with autism in ways that were rigorous and challenging, and she expanded the curriculum expectation to include reading, writing, math, communication and social skills beyond the goal of having the students keep their hands to themselves. She said, "Some of the kids there were very low functioning, but they still could learn a lot of things." She

felt like she was successful in handling this challenge as evidenced by not having parent

advocates fighting for student supports, by having a curriculum that she felt was meaningful

based on both academics and functional skill needs, and by having students with autism pass the

state standardized testing. The challenges faced by Principal Sally were focused on leading

student learning and raising student achievement, which are components of instructional

leadership (Tschannen-Moran & Gareis, 2004).

Hannah. As soon as she began as the principal, Hannah learned about the challenge she

would face that became the personally meaningful challenge. "I think the biggest challenge that

I had was morale when I first walked in there. And I do mean morale from everybody. Kids,

parents, and staff," she explained. When she was hired, she was specifically told about this

challenge by the supervisor who hired her. "The math sucks, the morale sucks, the language arts

sucks. I want you to come in and turn everything upside down," the supervisor told her.

In order to handle this challenge, Principal Hannah implemented a variety of actions with

each of stakeholder group. With staff, her strategy was, "validating them and nurturing them."

She told them, "I will take care of you so you can take care of our children." She moved her

office from the back of the school to the front so it could easily be accessed by anyone who

needed her. Her office door was always open to staff. They would come in and share their

problems, challenges and struggles. She listened and encouraged staff to help each other resolve

challenges. She cooked for staff and used food as a way to nurture them. She helped them work

through personal challenges so that her compassion would lead them to trust her and feel her

support. She would save her paperwork for home so that when she was in the school building

she could support her staff. She also made staff learn new instructional strategies to help them

improve their work such as Responsive Classroom, an approach that builds a positive school culture.

Principal Hannah worked to teach parents how to be engaged. She tried to be supportive and validate them in order to earn their trust. She met with parents and taught them how to help their children. She taught them to always know the names of their child's teacher. She explained curriculum. She taught them the reasons behind using certain instructional approaches. She responded to their concerns.   Principal Hannah would also attend extracurricular events of her students. If a parent told her that a child would not come to school, she would drive to the house, pick up the child, and bring the student to school. She convinced parents that her decisions would be based on what she believed was best for their children and would explain her rationale as to why she made certain decisions.

With students, Hannah focused on having high-expectations for academics and behaviors. She built relationships and strong rapport with students, based on her positive hopes for their future. She used "tough love" with students to help motivate them about the importance of a high-quality education in shaping their futures. "We're here for education and character," she taught the students. She moved her program for students with autism to the front of the school building, made sure these students were a welcomed part of the school community, implemented methods to mainstream these students, and ensured these students were active in school events.

Principal Hannah felt proud that she had successfully resolved the morale challenge after three or four years. She had implemented a variety of strategies that built strong, positive relationships with each group of people: staff, parents, and students. Her school's student achievement scores on standardized state tests showed significant progress and gains. She was

nominated for the Principal of the Year award in the school system. She felt she had earned the trust of the community as evidenced by some of the programs she implemented, that she felt would not have worked in other schools. These programs included changing the food that was served in the cafeteria and having parents tell each other about their trust in her to make decisions on behalf of their children. Building a shared vision, motivating teachers, raising student achievement, creating a positive learning environment, managing change, and facilitating student learning are all components of instructional leadership (Tschannen-Moran & Gareis, 2004). Promoting acceptable behavior and handling discipline are moral leadership roles, according to Tschannen-Moran & Gareis's Principal Self-Efficacy Scale (2004).

George. Principal George's personally meaningful challenge involved opening a magnet program for students in grades 4, 5, and 6 who were not behaviorally successful at their base schools. He learned of this challenge as soon as he began as the principal of his third school. The new program was designed to provide these students with an increased level of intervention and support as compared to what they received in their neighborhood school. Only one other school in the entire system of more than 120 elementary schools had such a program.

In order to face this challenge, Principal George assigned a very successful counselor, special education teacher, and instructional assistant to lead the new program. He believed, "It was the people that made it successful. I sort of thought, as the principal, that my job was to give the people what they needed and stay out of the way." Students in the program were able to successfully return to their base school within 12-18 months of being in his school's magnet program. After returning to the neighborhood school, they did not show significant inappropriate behaviors because of what they learned in his school. His staff would follow up with the progress of these students after they had returned to their base school and, "we were

pretty pleased with how it turned out." Principal George said, "absolutely it was successful." He also shared that later in his career, when he became the principal of a different school, he met a student who had been in his former school's magnet behavior program. This student was very successful in the base school following his time in the former school. This challenge could be considered one related to instructional leadership as it was designed to facilitate student learning and manage change in the school (Tschannen-Moran & Gareis, 2004). It also could be considered as a moral leadership challenge because the program was specifically intended to promote desired behaviors of students who had not been successful with this in their past schooling (Tschannen-Moran & Gareis, 2004).

Stephanie. Principal Stephanie had served as the principal of two other schools and served in a central office position prior to going to the school in which she faced her personally meaningful challenge. Her challenge arose during her first year at the school. She was to complete the implementation of a school-system developed instructional program. The program had been introduced prior to her arrival and certain components of it had begun. Her job as the new principal was to more deeply embed it and increase its effectiveness. The program was aimed at increasing student success in the areas of reading and mathematics by the time students were eight years old. The program provided staff development and instructional resources. It focused on eight components that successfully prepare students in their academic achievement. When Principal Stephanie arrived, she needed to reorganize the location of the classrooms in the building so that the K-3 classrooms were not grouped by grade level, but instead grouped as multiple K-3 teams with adjacent classrooms. Doing this meant that teachers had to change the grade level that they were teaching. "Some teachers had to change rooms, some teachers had to change grade level assignments, they couldn't run next door to their teammate at the same grade

level and get an extra copy of whatever they thought they needed because they were now in

families in difference circles in the school and so it kinda blew up."

When asked how the challenge was resolved, she said, "[The program] was implemented,

but not as successfully as I would have liked it." She conducted a staff book read to elicit

conversations about the various ways people handle change and methods to help each type of

person deal with change. She led her staff in researching the advantages of the program and the

reasons that reorganizing the structure of the school would lead to an increased level of program

effectiveness. In her second year as principal, the classrooms and teaching assignments were

shifted in order to more effectively implement the new program. Even though the change was

made, she did not feel that the implementation of the new program was as successful as she

would have liked it to be. She believed that it was not successful in part because she was a new

principal to the school and having a new program was yet another change the staff was facing.

"You know, new principal. Okay. New program. But there were some other dynamics there

that we didn't give enough attention to." In reflecting on that period of time, she felt that in her

first year as the principal, the staff needed to adjust to having a new principal and to having a

principal who was African American, rather than focusing on also implementing this new

program. Managing change and facilitating student learning are components of instructional

leadership challenges faced by principals (Tschannen-Moran & Gareis, 2004). Additionally,

shaping operating procedures and policies that are needed in order to effectively manage a school

are factors of management challenges (Tschannen-Moran & Gareis, 2004).

Frances. The personally meaningful challenge of combatting community racism faced by

Principal Frances occurred at both schools where she served as principal. For this research, she

focused on the first school at which she was principal. She learned about the racism as soon as

she began as principal, though she was not told that this was her challenge to face. "This group, just came to me kind of right out of-you know was just like out of the blue." She explained that the previous principal, "never allowed people into the building. He didn't allow volunteers and that kind of thing." When she began, she felt that the white community may have felt that because she was new, and a white woman, they could influence her to make decisions in the way they felt was right for the school community.

In order to face this challenge, Principal Frances held a variety of meetings and parent coffees both in the school and in the community to build strong, positive relationships among the community members. She befriended a daycare provider in the community who was African American and watched over a variety of ethnically diverse children. She asked this person to host a Saturday coffee in her home whereby the principal could talk with a diverse group of parents. She continued to have such events even though she did not get the turnout she wanted (because she thought the community didn't believe she would attend). Frances also worked with the high school principal and other principals in the area to engage in community events to build positive relationships with the various communities in her school area. Each year, community meetings were held. She explained, "We continued to have a yearly meeting where everybody was allowed to come.

[Community racism] resurfaced again when [the school] had ten (trailers) out back and we need to add onto the school." The community knew that with such a capital project to add permanent classrooms to the building to accommodate all of its students, more students would be assigned to the school. The community was aware that the neighborhoods that would be redistricted to the school had many ethnic minority students. Principal Frances learned that a certain group of white parents in the community were planning to organize a vote against these

additional classrooms being added to the facility, in order to avoid such a boundary change. To

prevent this and to combat community racism, Principal Frances called community meetings and

leveraged her PTA, which included parents who were African American, to be at the forefront of

the meetings. "We didn't allow the community to – you know, we tried to stay on top of it."

African American parents spoke at the meeting, shared their backgrounds, and successfully made

some parents "back off" the mindset that they were going to hold a community meeting against

the capacity enhancement at the school. Parents of former students were active members of the

PTA. They spoke, shared their backgrounds, their college degrees, and talked about how they

owned homes in the community and wanted this change to make all students feel welcome in the

school, rather than being assigned to the classrooms in trailers.

Principal Frances said that she felt the challenge was successfully resolved because the

parents voted for the addition to the school building and the construction took place. She

explained that in the school's 25th year anniversary celebration, there was standing room only

because so many parents attended. To her, this was evidence that she successfully changed the

mindset of the community to combat racism because parents did not block the capital

construction and because at a school celebration, parents of many ethnic backgrounds attended

and celebrated the school. The challenge can be seen as one that was focused on promoting the

values of the school system community in the school, which could be part of moral leadership

(Tschannen-Moran & Gareis, 2004). It also required elements of management as the principal

created work that added to time demands and elements to her own daily schedule that needed to

be prioritized in order to successfully handle this challenge (Tschannen-Moran & Gareis, 2004).

Alice. Principal Alice's personally significant challenge was helping staff have high

expectations for students and beliefs that the students could be successful. The challenge arose

because the students came from such diverse and difficult backgrounds and the staff turned over

constantly. This challenge became apparent about 10 years into her principalship when the

federal legislation, No Child Left Behind, exposed achievement gaps among students when their

test scores were disaggregated by ethnicity, special education needs, and language proficiency

levels. In seeing her school's student achievement data in this way, she understood that the

school needed to improve the quality of education for all students regardless of their subgroup.

The student body was shifting and becoming more diverse both ethnically and socio-

economically so her staff had to change their approaches. She needed to bring this new way of

thinking about success and better instructional strategies to her staff. She needed to build the

self-efficacy beliefs of her staff to help them believe they could be successful in educating all

students and to focus on the important parts of collaboration with each other. "In order to do

that, the teachers had to believe that the students can do this," she explained.

To support her staff, new expectations for collaboration were established and monitored.

She had to support staff in standing up to each other when they heard people having low-

expectations about students. She had to build a shared mission and vision in her staff to clarify

expectations and purpose. She hired new staff and new staff positions to help lead this change in

mindset and culture. She sent staff to training to learn how to specifically help students from

poverty and about how to not be afraid of the new teacher evaluation system, which shifted to

focus on student achievement outcomes as a measure of a teacher's effectiveness. She also

learned from other principals about what they were doing to help change the mindset of staff.

Principal Alice felt that even after 17 years, this challenge was never fully resolved. She

explained the difficulty of retaining teachers and keeping the culture and new mindset in the

school. She implemented coaching techniques to help her staff and realized that it took courage

for new staff to speak up and challenge the former mindset and beliefs that prevailed in the building, especially as the student demographics continued to change. Teachers struggled because they felt like they didn't have enough time to teach the students; when they were sent to training, they were losing even more time to help the students. "It was never resolved," she explained. This challenged focused on work related to instructional leadership (Tschannen-Moran & Gareis, 2004). Principal Alice needed to motivate her teachers in order to facilitate student learning and raise student achievement on standardized tests (Tschannen-Moran & Gareis, 2004). She needed to manage this change and generate enthusiasm for this mindset shift of her staff, which are also elements of instructional leadership (Tschannen-Moran & Gareis, 2004).

Michelle. Principal Michelle's personally meaningful challenge was taking a school that had no "synergy" (as she called it) and no instructional programs and making it into a school that provided services for children with all needs. She learned of this challenge as soon as she began researching the school in order to interview to be its principal; her understanding was confirmed when she began in her first year as the school's principal. In order to handle this challenge successfully, Principal Michelle believed she needed to gain community support in order to implement a variety of instructional programs that helped many students, not just some students. She did not realize that this was going to be difficult to do as a result of her community's limited understanding of the need for diverse programs that supported a wide range of student needs. She said that the parents in the community did not see the value of having new programs. "They were so hyper focused on making sure that their kids was emotionally stable, um and happy, and socially accepted, that the academics piece was truly secondary to them."

In spite of the lack of community support during her tenure, Principal Michelle did bring in a variety of new instructional programs in her efforts to create the synergy she felt was missing from the school. She brought in programs to support students with special education needs, a new math program that had an advanced and accelerated sequence, a local school advanced academics program to keep students from leaving her school in order to attend a magnet advanced academics program in a different school, and a Chinese language program. The parents did not welcome this because, "I was creating an adversarial situation because I was trying to meet the needs of every kid rather than having what they had in the past – this "wash" that met the needs of just the average kid."

She explained that she didn't think the matter was ever resolved due to the mindset in the community. They felt she was, "threatening their cute little neighborhood insular community" and that her "global perspective didn't match what they wanted to keep their school to be." This challenge called upon instructional leadership from the principal as she implemented new instructional programs to facilitate student learning in her school and had to motivate staff and manage this change (Tschannen-Moran & Gareis, 2004). It also required moral leadership as she worked to promote the values of the school system community to her specific school's community (Tschannen-Moran & Gareis, 2004).

Cross-Case Findings. When comparing the individual cases of this multiple case study, various findings emerged. I considered the following characteristics of the presented challenges: when the challenges occurred during each participant's career, how long it took each principal to face the challenge, the category of the type of leadership challenge as per Tschannen-Moran and Gareis (2004), and the degree to which the challenge was successfully resolved.

First, I looked at the timing and duration of the challenge in the career-span of the principals. Seven out of the eight principals selected a challenge presented to them during their first year as a principal in their school. Five of these seven principals only served in one school building, thus they learned about the challenge in their very first year as an elementary school principal. Six of eight former principals selected challenges that lasted multiple years to resolve or attempt to resolve. These six challenges, in fact, seemed to last the entire duration of the principal's term in the assigned school. Principal Frances's challenge actually occurred in both schools where she was principal, even though the interview focused on the specific self-efficacy beliefs associated with one of schools.

Second, I considered the type of challenges shared by participants. Most of the challenges primarily fell into the category of instructional leadership challenges. Some of the challenges also required elements of moral leadership and management. The two challenges relating to changing the mindset of the specific school community (Principal Frances combatting racism and Principal Michelle implementing new instructional programs in the school with community support of such changes) required elements of moral leadership by considering how the school system's values differed from the specific school community's values. The challenges that included details about changing structures, schedules, and school operating procedures (Principal George implementing a new program in his building and having to organize staff for this program, Principal Frances holding parent meetings and coffees, and Principal Stephanie having to change the assignments and room locations of staff) were considered as management leadership components of the challenges faced.

Lastly, I considered whether or not the selected challenges had been resolved successfully. The challenges varied in this regard. Most of the principals chose to speak about

personally meaningful challenges that were positively concluded. Two principals indicated that

the challenges were not handled to their desired level of satisfaction. Only one principal said

that the challenge was not fixed.   Principal Michelle did not feel she was successful in changing

the minds of the community, in spite of having implemented new instructional programs in her

school to better serve a variety of students. Two principals felt the problem was neither

successfully nor unsuccessfully resolved. Principal Stephanie said, "It was implemented but not

as successfully as I would have liked it." She explained that her staff criticized her leadership

style and that in retrospect she felt she could have done some things to make them more

comfortable with the change. She also found it interesting that nine or 10 years after the

challenge, she participated in professional development about leading people through change.

She felt that because of her previous experience, she was better able to manage in her future.

Principal Alice said that although progress was made toward her goal of changing the mindset

and belief systems of staff. "It was never resolved," she said. She shared, "I was still very

disappointed in the end" because her staff would still make comments that showed they did not

believe all students could learn and be successful. "I never got to where I wanted to be with that,

and if you ask me, that was probably the greatest stumbling block."

Initial Self-Efficacy Belief Levels

As previously stated, each former principal was asked to select a personally meaningful

challenge faced during the principalship. After the challenge was described and the principal

explained how it was resolved, each principal was asked to explain their initial self-efficacy

beliefs and the degree to which they felt they could act in ways that would lead to a successful

outcome to overcome the challenge. All eight principals stated that their initial self-efficacy

beliefs were high. All eight principals felt they could be successful in handling the personally

meaningful challenge. They said: "I didn't hesitate. …I believed in what they were saying, the philosophy of it, the strategies to implement it, and so I believed I could do it" (Principal Stephanie), "I had no qualms myself, as a principal, about know…what needed to be done. I would say yes, I thought we can do this. If you look at our scores – absolutely" (Principal Alice), and "I had absolutely no qualms about you know taking the bull by the horns and moving forward" (Principal Michelle). Additionally, Principal Hannah didn't doubt her ability to show the behaviors necessary to successfully resolve her challenge.

> I didn't have a doubt in my mind. I think and I say that with no humility. I was going to say with lots of humility. But I say that – I had no doubt in my mind that I could do it. That was great because it was exhausting (Principal Hannah).

None of the principals selected to discuss a personally meaningful challenge which they initially did not feel they could successfully handle in the future. Although some of the former principals discussed their doubts about their ability to be successful which occurred during the time in which they were actually facing the challenge, none began to tackle the challenges with such feelings. In the next sections, I will present the findings about what sources of information led to these initial, positive self-efficacy beliefs.

Source One: Mastery Learning

According to Bandura's research, mastery learning is the strongest source of self-efficacy belief formation (Bandura, 1997). Mastery learning means that a person's past successes or failures leads to their beliefs about their future potential ability to be successful or to fail. As previously stated, all eight retired principals indicated positive initial self-efficacy beliefs about their ability to handle the personally meaningful challenge. Seven of these principals spoke

about past successful experiences in their professional or personal life as a source of information which led to their positive self-efficacy beliefs. Mastery learning in the past was a main source of self-efficacy beliefs for most of the principals which led them to feel they could successfully handle the personally meaningful challenge.

The previous mastery learning experiences came from a variety of contexts. Most participants spoke about past successful professional experiences as teachers, assistant principals, or principals in previous schools as the main source of information. Some spoke about mastery learning from personal experiences which influenced their initial self-efficacy beliefs as they faced their personally meaningful challenges. These examples of past mastery learning experiences which informed initial self-efficacy beliefs in this research are presented below.

Previous teaching successes and mastery learning from such successes led three principals to feel they could successfully show actions that would have positive results as they faced their personally meaningful challenges as principals. Principal Sally spoke about her past successes as a fourth grade teacher which led to her positive, initial self-efficacy beliefs that she could successful implement a program for students with autism. When she was a teacher, her experiences included teaching a student who was deaf and students who were academically advanced. She had no prior experiences or specific training to support either type of student prior to being expected to teach these children. Regardless of this, she was successful. This led to her initial, positive self-efficacy beliefs in this challenge. She said, "As a teacher,[I] was always able to…find a way to make things work." Because she had successful experiences as a teacher implementing specific practices to help different types of students, she felt she could be successful as a principal who supported the innovation needed to support students with autism.

Mastery learning led to her initial self-efficacy beliefs in facing her personally meaningful challenge.

Principal Alice also spoke about her initial self-efficacy beliefs as having come from her past successes as a classroom teacher and reading specialist who worked with students who were disadvantaged. She said, "When I came out of there I believed I could teach any child ….how to read. So I guess I just believed it when I met these children [as a principal] who [had] such great need. I mean I believe I helped my third graders." This showed that because she had previously been successful as a teacher when her actions helped disadvantaged students, she felt that as a principal, she could show behaviors that would help her success in leading her staff as they faced what became a personally meaningful challenge. Her challenge was building positive beliefs in staff that all students could be successful and that they could successfully help all students, in spite of high levels of staff turnover. Thus, mastery learning from her teaching experiences led to her initial self-efficacy beliefs that she could be successful as a principal in this endeavor.

Additionally, Principal Frances described her past teaching experiences in ethnically diverse schools as a classroom teacher, a math resource teacher, and technology teacher who supported a variety of schools led to her initial, positive self-efficacy beliefs. As a principal, her challenge was to combat community racism. As a teacher, she experienced mastery learning teaching in schools with ethnically diverse communities. She talked about being a fourth grade teacher who broke up a fight between boys who were Asian and African American, while other colleagues just stood and watched without taking action. One of the boys in the fight had a knife. She broke up the fight and disciplined the boy with the knife by herself and threatened that if he ever did something like that again, she would call his parents and the police. She explained that being a teacher in diverse schools and having successes in schools combatting

racism, led her to feel that she could be successful in this endeavor as a principal facing her personally meaningful challenge which was to combat racism in the community.

From both her personal experience and her experience as an assistant principal, Principal Michelle had experiences that led to her positive self-efficacy beliefs as a new principal facing a challenge. Her challenge was implementing new instructional programs in spite of the mindset of the parents who did not want changes in instructional programs in their school. Principal Michelle described herself as having been a "tough parent" when she advocated to the same school system in which she was a principal on behalf of her child's ADHD needs. She successfully helped her own daughter prior to her experience as a school principal. She knew that in order to be successful with the personally meaningful challenge as a principal, she would be working with parents who she knew were "tough stuff." She felt that because she had been personally successful as such a parent in the past, she could be successful in the future with her new community of parents in her efforts to implement new instructional programs. In addition, she shared that when she was an assistant principal, she was quite successful as an instructional leader. She felt this also informed her initial, positive self-efficacy beliefs as a principal facing her personally meaningful challenge.

> I thought that having come from a Title I school as an [assistant principal] that I
> had gotten a tremendous amount of resource information to be able to do this. So
> I had absolutely no qualms about you know taking the bull by the horns and
> moving forward. I had had the special [education] piece. I had the advanced
> academics piece. I had the language piece. We had [a] great… program with the
> [theater] with kids with fine arts. So you know I had the background knowledge
> to do what I had to do (Principal Frances).

Thus, successful experiences as a parent and as a former assistant principal whereby she experienced mastery, led to her initial self-efficacy beliefs in facing this personally meaningful challenge as a principal.

Two principals, Principal George and Principal Stephanie, who had been principals in other schools prior to coming to their new schools, shared examples of how mastery learning served as a source of information for their initial, positive self-efficacy beliefs in facing their new personally meaningful challenges. Principal George said, "I've used a lot of words to say that I had stepped from [school] to [school] to [school] before [this program] and all of that I felt successful at." This showed that because of his past mastery learning, he felt he could be successful in this new challenge of implementing a new instructional program in his new school. Likewise, Principal Stephanie also spoke about learning from prior principal experiences which led to her positive, initial self-efficacy beliefs. Her challenge was also to implement a new instructional program in her new school. She said, "I'd had successes with implementing other programs before and I had done the research and I believed that it could happen and could be successful." In her previous schools she had shown the behaviors which led to the successful implementation of new programs, therefore, she felt she could do it again as she faced this personally meaningful challenge.

Principal Hannah spoke about mastery learning from her personal life in successfully facing challenges and hardships which led her to feel she could be successful in facing her personally meaningful challenge as a principal. From her past experiences in which she was successful, she learned how to behave in ways the led to future success. She said, "What I knew was hard work, perseverance…..you give it a shot and if it doesn't work, you figure out how to make it work – and then good results happen." Her life experiences led her to trust her own

ability to make decisions. This mastery learning led to her positive self-efficacy beliefs about her ability to handle the challenge that was presented to her as she became a new principal at her school. She knew that successfully accomplishing the challenge would require her to work hard, persevere, try new things, and to trust her own ability to make decisions. Thus personal mastery learning served as a source of information that led her to believe she could show the actions which would produce desired result in overcoming the personally meaningful challenge as a principal.

Seven out of the eight principals shared successful past experiences as having influenced their initial self-efficacy beliefs as principals facing personally meaningful challenges. These mastery learning experiences came from professional experiences as teachers, assistant principals, and principals in other schools. The mastery learning experiences also came from personal experiences of overcoming challenges and advocating for the needs of their own families. Thus, mastery learning from the past provided most of the principals with information that led to their positive, initial self-efficacy beliefs about their ability to show actions which would result in future success on personally meaningful challenges. Additional sources of information also contributed to the initial self-efficacy beliefs of principals. These sources will be presented in the next sections.

Source Two: Vicarious Learning

Vicarious learning can also be a strong source of self-efficacy beliefs, but may not be as strong as mastery learning (Bandura, 1997). Vicarious learning means learning by observing or learning about the experiences of others (Bandura, 1997). Two principals talked about watching their parents' experiences when they were children. They each spoke about how watching their parents led them to gain both belief systems and strategies for how to be successful.

Principal Hannah talked about how she watched her mother as she was growing up. "We were poor. My mom worked every night managing a restaurant and there was no money." Watching her mother survive by working hard led Principal Hannah to believe she, too, could overcome challenges by working hard. Also from watching her mother, she learned about a specific behavior strategy which was effective in tackling challenges. This strategy was nurturing others in order to build trust and respectful relationships. From watching this work with her mother, she felt that showing behaviors of nurturing staff would help her as a principal facing her personally meaningful challenge. She explained, "My mother was like that. My mother was a nurturer. A hard ass nurturer." This taught her that one way to build community was by nurturing others so she believed she could do this successfully. Principal Hannah learned vicariously from her mother and this influenced her initial self-efficacy beliefs.

Principal Marsha also talked about vicarious learning experiences which served as a source of information as she considered her ability to show future actions the would help her face her challenge of building positive culture and parent community involvement. She described her childhood whereby her parents, who were immigrants, thrived as a part of the community created by her school. She learned from them what behaviors to show in order to be successful in the future as they did this for themselves. She explained, "My parents were first generation Americans. I was raised in a family who valued hard work and determination. My grandparents all spoke another language as their first language." She talked about her family's experience with public school education.

> When I went to school there was a great – this kind of like stuck in the back of my head
> when I was thinking about the PTA – there was a great sense of connectedness and
> belonging that my parents had through the school. Their social circle, to the day they

died, and my friends – their parents were friends with my parents. So everybody knew

each other (Principal Marsha).

Vicariously learning from the experience of her parents, who were hard working and

determined immigrants, taught Principal Marsha how important the school community could be

to families. She felt she could successfully tackle the challenge as she thought, "how do we start

this and how do we bring people together so they feel like they belong to one another and they

feel significant?" Because she watched how this happened with her parents, she felt she could

overcome this challenge as a principal. Lastly, Principal Marsha also shared that she visited

another school to see what they were doing which led to her initial, positive self-efficacy beliefs

about her own ability to successfully face her challenge. She said, "We started going to visit the

couple school that had …parent centers." She continued to explain that these visits led her to

want to create a family center that was different from what she had observed. It helped her

continue to "dream" about what she wanted in her school and influenced her initial self-efficacy

beliefs that she could show successful behaviors to accomplish her goal.

Principal Alice learned of her challenge about 10 years into her 27 years of service as a

principal in one school. Vicarious learning experiences led her to her positive initial self-

efficacy beliefs. She explained that during her career, the expectations of public school

education changed as a result of the federal policy called No Child Left Behind. This legislation

led schools to focus on raising student achievement as subgroups of students were compared to

each other based on performance on standardized tests. As a principal, her challenge was to help

her staff have high expectations for all students and feel they had the ability to help all students

be successful. She explained that this was a mindset shift for her and for all educators. When

she learned of this challenge, her initial self-efficacy beliefs were high because she had seen a

teacher in her building achieve tremendous results with all students on standardized tests. She had observed this teacher's success with the students in her school and therefore she knew other teachers could have the same success and she could show the necessary behaviors as a principal to lead this new approach.

> We had a math teacher there who was studied by The Department of Testing and Accountability…our math scores are always like in the high 50s and all of a sudden you saw this graph and it went zoom – right up. Way up there in the 80s – 80 percentile were her scores, and higher. So she was one of two people that really made such a difference. They [The Department of Testing and Accountability] couldn't understand why and that was way back when. When you see that kind of success, you just say to yourself, 'We can do this. I know. Look at – look at her hard work.' I saw that success – one success – even if it was just little pieces of success, and I specifically saw that of course with math (Principal Alice).

From watching this teacher and vicariously learning from her, Principal Alice felt she could lead her staff to achieve the same results.

Principal George talked about his experiences watching other principals and their leadership styles. He learned through them about various behaviors leaders could show. These experiences led him to feel he knew a variety of behaviors he could show when trying to overcome his challenge. Specifically, as he learned vicariously from others, he came to understand that behaviors such as those shown by micromanagers were not what he would

implement as a leader wanting to successfully handle his challenge of implementing a new instructional program in his school.

> I didn't have a mentor, I had many mentors. And so I don't know that I witnessed failures as much as I saw different very different men and women and how they managed and I, I knew I could take this from here and that from there and this from here ... and I think I think the most prominent thing I saw was the difference between micromanagers and whatever the other extreme is (Principal George).

Principal George described that his initial self-efficacy beliefs about his ability to successfully handle his challenge were high because he knew exactly which staff members he would have lead the initiation of the new instructional program. He believed in his ability to show the right actions, such as assigning these teachers to the program and avoiding behaviors that would micromanage the program, which led for him to have such high initial self-efficacy beliefs. He explained, "I sort of thought, as the principal, that my job was to … give the people what they needed and stay out of the way." Thus, from having learned from other principals, Principal George felt he could show behaviors that would successfully handle the challenge ahead.

Principal Sally also shared of how vicarious learning was a source of information she used to help her feel she could successfully support an autism program in her school. She explained that she learned strategies for how to work with a variety of stakeholders by watching her principal when she was an assistant principal. This helped her feel she had a multitude of strategies to use when working with stakeholders.

I watched [former principal], and she was wonderful at making everybody – if she had a parent come in I would just sit there and just watch. She'd say, 'Come on in, watch, see how I handle this.' She was wonderful at having everybody leave feeling like they had won. If there was an angry parent and an angry teacher, she would bring them together and she would have people listen to each other and she would facilitate a conversation and at the end both of them felt like they were win/win (Principal Sally).

By watching her principal when she was an assistant principal, Principal Sally felt she had learned behaviors that she could successfully implement when working with stakeholders. Supporting a successful autism program required working closely with parents and staff in order to change practices. Principal Sally felt, in part, she had learned from the vicarious experience of watching her former principal about what behaviors she could then show in the future that would lead to her own success.

Vicarious learning was a source of information used by many of the principals to form their initial self-efficacy beliefs. Principals learned from their personal experiences observing their family members. Principals learned from observing their supervisors and other schools. Principals learned from watching teachers in their own schools who were experiencing success. Lastly, principals learned from other principals about what behaviors they could show in the future to create their desired results. Thus, vicarious learning from a variety of experiences served as sources of information used to positively influence initial self-efficacy beliefs.

Source Three: Verbal Persuasion

Verbal persuasion is a third source of self-efficacy beliefs. This refers to words of

encouragement used to influence someone's thinking about their future ability to successfully

handle a challenge (Bandura, 1997). Only two principals specifically noted verbal persuasion

that influenced their initial self-efficacy beliefs about their ability to handle the challenge.

When Principal Sally was told by her supervisor that she was to successfully improve and

support an autism program, her supervisor said, "I know you'll do great. You know, there are

people around who can help you but I know you'll do great." This verbal persuasion from her

supervisor led her to feel she could, indeed, show the necessary behaviors to be successful in her

challenge.

Principal Michelle also received specific verbal persuasion from her supervisor which

was a source of information she used to form her initial beliefs. She received this verbal

persuasion when she was being told about the challenge upon being hired to be the new principal

of her school. She said, "I was being encouraged by the … Assistant Superintendent…to move

forward because her charge to me was put (school name) on the map.   And so that was the

goal." Because her new supervisor, the Assistant Superintendent, told her this was her goal and

had hired her with this goal in mind, Principal Michelle felt the verbal persuasion influenced her

beliefs that she could be successful in the challenge.

Source Four: Emotional Cues

Emotional cues are the fourth source of information used in initial self-efficacy belief

formation (Bandura, 1997). Positive emotions may lead to positive self-efficacy beliefs

(Bandura, 1997). Five principals noted the excitement they felt when they first learned of the

personally meaningful challenge. Principal George stated he was "eager to rise to the challenge." Principal Marsha described how she told a teacher, "Well I have this little vision I want to share with you. Don't laugh." She continued and said, "My belief and my passion were all about my hopes and dreams, given the fact that I knew what that sense of belonging and significance could possibly do to transform culture within the school." Principal Stephanie specifically stated, "Implementing instructional programs and strategies was something I got excited about… I believed in what they were saying, the philosophy of it, the strategies to implement it, and so I believed I could do it." Principal Alice said, "But when you see that you're so excited and you're so focused, it's like laser like, so everybody becomes laser like." Lastly, Principal Michelle specifically stated, "I think my biggest challenge, although I saw that as my goal and I was so excited." Excitement was identified as a positive emotion felt by these five principals when they learned of the challenge. This feeling served as a source of information which influenced their initial self-efficacy beliefs that they could show the necessary behaviors to successfully handle their challenges.

Additional Sources of Information

Additional sources of information were found to have influenced the initial self-efficacy beliefs of the principals. These sources of information were: childhood experiences, core beliefs, and anticipating future support from others. Although these sources of information may have been components of the four main sources of information used to influence initial self-efficacy beliefs, I did not want to make assumptions so am presenting these findings as unique sources of information.

Childhood experiences. Many of the principals shared information about their childhood as a source of information used to influence their initial self-efficacy beliefs when

facing their personally meaningful challenge. These experiences related to the environment in

which the principals grew up and the adult guidance/modeling they had received as children.

Principal Frances talked about her own childhood experiences as an influence on her

initial self-efficacy beliefs about her ability to combat community racism. She felt she could

build such a diverse community that was integrated and welcomed diversity in her school

because she grew up in such a community.

> Growing up I was – I had a lot of friends that were of all – like I say you know,
>
> Italians, Japanese, Mexicans, African American students. We really bonded as
>
> kids because you know farming is hard work. My father ran a packing plant and
>
> my sister and I both had to work in it, and you know we had to work with
>
> unskilled labor and people who couldn't read and those kinds of things. We both
>
> became teachers because we felt that you know we could make a difference. But
>
> I think that's probably where all of this started. My parents were, like I say, we
>
> were direct immigrants. I'm a first generation and you know, considering my
>
> dad's side of the family and so I think you know it was just the way I grew up and
>
> you know I went to (location) State or (location) State and we were integrated.
>
> (Principal Frances).

From this experience of having a successful childhood in a diverse and integrated

community, Principal Frances believed she could create this in her school community as a

principal who was tasked with combatting racism.

Principal Marsha also spoke about her childhood experiences as an influence on her

initial self-efficacy beliefs. She said, "I was raised in a community kind of sense so every one of

the kids in my classroom knew that their parents knew what was going on." Having had this experience herself as a child, she then knew as a principal she had the ability to be successful in creating a strong parent community for her school. From this experience, facing the challenge of welcoming the diverse community into her school "became a mission for me," she said. "There was a new passion."

Principal Sally also spoke about her childhood and its influence on her initial self-efficacy beliefs. She said, "My father was really good with me when I was growing up and he just always – his attitude was you can do anything. So I grew up feeling like I could do anything." This belief system developed in childhood as a result of her father's words.

Principal Alice also spoke about her childhood experiences which led her to become a teacher and led her to apply to be the principal of her school because of its diversity. When she went to high school, many schools in her community combined and she found herself in an ethnically diverse school which represented many cultures and values. From this experience, she selected her future career path. She said, "I thought when I – I'm gonna be a teacher and I'm gonna help people, especially people who are discriminated against, who are the underdog." This led her to become a teacher in a difficult part of town. Then, when she applied to be a principal, she only applied to her one school – as a result of her awareness of its cultural diversity. These childhood experiences served as a source of information used to form her initial self-efficacy beliefs when faced with the challenge of helping her staff have high expectations for all students and help the achievement of all types of diverse students

Principal Hannah referred to her childhood experiences throughout the interview. She shared details of the struggle growing up in poverty. She had watching her mother's success as a

result of hard work and determination. She described the community of women who raised her. When faced with the challenge of improving the culture of her school with staff, students, and parents, these memories influenced her initial self-efficacy beliefs in positive ways.

Lastly, although she did not elaborate, Principal Stephanie also briefly mentioned her childhood as a source of information she used to influence her initial self-efficacy beliefs.

> I believe that had I not had the support- the family support-the personal support I
>
> had – the way I'd been raised, that that might have been an assignment I would
>
> have reacted to differently (Principal Stephanie).

This finding showed that Principal Stephanie's childhood experiences served as a source of information she used when forming her initial self-efficacy beliefs.

Six principals shared information about their childhood during this research study. The context of such sharing involved how experiences and lessons learned in childhood served as a source of information used to influence their initial self-efficacy beliefs about their ability to successfully handle their personally meaningful challenge.

Core beliefs.   Six of the eight retired principals spoke about their core beliefs as having influenced their initial self-efficacy beliefs when they learned about the personally meaningful challenge. Principal Stephanie said, "I had been raised to believe that if I did the right thing and if I worked hard that things would turn out okay." She also said that she believed in the new instructional program she was asked to implement. "I believed in what they were saying the philosophy of it the strategies to implement it and so I believed I could do it."

Principal Sally also spoke about how the challenge related to her own core beliefs.

I think it was a core belief. I think I think having been a student and extensions that kids need, I think that as a person that that was my core belief – everyone gets what they need because you you've gotta have them to become as successful as possible (Principal Sally).

Principal Frances explained that the challenge she had to face related to her personal beliefs, "But what I saw of the diversity, you know, and the different families from the different cultures, that we had to value those cultures. As I said, going back to personal belief…" During the interview, Principal Hannah also spoke about her belief in the power of education. "It gives you choices. It gives you volume. It gives you freedom. And that's what I want for our kids." Principal Sally shared that she had been taught that she could be successful with anything she wanted to do. This could be considered a core belief that was instilled in her by her father. Principal Marsha also shared information relating to her core beliefs.

I knew I had great hopes and dreams…But what I saw of the diversity, you know, and the different families from the different cultures, that we had to value those cultures. As I said, going back to my personal belief (Principal Marsha).

Principal Marsha explained that she valued diversity and knew that welcoming the diverse cultures in her community was going to be a critical challenge she felt she could successfully overcome. Lastly, Principal Alice said, "And so I think always – always from the outset – I can do this, and when I think about children of poverty particularly, I always believed. That's why I'm there at (school) and we're going to do it." These examples show how the initial self-efficacy beliefs of these five principals were influenced, in part, by core beliefs. They

shared that these beliefs served as a source of information that helped them consider whether they felt they could be successful in handling the personally meaningful challenge.

Support from others. Multiple principals noted that their initial self-efficacy beliefs were influenced by their knowledge that they had the support of others in tackling the challenge ahead. This support included that from their new supervisor, central office employees, and colleague principals. The following section will describe these findings in more detail.

Seven of the eight principals learned about the challenge as they began their first year as principal in a school. Because they had just been hired, they believed they had the full support of their new supervisor; had their supervisors not believed in their ability to be successful they would not have been hired. Additionally, they may not have been asked to face the challenge if their supervisor had not believed they could be successful. For example, Principal George believed that because he was asked to implement a new challenge in his new school, his supervisor believed in his ability to successfully handle the challenge. "So, I just I just chose to look at it as a compliment also that I could do it… I chose to look at it that way. I don't know what was in her mind." He felt that because he had just been hired as the new principal of his school and because he was asked to be one of two schools who had this new program, he had the support of his supervisor to face the challenge.

Principal Michelle also felt the support from her new supervisor. Principal Michelle realized the challenge as she was preparing for her interviews to be the new principal of her school. She recognized the lack of diverse programming in the school. Upon being hired, she was told about the challenge and was told that the community could be difficult. She said, "I was being encouraged by the … Assistant Superintendent… to move forward because her charge

to me was put (school name) on the map.   And so that was the goal." Knowing that she had the support of the Assistant Superintendent who wanted her to successfully accomplish the challenge, Principal Michelle felt she could be successful in handling the challenge.

Two principals felt they would have the support of central office as they faced their challenges, which led them to feel they could be successful in overcoming the challenge. Both Principal Frances and Principal Stephanie had previously worked in central office. Having been support staff and knowing they had relationships with central office employees led them to feel they would be able to be successful in facing their personally meaningful challenge. Principal Frances said, "I think I had an advantage by having been a resource teacher because we dealt with central staff all the time….But we knew – you know I knew where to go." Similarly, Principal Stephanie said, "I believed I had the support of the elementary instructional office and I guess those were the things that made me think I could do it." Additionally, although she had not worked in central office herself, Principal Sally explained that a reason her initial self-efficacy beliefs were positive was that she knew she could call upon specialists to help her. When she first learned of the challenge, she considered what resources were available to her. This led her to then feel she could show the necessary behaviors to successfully handle the challenge.

> I was a little overwhelmed at first thinking, 'Oh my gosh. What do I have to
> do?" but I figured if I did it step by step along the way – if I got as many of the
> experts in the county that were connected with the school to come in and help me
> understand what was needed - she would then be successful (Principal Sally).

Thus, three principals explained that their initial self-efficacy beliefs were influenced by their knowledge that they could call upon central office employees to activate their help in facing the challenge. Understanding these available resources served as a source of information used to form their initial, positive self-efficacy beliefs.

Lastly, Principal George noted that he knew he had the support of other principals in the school system. This, then, led him to have positive, initial self-efficacy beliefs about his ability to show the behaviors necessary to successfully implement a new instructional program in his school. Principal George described that he had support from other elementary school principals.

> In those days, you didn't have a mentor. You had many mentors. People
>
> wouldn't wait for me to ask….In those days, there was no email and if you got a
>
> call from a fellow principal, you stopped what you were doing and you took the
>
> call (Principal George).

Knowing he could call upon the support from other principals positively influenced the initial self-efficacy beliefs of Principal George.

Desired Supports

Each principal was asked to identify what supports, if any, would have further increased their initial self-efficacy beliefs that they could successfully handle the personally meaningful challenge. Six principals described some type of observation in another school and/or conversation with a colleague who had had success with a similar challenge as means by which they could have increased their initial self-efficacy beliefs. According to Bandura (1997), this type of experience would be considered vicarious learning. Two principals said "So maybe someone giving you the knowledge and research on how you could just learning from those

people who had great strengths. So they could share the story" (Principal Alice) and "I think it would have been beneficial had I met the former principal and had the opportunity to speak with her just to find out where she was with everything" (Principal Michelle). Other principals had similar suggestions.

It would have been helpful at that point, although I don't know what was available in the county, if there had been a really successful program that I could have gone to see. That I could have talked to principals and assistant principals from those programs so that could have learned what they did to make a really good autism program (Principal Sally).

The people involved visited the program at (school) which had been in place for quite a while. I could have done that. I didn't I've know I'd gotten to know the principal in retirement a whole lot more than before; and that would have been to my credit. To interview, not interview, but to talk to him and visit the program. I didn't do that (Principal George).

A conversation with someone who had done it; now that would have been in another area because as I said, we were the school. But I think having had a conversation, maybe having done some observations, and um talk to whatever leadership team was at that school might have helped me see some of the minds that I was getting ready to step into (Principal Stephanie).

Additional ideas for vicarious learning experiences were offered. These included training and having a mentor in order to increase initial self-efficacy beliefs. Principal Frances explained that she felt she had strong training experiences and an experience specific to her challenge

would have been helpful as a support which could also be considered a vicarious learning experience. Principal Hannah talked about how, at one point in her career, she was assigned a mentor who was a retired principal who lived in another state and did not know her/her school/her school system. She suggested this may have been a helpful support. "It was like having – I know she was called mentor – it was like having a psychiatrist." She felt this type of support was effective because the mentor "was very good at letting me walk myself through it…asking the right kind of questions and allowing me to amend my own thinking. That, to me, was valuable." Principal Stephanie seemed to feel that a mentor would have been helpful. She said, "I wished I had had someone with whom I could talk about the REAL things I was dealing with over there and I think those things certainly impacted my tenure." Principal Marsha also discussed the suggestion of both training and individualized support. She, described the need for individualized and personalized school support, rather than what she called a "one size fits all model" of support. Thus, specific training and mentoring were suggested as additional supports that could have increased the initial, positive self-efficacy beliefs of the principals.

Lastly, a suggestion was made which may have been a way to support emotional cues. Principal Marsha explained that a support which would have been helpful to support her initial self-efficacy beliefs would have been to have "less general demands" expected by the school system. This example may have been one intending to reduce the stress levels of principals, which could increase the positive emotional cues experienced by principals when facing new challenges.

Summary

Effective principals are the foundation to effective schools (Tschannen-Moran & Gareis, 2004). In order to be strong leaders, they must build and support necessary conditions to enact

change and overcome challenges (Tschannen-Moran & Gareis, 2004). Principals face a variety

of challenges. Their self-efficacy beliefs about their judgement about their ability to successfully

handle specific challenges predict their actual future behavior and success (Tschannen-Moran &

Gareis, 2004). The retired principals shared information about a variety of challenges they faced

and their initial self-efficacy beliefs about their ability to be successful in handling it. According

to Tschannen-Moran and Gareis's Principal Self Efficacy Scale (2004), there are three types of

leadership challenges: instructional: management, instructional leadership, and moral leadership.

In this study, instructional leadership challenges were selected by most of the participants as

personally meaningful challenges faced in their career. In order to successful accomplish such

challenges, elements of management and moral leadership were shared but the challenges

predominantly focused on instructional leadership and related efficacy beliefs. The challenges

were: building positive culture and parent community involvement (Principal Marsha), building

an autism program (Principal Sally), building positive culture with staff, students, and parents

(Principal Hannah), initiating and implementing a program for students with behavior struggles

(Principal George), implementing an instructional program with greater fidelity (Principal

Stephanie), combatting racism of parents (Principal Frances), building positive beliefs in staff

that all students could be successful and that they could successfully help all students, in spite of

high levels of staff turnover (Principal Alice), and implementing new instructional programs in

spite of the mindset of the community (Principal Michelle).

Each principal described the actions they took in their effort to resolve the challenges and

their beliefs about the degree to which the challenge was successfully resolved. Most spoke

about challenges that were successfully resolved, one spoke about a challenge that she felt was

not successfully resolved, and two spoke about challenges that were partially resolved. Next,

each principal talked about their initial beliefs about the degree to which the felt they could successful handle the specific challenge. These beliefs are known as self-efficacy beliefs. All eight principals in this multiple-case study research initially felt that they could be successful in handling challenges; they all had high levels of initial self-efficacy beliefs in spite of the fact that not all felt that actual success was achieved. Research suggests that when initial self-efficacy beliefs are high, this leads to actual success (Bandura, 1997). There were three cases where, in spite of high initial self-efficacy beliefs, the participants did not feel that the challenges were successfully resolved.

Next, the principals discussed the sources of information that led to their initial self-efficacy beliefs. Specifically they were asked about the four main sources of information that influence the formation of efficacy beliefs: mastery learning, vicarious learning, verbal persuasion, and emotional cues. While mastery learning experiences appeared to be the strongest source of initial self-efficacy belief formation, vicarious learning experiences were also noted by most of the principals as sources of information that led to initial self-efficacy beliefs. Evidence of verbal persuasion and emotional cues also served as source of information used to form initial self-efficacy beliefs. When asked about desired supports principals wished they had had, vicarious learning experiences were identified as a main suggested support. The principals shared that they would have positively benefited from observing other schools and programs, talking to others, training and mentoring.

Three other sources of information also emerged as contributors to the positive initial self-efficacy beliefs held by the principals. The first source of information was from childhood experiences Core beliefs also informed self-efficacy beliefs. Lastly, knowing they had support from others served as a source of information that influenced initial self-efficacy beliefs.

Chapter 5

Chapter one discussed the importance of school principals. It introduced the concept of self-efficacy beliefs. Self-efficacy beliefs are defined as the initial beliefs a person has about his or her capabilities to successfully create and implement a course of action that will produce desired results (Tschannen-Moran & Gareis, 2004). High initial self-efficacy beliefs lead to a greater probability that a person will experience actual success. There is a gap in the research about principal self-efficacy beliefs and how to support these beliefs. The specific research question to be answered in this study was: What Factors Attend to the Domains of Self-Efficacy Belief Formation in School Principals?

Chapter two presented a thorough review of the literature about self-efficacy. It defined self-efficacy and the theory in which self-efficacy is contained. It identified the sources of information people use to form self-efficacy beliefs and provided examples as to how these sources work. It also shared examples of how self-efficacy has been studied in the past.

In chapter three, I explained the methods used in this research. I conducted a multiple case study qualitative research study based on a critical incident theory. Former school principals shared memories from a specific, personally meaningful professional challenge they faced. They described their initial self-efficacy beliefs about the challenge and the sources of information that influenced their beliefs. A great deal of detail was provided about the strengths and limitations of studying retired school principals.

Chapter four presented the findings from this multiple-case study qualitative analysis research. I described the challenge faced by each principal. Then, I shared information about the initial self-efficacy beliefs of each principal. Following this, I presented details about the

sources of information that led to these initial self-efficacy beliefs. Lastly, I presented

information about the desired supports the retired principals wanted which could have influenced

their initial self-efficacy beliefs.

In this chapter, I will discuss my findings and make recommendations for the future.

First, I will discuss the role of the principal. Then, I will consider the characteristics of the

personally meaningful challenges described by the principals. From this, I will present

information about the initial self-efficacy beliefs of the principals as related to the current

research. I will discuss the career choice of becoming a school principal and its relationships to

self-efficacy beliefs. Then, I will present my recommendations for supporting principal self-

efficacy belief formation. I will conclude with recommendations for future research about

principal self-efficacy beliefs.

Being a Principal

Principals are expected to successfully initiate and lead change; without them, schools

cannot be successful (Tschannen-Moran & Gareis, 2004). They confront a variety of demands

(Beck & Murphy, 1992). From this study, I confirmed the wide array of complex and multi-

faceted challenges principals are expected to face. I found that such challenges oftentimes take

multiple years to fully resolve. Although the principals in this study spoke of positive memories

such as accomplishments, honors, and meaningful relationships with stakeholders including

supervisors, staff, colleagues, students, and parents, they also spoke authentically about the

negative aspects of the job which were emotionally taxing. Examples of the emotions associated

with being an elementary school principal will be presented in below.

The principal participants shared some of the positive aspects of being a principal. "I loved being a school principal," said Principal Frances. Principal Hannah spoke about being nominated for the Principal of the Year award, while Principal Frances spoke about earning this recognition. During the interviews, all participants spoke about successful accomplishments they made in their schools which improved the quality of services for students and resulted in student success. Most of the principals also shared about relationships they still have with former colleagues, staff, and students which are still maintained even though they are retired. This finding is consistent with the research that says administrators believe in their ability to make a positive difference as one of the largest reasons they enjoy serving in this role (Howley, Solange & Perry, 2005).

But, the principals in this study also spent a great deal of time speaking about the challenges of the role such as stress, lack of control over their daily schedule, the demanding and emotional nature of the position, and how their personal lives were negatively affected as principals. Like Bredeson (1985), principals in this study shared stories about the difference between what they dealt with on a daily basis as compared to what is written about what it is like to be a school principal. "There are so many considerations in the principalship that people don't even think about or talk about… There were a lot of joys but there were a lot of pains …some years were better than other," shared Principal Stephanie.

> I think the role of – the roles, plural, are too many of a principal. The expectations are super high but I know as principals we usually set our own high expectations even higher and yeah, I think sometimes we get so caught up in the job, as I said earlier, and the responsibilities that we forget how important it is that life is not our work, and if it got to a point you know where I was constantly questioning myself about – people would say

"How do you take care of you?"….Sometimes, as a principal, you kind of feel like you're

on the treadmill and the speed just keeps going faster and faster and faster and really? Is

that really what you want your life to be about?"…. The demands of what every day is –

is it's just unbelievable. I think what helped me most cope with the stress of the job is

just learning not to be a perfectionist because you can't (Principal Marsha).

I think that the stress of being a principal is something else. I don't know how young

people… I don't know how you keep that up for a career…The stress I think is just hard.

It's, you know, it all lays on your shoulders, and that's OK but – but doing it day in and

day out, twelve months a year, over a period of years, you feel like you can't even take

vacations because I was always working on vacation - always (Principal Sally).

The former principals discussed the lack of control they had over their schedule.

"There's just so many surprises," said Principal Marsha. "My office was like Bananaville.

Constantly. All the time and my paperwork came home with me," explained Principal Hannah.

Principal Sally said, "Every single day…you get your whole schedule. You have all these

meetings that you have to go to and then the fire alarm goes off as the bus is arriving first thing

in the morning. OK that shoots that." Principal Frances said, "That's not a good feeling when

you walk out of the door and think 'I had ten things I wanted to do today and none of them got

accomplished because something else happened that was a lot more important." Other principals

shared similar stories.

I could be sitting at breakfast thinking I'm going to do this observation, um, I'm going to

get that done first thing and go back to my office and write it up – three days later it's not

written up because of this, that, or the other. And I didn't face like true crisis like middle

and high school people do but I was in a Mayberry school but it's just we don't have control of our schedule or our time (Principal George).

You never knew what was gonna – you know, what was gonna walk through that door in the morning. I'd be out at the busses every day and you could tell what kind of a day you were going to have by virtue of what was going on, you know, when they came off the bus in the morning. I also went to breakfast and here again, that set the tone for the day because you know you could always tell that something had happened or something was going on (Principal Frances).

The study revealed the volume and magnitude of challenges principals face. Examples included: dealing with violence, gang activity and hardships in the community, deaths of students and parents, and supporting staff members who were dealing with their own life crises. These challenges seemed to create a deep emotional response in the retired principals as they related to safety, health, and people's well-being. The former principals also spoke about how they also had to confront the large volume of professional responsibilities and resolve personal challenges that were not related to the job, while confronting the daily demands of the job and unexpected challenges.

Being a school principal is not easy. "You just feel like you're just stumbling along, you're not doing a good job," said Principal Alice. Principal Michelle spoke about how she is a person who "takes things personally."

I think principals receive very little emotional support…Someone who takes on this job is very much emotionally committed to the outcomes. And I think that as I hit every challenge, as, you know, I put in place the different programs, that you know there could

have been like a little bit of um uh debriefing with [supervisor] so you know I knew

where she stood and what was going on (Principal Michelle).

Being a principal is filled with upsides and downsides. Although there are many joys and

successes, principals must confront a wide variety of demands that are emotionally taxing. Being

a principal is difficult. Supporting them as they face challenges is a worthwhile pursuit. As was

found in this study, principals are not always successful in resolving challenges. Because of this,

it's important to help principals have high levels of initial self-efficacy beliefs because such

beliefs are predictive of actual future success (Bandura, 1997).

Personally Meaningful Challenges

The purpose of this multiple case study research was to answer the research question:

What Factors Attend to the Domains of Self-Efficacy Belief Formation in School Principals?

Self-efficacy beliefs are those held by people about their ability to be successful in handling a

challenge (Bandura, 1997). A fundamental component of self-efficacy beliefs is that they are

specific to a situation (Dimmock & Hattie, 1996). Therefore, first it is important to discuss the

self-selected personally meaningful challenges from the eight retired, elementary school

principals in this study.

Stressful challenges can be expected in the careers of school-based administrators

(Sarros, 1998). It was not surprising that the self-selected personally meaningful challenges

explored in this study were stressful, multifaceted, and complex. They challenges were: building

positive culture and parent community involvement (Principal Marsha), building an autism

program (Principal Sally), building positive culture with staff, students, and parents (Principal

Hannah), initiating and implementing a program for students with behavior struggles (Principal

George), implementing an instructional program with greater fidelity (Principal Stephanie), combatting racism of parents (Principal Frances), building positive beliefs in staff that all students could be successful and that they could successfully help all students, in spite of high levels of staff turnover (Principal Alice), and implementing new instructional programs in spite of the mindset of the community (Principal Michelle). Most of the challenges related to instructional leadership, as defined by Tschannen-Moran & Gareis (2004). These challenges required the principals to motivate staff, get people excited about a shared vision, deal with change, create a positive environment, enable student learning, and raise student achievement (Tschannen-Moran & Gareis, 2004). According to Eberts and Stone (1988), improvements in student outcomes are correlated with principal involvement with instructional leadership. A modern way of describing the principalship is to characterize principals as instructional leaders (Mendels, 2012). When principals focus on instructional leadership, they are more likely to be effective in raising student achievement (Mendels, 2012). Since the principals in this study came from a common, high-performing school system, it is not surprising that they selected personally meaningful challenges related to instructional leadership.

It was also not surprising that for most of the principals, the challenges occurred in their first year of service in their schools. In fact, five of these principals were first-time principals. This timing aligns with the research that suggests first-time principals and those in their first few years need the most support because they are transitioning from principal preparation to actual service (Thomas & Kearney, 2010). Thus, the challenges the principals confronted when they first arrived in their new buildings were the most significant because they were also facing the transition to being in the new role. This is important because it shows the need to support beginning principals who are facing complex challenges for their very first time as principals.

Initial Self-Efficacy Beliefs

The initial self-efficacy beliefs of all participants were high. All of the principals believed they could successfully show the behaviors which would overcome their personally meaningful challenges. As previously noted, seven of eight participants selected challenges that occurred in the first year of service as principals in specific schools. Five of the principals were first year principals in the schools where they'd spend their entire career as principals.

These findings align with the results of Fisher (2014) that principal self-efficacy beliefs are high in the first year of service. Although this study did not compare such beliefs over time like Fisher (2014), a comparison could be made that when newly hired, people have high levels of beliefs in their future abilities. Further, the only principal who selected a challenge mid-career selected one that occurred in her 10th year as principal, which also is consistent with Fisher's finding that principal self-efficacy beliefs significantly decline during the second through fifth year of service, then rise after the fifth year and stabilize after ten years (2014). These snapshots of experiences during the first year as principals and, in one case, the tenth year of services align with an element of Fisher's (2014) research. Principal self-efficacy beliefs may be high in their first year of service regardless of the magnitude and complexity of the actual challenge.

In spite of all principals having high initial self-efficacy beliefs, not all of the challenges were successfully resolved. This result was consistent with the research on self-efficacy beliefs. Just because a person has high initial self-efficacy beliefs, this does not mean the person will actually experience success (Bandura, 1997). As previously mentioned, the challenges faced by principals are complex and multi-faceted. Actual success is not guaranteed, even when principals feel they can be successful.   Even principals with high self-efficacy beliefs need

supports to face challenges, in order to fortify their persistence, flexibility, and motivation as they face future challenges.

The findings from this study show that challenges often take multiple years to resolve. Therefore, even though most of these challenges began in the first year of service, support for principals should not stop after their first year of service because challenges take time to resolve and can occur at any time in a principal's career. A strong sense of self-efficacy is needed for people to stay motivated during the continual flow of activities that characterize challenges (Bandura, 1997). High self-efficacy beliefs help people understand challenges and stay focused on the tasks that need to be resolved, and persevere in implementing effective strategies to overcome challenges (Bandura, 1997).

Sources of Self-Efficacy Beliefs

Research suggests that are four main sources of information that contribute to self-efficacy belief formation (Bandura, 1997). All four of these sources of self-efficacy beliefs emerged in the eight cases studied for this multiple case study research. Additional sources of information also contributed to initial self-efficacy beliefs. The following section will detail how the findings relate to the existing research about sources of information that lead to self-efficacy belief formation.

Mastery learning. As could be expected, most of the participants identified mastery learning experiences as the strong source of information used to form their initial self-efficacy beliefs. The most influential source of self-efficacy beliefs was mastery learning, because the learning from past successes is authentic and results in a strong belief that due to past success, a person can be successful in the future (Bandura, 1997). From such past success, a person builds

both beliefs and specific strategies that are effective and can be applied in the future (Bandura, 1997).

In this study, most of the mastery learning experiences came from professional experiences as teachers and assistant principals prior to becoming principals. Some mastery learning experiences came from personal successes as being parents. This finding shows that allowing aspiring principals to face challenges and experience success provides a strong source of learning for their future belief orientations about their own capabilities. The largest numbers of new principals are likely to have been teachers (Howley, Solange & Perry, 2005), so building the leadership experiences of teachers by having them confront challenges will help them if they become assistant principals and principals.

Vicarious learning. Vicarious learning can come in a variety of formats such as: personal observations, imagined situations, simulations, watching videos, reading and considering case studies, and listening to stories. In this study, all examples were live observations in authentic situations. Seven out of the eight principals identified learning from others' successes as having influenced their positive initial self-efficacy beliefs. This finding aligned with the research that suggests vicarious learning experiences are an effective way to develop high self-efficacy beliefs (Bandura, 1997). Humans naturally compare themselves and their experiences to others (Bandura, 1997).

Three of the principals learned from others in professional settings. Two learned from observing principals when they were aspiring principals. The other one learned from observing the successes of a teacher, which made her believe other teachers in the school could experience the same success.

I also found that when asked what additional support principals desired to help inform their initial self-efficacy beliefs, most of the suggestions were some type of vicarious learning experience. They all suggested that they could have learned from visiting another successful school or talking to staff from another successful school who had successfully mastered a similar challenge. According to Bandura (1997), when models teach people better ways of behaving, this can further help people raise their self-efficacy beliefs– even if they already feel they can be successful.

Verbal persuasion. I found limited examples of verbal persuasion as a strong source of information which led to initial self-efficacy beliefs. Principal Michelle clearly articulated that verbal persuasion from her supervisor at the time of the challenge was a source of her initial, positive self-efficacy beliefs. She was told that she was hired her with this challenge in mind, which led her to positive initial self-efficacy beliefs. This aligns with the research about the limited power of verbal persuasion to influence self-efficacy belief formation (Bandura, 1997). Verbal persuasion is the third strongest source of self-efficacy beliefs (Lamarche, Gammage & Adkin, 2011). Lamarche, Gammage and Adkin (2011) found that it is more difficult to increase self-efficacy beliefs using only verbal persuasion, as compared to its effectiveness decreasing self-efficacy beliefs. In this study, verbal persuasion was identified as a minor source of information used to form initial self-efficacy beliefs in conjunction with stronger sources of information from mastery experiences and vicarious learning. In spite of it being so readily available and easy to use, I did not find verbal persuasion to be a significant contributor to initial self-efficacy beliefs.

Emotional cues. Lastly, five participants identified emotional cues as a source of information that was used to form their initial self-efficacy beliefs. Specifically, three of the

principals used the word "excited" when they recalled their initial self-efficacy beliefs. Principal George said he was "eager" to rise to the challenge.

People rely partly on emotional cues when forming initial, self-efficacy beliefs but it is most prevalent in situations that require physical challenges, health, and dealing with stress (Bandura, 1997). The findings I made from this study are consistent with the research. Emotional cues are the least compelling source of self-efficacy beliefs (Lamarche, Gammage, & Adkin, 2011). It is not surprising that emotional cues were not recalled by the majority of the participants as they discussed their initial self-efficacy beliefs.

Additional Sources of Information

In addition to the four main sources information used to influence self-efficacy belief formation, three other concepts were presented during the interviews as sources of information that influenced initial self-efficacy beliefs. Although most of the research only discusses the four main sources of efficacy beliefs, Bandura's triadic reciprocal causation suggests how these other sources of information matter. Triadic reciprocal causation means that behavior, internal elements, and the external environment influence each other in ways that vary depending on challenges and conditions (Bandura, 1997). Triadic reciprocal causation is a component of social cognitive theory which explains that learning comes from both direct experiences and from observing and interacting with others in a social context (Bandura, 1993). The three other concepts were: childhood experiences (external elements), core beliefs held by the principals (internal elements), and the perception of anticipated support from others that the principals forecasted they would have when actually facing the challenge (external elements). Drago-Severson, Blum-Destefano and Asghar (2013) identify three ways people know what they know: instrumental, socializing, and self-authoring. People know what they know through different

means, which aligns with my findings as will be presented below in these three additional contexts that informed initial self-efficacy beliefs.

Childhood experiences. Multiple participants shared childhood experiences as contributors to their initial self-efficacy beliefs as they faced their personally meaningful challenge. They talked about what they'd learned from their parents, the experiences of their parents, and what they'd learned from the environment in which they were raised. According to Bandura (1997), childhood experiences and the development of belief systems are related to self-efficacy beliefs. Parental influence begins in infancy and continues through childhood as parents create mastery learning and vicarious learning experiences for their children (Bandura, 1997). Parents also provide verbal persuasion and establish the environment in which their children are raised (Bandura, 1997). These experiences are critical because people develop their initial self-efficacy beliefs in their home environments as they are developing; this later impacts their future appraisals of their own capabilities to be successful (Bandura, 1997). Lessons learned and memories from childhood may be an internal component of triadic reciprocity which influenced the initial self-efficacy beliefs of the principals in this study. Positive experiences with parents who successfully navigated challenges and worked to create successful conditions for their children led this study's participants to have high, initial self-efficacy beliefs when they first learned of their challenge.

Core beliefs. Multiple participants identified that their core beliefs contributed to their high, initial self-efficacy beliefs when considering their ability to successfully handle their challenges. Although this was not identified as a major source of information used to influence initial self-efficacy beliefs, Bandura's work explains that people have freedom to live their lives and make their own decisions about their behavior (Bandura, 1997). Core beliefs could be

considered an internal factor component of Bandura's triadic reciprocity (Bandura, 1997). Core

beliefs may have influenced the career pursuit choices of the principals. Thus, the challenges

they faced in their first year as principal in their building may have aligned with their purpose for

becoming school principals in their specific schools. These principals were selected specifically

for the particular schools where they served; many spoke about the demographics of the school

which matched the vision of the type of school they wanted to lead.

Anticipated Support from Others. Another source of information that influenced the

initial self-efficacy beliefs of participants was consideration of additional supports they

anticipated. These supports included beliefs that their supervisors, central office colleagues, and

colleague principals would be available to join the principals in overcoming the personally

meaningful challenges. For example, Principal Michelle stated, "I think principals receive very

little emotional support."

Although anticipated support from others was not one of the four main sources of

information suggested by research, as previously mentioned, Bandura's social cognitive theory

and triadic reciprocity relationships may help explain this finding. Beliefs are influenced by both

internal and external factors (Bandura, 1997). Some of the principals expected that external

support would be available to help them. Therefore, believing they had the support of others led

them to feel that they could show the behaviors necessary to achieve the desired outcomes.

Receiving help from others may have been part of their appraisal of how they would face the

successfully face the challenge, which led them to have high, initial self-efficacy beliefs.

Leithwood and Jantzi (2008) found that the organizational conditions and district leadership

influence the self-efficacy beliefs of leaders in the school system. Like the findings in this study,

Tschannen-Moran and Gareis (2005) also found that principal self-efficacy beliefs were

correlated with perceived support from superintendents and central office. This study differed, though, from Tschannen-Moran and Gareis (2005) who found the strongest correlation between principal self-efficacy beliefs and the support of parents/students. Since most of the principals were new to their schools it make sense that they may not have been able to anticipate whether or not they'd have support from these stakeholders. Anticipated support from others was an external, environmental support the principals considered, which influenced their high, initial self-efficacy beliefs. Such supports may influence the emotional arousal of principals as they take comfort and knowing that they are not alone while facing their challenges.

Consideration of Career Pursuits

Through this multiple case study research I found principals to have strong, positive, initial self-efficacy beliefs, regardless of the complexity of the future challenges. This was presented both in the interviews and in the demographic information collection using the Principal Self-Efficacy Scale. According to Bandura (1997), career pursuits are impacted by perceived efficacy beliefs. When people have high levels of self-efficacy beliefs, they prepare for specific career fields, persist in challenges related to that field, and are successful in career trajectories (Bandura, 1997). Efficacy beliefs influence the types of jobs people believe they can do and what they choose for their career (Bandura, 1997). These beliefs influence their persistence in their jobs and dedication to their occupations (Bandura, 1997). Therefore, it could be expected that the principals in this study had high, initial self-efficacy beliefs. They had successfully moved up the career ladder to become a school principals. This career advancement aligns with past career successes and positive beliefs that one can handle additional challenges and levels of responsibility as a leader, as evidenced in decision to apply to be a principal.

In fact, some of the retired principals shared that they believe all principals have high levels of initial self-efficacy beliefs. Principal George said that principals are "prima donnas" with "egos." He stated his belief that when faced with challenges, principals, "knew they could do it. Bring it on. Whatever." He described his beliefs that principals are, "very self-assured and very confident." Principal Hannah described herself by saying, "I have an ego."

> I think as a principal, you wake up, you get up and you're driven you know – I was anyway, very driven to do whatever I could within my realm of possibility and beliefs to do the best that I could with the kids and the teachers and the community, cause that's what it was about (Principal Marsha).

She also said that, "leadership is much more – much more for principals than just in a school. It's about who you are as a person too." Two other principals shared their perspectives about what it takes to be a principal. Principal Sally spoke about how, in order to be a successful principal, you need to have a high level of emotional intelligence. Therefore my findings from this study align with the research. If people did not think they could successfully handle the challenges of leadership, they would not pursue the career path of becoming a school principal.

Recommendations for Supporting Principal Self-Efficacy Beliefs

My findings from this multiple case study research lead me to make the following recommendations based on the research question: What Factors Attend to the Domains of Self-Efficacy Belief Formation in School Principals?

1. Principals face a wide variety of complex and multifaceted challenges. Many of the challenges take multiple years to successfully resolve and are presented when new principals are in their first year of service in schools. Along with personally meaningful

challenges, principals face high levels of job stress, complex demands, and they feel a

lack of control over their daily schedule. Therefore, it is necessary to support principals

both before and during times when they are facing new challenges. At any given

moment, principals face competing job demands and a multitude of challenges.

Two principal support techniques that should be implemented are: principal mentoring

and principal coaching. Mentoring and coaching should be provided by colleague

principals, central office personnel, retired administrators, or certified professionals.

Principals should perceive mentors and coaches as credible. Mentoring and coaching

experiences can be conducted in a variety of settings such as one-on-one, small group,

and with large groups if well-designed protocols are developed and implemented. These

two support techniques can be done in person, by telephone, and through face-to-face

teleconferencing.

Principal mentoring and coaching can support the four sources of information used to

inform self-efficacy beliefs. Mentoring, for example, can help principals learn

vicariously from the experiences of others. As mentees, principals can receive verbal

persuasion and support for emotional arousal. Coaching can provide principals with

opportunities to reflect on past successes and deepen the connection they make between

past behaviors and goal achievement. This will build learning from past mastery

experiences. Coaching can also provide principals with vicarious experiences as they

imagine situations and consider possible ways to handle such challenges. Principal

coaching can also support emotional arousal and help them make connections between

feelings and beliefs. Lastly, coaching can allow principals opportunities to provide

themselves with their own self "pep talks" as a way to inform their self-efficacy beliefs.

As previously noted, support such as principal mentoring and principal coaching should

take place throughout the career of principals. It should be job-embedded. During times

when principals have low levels of self-efficacy beliefs, mentors and coaches should

consider ways to fortify the four sources of information people use to form positive

beliefs. This is important because self-efficacy beliefs are predictive of actual, future

success. At the same time, mentors and coaches should be aware that high self-efficacy

beliefs do not always result in actual success. Therefore, principal mentoring and

principal coaching should be on-going.

2. Mastery learning is a main source of information principals use to form their initial self-
   efficacy beliefs. Aspiring principals should be provided opportunities to experience

   mastery learning by actually handling complex challenges. One of the main reasons

   mastery learning is so effective in building self-efficacy beliefs is that it is authentic.

   There are many low-cost ways that school systems can create mastery learning

   experiences for aspiring principals. One technique is to intentionally assign assistant

   principals as Substitute Principals when principals are not at school. Principals are often

   out of the building for training, conferences, and meetings. They also are absent when

   they use personal and sick leave. During such times, school systems should take

   advantage of these opportunities to name assistant principals as Substitute Principals.

Additionally, during such times when assistant principals are serving as Substitute

Principals, non-classroom based specialists and central office personnel should then

become Substitute Assistant Principals. If funding is available, classroom teachers

should be considered for Substitute Assistant Principal experiences, which would require

hiring substitute teachers on these days.

Another way school systems should encourage mastery learning experiences is by

selecting assistant principals to serve in Principal positions for unique summer learning

programs. Even if assistant principals are not on contract, these types of non-paid

leadership positions may be of interest to aspiring principals who additional authentic

leadership experiences from which they can develop. Consideration should be given to

encouraging experiences across elementary, middle and high school levels to allow

assistant principals to build their K-12 understanding.

A final way school systems can build mastery experiences in aspiring principals is

through year-long administrative internship programs. Such programs assign teacher

leaders to specific schools and allow them to handle specific administrative

responsibilities and duties. While there are costs involved to hire year-long substitutes for

such administrative interns, school systems may find this to be a positive investment in

their organization's future as they groom their own "pipeline" of future administrators.

Throughout all of these authentic learning experiences, specific support and reflection

techniques should be designed and implemented. Mentoring and coaching should be a

critical element of the aforementioned opportunities. As previously mentioned, this can

occur one-on-one, in small groups, and with larger groups if structured protocols are

followed. Reflective journaling should also be an expectation of participants. Lastly,

these experiences should involve participant goal setting, action planning, and

monitoring. Participants should identify what they want to learn and do as a result of the

experience. From these goals, they should develop action plans of the behaviors they will

need to show in order to achieve their goals. Such plans should be time-bound, then

monitored and adjusted as needed. Finally, participants should evaluate their own level

of success on their goals and hypothesize as to what could have been done differently or

better to improve desired results or to make connections as to why their actions led to

success. Support for this goal setting and monitoring process should be given by peers,

mentors, coaches, and central office staff.   Goal setting and monitoring will fortify

participant learning as they make connections between specific behaviors and goal

outcomes. From this, in the future, when participants face new challenges, these

memories of past experiences will serve as a source of information used to inform self-

efficacy beliefs.

3. Vicarious learning is also a strong source of information people use to form self-efficacy

    beliefs. Therefore, well-designed professional learning experiences that involve

    vicarious learning experiences are needed to prepare aspiring, new, novice, and

    experienced principals as they handle the job challenges (Thomas & Kearney, 2010;

    Hansford & Ehrich, 2006). The self-efficacy beliefs of aspiring principals can change as

    a result of training programs (Fisher, 2011). Such professional learning from vicarious

    experiences should be grounded in the tenets of the Interstate School Leadership

Licensure Consortium (ISLLC) and the Standards for Professional Learning developed

by Learning Forward, an association dedicated to high-quality professional development.

Low-cost methods for vicarious learning experiences include: talking and listening to

experienced principals and former principals tell stories about how they overcame

challenges, analyzing case studies of effective leaders, and watching videos as people

share their leadership journeys. In order to facilitate learning from these experiences,

reflection and dialogue protocols should be developed and implemented so that learners

can process what they have heard and observed, identify key behaviors shown by the

leaders, and make connections as to why such behaviors were effective. These

experiences can also be implemented one-on-one, in small groups, and in large groups

that are heavily facilitated with specific conversation protocols.

Recommendations for Future Research

Continued learning about principal self-efficacy beliefs is worthwhile. From this study, I

confirmed that principals face a multitude of demands and challenges. I found that the four main

sources of information influence principal self-efficacy beliefs. I also found that childhood

experiences, core beliefs, and anticipated support from others also influences principal self-

efficacy beliefs. Future research about principal self-efficacy beliefs should be conducted.

According to Tschannen-Moran and Gareis (2004), it is difficult to capture and measure

principal self-efficacy beliefs. Future studies should continue to explore the relationship

between PSES results, self-efficacy beliefs, and effective supports for principals. In this study, I

did not find the PSES results to be useful, other than to identify that principals have high self-

efficacy belief orientations in the areas of management, instructional leadership, and moral

leadership. Like Smith and Guarino (2006), I believe that future studies about principal self-efficacy beliefs should include other elements of such beliefs beyond the PSES. Such studies should continue to explore the sources of information that lead to self-efficacy beliefs. It should also continue to explore self-efficacy beliefs of principals throughout their careers as they face new challenges.

Future researchers should be cautioned about studying initial self-efficacy beliefs. When participants in this study spoke about initial self-efficacy beliefs, at times they talked about their beliefs as they were actually facing the challenges, rather than prior to facing the challenges. Techniques should be implemented to ensure clarity about the timing of when self-efficacy beliefs were experienced. Also, because self-efficacy relates to people believing they can show the behaviors necessary to successfully resolve the challenge, researchers should ensure they collect data to clarify what the actual anticipated expected behaviors could be since this plan could be indicative of self-efficacy belief levels. Additionally, future principal self-efficacy belief studies should consider a design model whereby principals are interviewed at the time they learn of a new challenge they are expected to face. For example, if a school system is implementing a new system-wide instruction program, multiple principals should be interviewed before they have any experiences actually facing the challenge. This would allow the researcher to focus on initial self-efficacy beliefs.

Lastly, future research should explore the other concepts that served as sources of information that informed initial self-efficacy beliefs in this study. I considered research published by Bandura spanning from 1977-2003. His work was cited in most of the research studies I read. Yet it wasn't until his 1997 book that information was presented about other sources of information that inform self-efficacy beliefs, besides the four main sources. Future

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studies should consider way to learn more about childhood experiences, core beliefs, and

predictions about future support that will be given, to better understand the relationship between

these concepts and initial self-efficacy beliefs. Additionally, relationships between principal ego

and self-efficacy beliefs should be conducted to further explore these two ideas.

Reflections

This research study confirmed my opinion that being a principal is hard work. Principals

face a wide variety of demands and complex challenges. Aspiring principals and acting

principals can't learn, in advance, a step by step process or procedure for how to handle each and

every challenge which might come along. But, they can learn from sources of information which

influence initial self-efficacy beliefs prior to facing challenges. When principals have high,

initial self-efficacy beliefs, they are more likely to be persistent, motivated, and resilient as they

work to successfully resolve challenges. Thus, cognition influences future, actual behaviors.

Professional development is a key to creating situations and experiences that inform cognition.

From this study, I strengthened my views that effective principal professional

development must be strategically designed. It should focus on fortifying the beliefs of

principals rather than simply focus on skill building. The principals in this study did not say they

learned from many of the traditional methods of professional development. For example, they

didn't say their initial self-efficacy beliefs were influenced from reading a book or article,

attending a live or online training, or attending a conference.   In addition, they did not say they

wished they had learned from such experiences. Rather, they spoke about learning from past,

authentic, interactive, social experiences and identified that these methods would have helped

further enhance their initial self-efficacy belief formation. Such ideas within the scope of their

professional experiences included: talking to mentors/coaches, observing others, talking to

others, and knowing they had the support of others such as supervisors and central office staff. These social experiences served as actual sources of information that influenced their high, initial self-efficacy beliefs. Thus professional development of principals must contain authentic experiences, interaction, and reflection about the experiences in order to promote cognition.

Principals deserve high-quality professional development and it must be a top priority for supervisors. They face a wide variety of complex challenges and they are expected to be successful at all times. High-levels of principal self-efficacy beliefs are important for others. Principal self-efficacy beliefs influence those of staff, students, and the actual success of students. Principals matter to the success of a school. Thus, effectively supporting principals matters too. In spite of tight budgets and financial struggles of school systems, a worthwhile investment in the future of school success is developing both aspiring and acting principals through authentic techniques that promote cognition and reflection.

Summary

Self-efficacy beliefs are those held by people about their assessment of their future capabilities to show actions that result in a desired outcome when facing a challenge (Bandura, 1997). High levels of self-efficacy beliefs predict actual achievement. Additionally, high levels of self-efficacy beliefs in principals influence the beliefs of staff and students (Tschannen-Moran & Gareis, 2004). There is a gap in the research about principal self-efficacy beliefs.

Self-efficacy beliefs come from four main sources of information: mastery learning, vicarious learning, verbal persuasion, and emotional cues. I also found childhood experiences, core beliefs, and anticipated support from others as influential on initial self-efficacy beliefs.

Supports which would have been helpful included additional vicarious learning experiences and verbal persuasion from someone such as a mentor or coach.

Principals face a variety of demands and challenges. These challenges are complex and often times take multiple years to resolve. In this multiple case study research, all eight principals had high levels of initial self-efficacy beliefs prior to their facing challenges that they described as personally meaningful in their career. Most of the challenges began when principals were brand new to their schools. In spite of these high initial self-efficacy beliefs, not all principals experienced actual success in handling their challenges.

Supporting principal self-efficacy beliefs is worthy of future research. Strong professional development experiences that build mastery experiences and vicarious learning experiences are recommended as methods to support principal self-efficacy beliefs. As more research is conducted about principal self-efficacy beliefs, additional recommendations can be made and implemented to help principals face future challenges.

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Appendices

Appendix A: Approved Email - Retired, Elementary School Principals

Dear XXX,

I hope this email finds you well! Might you consider being a participant in a research study I am conducting about retired, elementary school principals for my dissertation? See attached documents for more information. I'm happy to discuss this further by phone or in person.

Also, might you have the contact information of other retired, elementary school principals from your former district? If so, might you be able to provide me with this information so that I can see if they'd be willing to participate too?

Thanks, in advance, for any help you can provide.

Sincerely,

Aimee

(phone number)

Appendix B: Approved Letter - Retired, Elementary School Principals

DATE

Dear Retired, Elementary School Principal,

As a doctoral student at Virginia Tech, I'd like to request your support for research I am conducting for my dissertation. I have chosen to focus on self-efficacy beliefs of retired, elementary school principals. Self-efficacy beliefs are those which a person holds about their ability to be successful on a future challenge.

I would like you to interview you about a personally meaningful challenge you faced when you were a principal. I will be asking you about your initial beliefs about your ability to successfully handle the challenge. I will be asking you about what sources of information may have led to these initial beliefs. I will also be asking you about what supports may have positively influenced these initial beliefs. This interview is expected to take no more than one hour. You will be given the interview questions at least three days in advance of the interview. I will schedule the interview at a time and location that is most convenient for you. Should you be willing to participate, your name will be kept confidential by me.

Prior to the interview, I will ask that you complete an 18-item rating survey. This assessment is called the Principal Self-Efficacy Survey. The results from this survey will be shared with you at the conclusion of the interview and will be used as part of the data collected about you for the dissertation. You will also be asked some brief demographic questions which will be included in the research.

Following the interview, should you so desire, you will have the opportunity to read the transcription of your interview prior to it being used in the research. Should there be any information you'd like revised or removed, you will have the opportunity to provide me with that guidance. This will allow you the ability to correct the information for accuracy and delete any information which you do not want to be used in my research.

Please let me know by xxx, which is two weeks from today, if you are willing and able to participate in my research. My hope would be to conduct this interview sometime in October, November, December or January. If you are unable to participate, please know that there will be no repercussions of any type. I recognize that there are many factors which may lead you to be unable to participate and I will not make any assumptions or conjectures about this or about you if you decline my invitation to participate. Additionally, you are free to withdraw from this study at any time without penalty if you no longer wish to participate. You are also free to abstain from answering any questions you do not feel comfortable answering.

Feel free to contact me should you have any questions so that I may clarify any of the information presented above. I will look forward to hearing from you either way.

Sincerely,

Aimee J. Holleb

Appendix C: IRB Approval Form

IRB Approval Form – Informed Consent

VIRGINIA POLYTECHNIC INSTITUTE AND STATE UNIVERSITY

Informed Consent for Participants in Research Projects Involving Human Subjects

Title of Project: Principal Self-Efficacy

Research Investigators: Aimee J. Holleb, aholleb@vt.edu, (phone number)

Dr. William J. Glenn, wglenn@vt.edu, (phone number)

I. Purpose of this Research Project

The purpose of this study is to contribute to the limited research about principal self-efficacy beliefs. Specifically, the study is designed to lead the investigator to understand what factors influence principal self-efficacy beliefs. The research will involve the collection of information about the initial self-efficacy beliefs of retired, elementary school principals prior to their facing a personally meaningful challenge. From this, the investigator intents to understand each participant's experience and to consider its relationship to the other participants in the study as related to self-efficacy beliefs.

The study will involve data collection from 8-10 retired, elementary school principal participants who served in a common school system. The participants will have retired within three years of the interview date.

The results of this study will be used for publication and a dissertation.

II. Procedures

You, the participant, will be asked to sign an informed consent form prior to the collection of any data. Should you choose to participate, first you will be asked to respond to an 18-item questionnaire which is a modified version of the Principal Self-Efficacy Survey (Tschannen-Moran & Gareis). This will take no more than 10 minutes. You will then be asked some questions relating to your demographics and your previous career experiences. Responding to these questions will take no more than 5 minutes. This information will be deidentified by the investigator.

Following this collection of demographic data, you will participate in a one-on-one interview with the investigator which will take no more than one hour. You will be provided with the interview protocol at least three days in advance of the interview. The interview will take place on a date, time, and location which are convenient for you.

The interview will explore a personally meaningful challenge you were asked to face as a principal and it will focus on your initial self-efficacy beliefs. The interview will seek to hear about the sources of information which may have led to your initial self-efficacy beliefs. The interview will be scheduled for a date in November 2015, December 2015, or January 2016. The interview will be recorded using a voice recorder.

A transcription will be made from the interview. All identifying information will be removed from the transcription. You will have the right to review the transcription and to provide the investigator with any revisions such as omissions, clarifications, or additions to the interview, prior to the transcription being used for this research. You will have seven days from the time you receive the transcription to provide such revisions to the investigator.

All data collected (including the transcription of your interview, audio recording of your interview, and documents created by the investigator from the data you provide) will be kept confidential by the investigator and will be

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retained for three years following the publication of the study. After that, the investigator will shred and destroy all hard copy documents and permanently delete all data collected and stored on technology.

III. Risks

Risks to you are minimal. The interview may cause you emotional distress as you share about your past challenge. If there is distress during any part of the research and you wish to no longer participate in the study, you have the right to withdraw from the study at any time.

In order to safeguard against such distress during the qualitative research, you will receive the interview protocol questions at least three days in advance of the interview so that you are fully aware of the questions that will be asked during the interview.

Methods will be followed to promote an ethical and valid qualitative research study.

You may experience concerns about confidentiality. The investigator will not divulge your identity and data will be deidentified by the investigator.

If, as a result of the research project, it is determined that you are in need of counseling or support for any distress caused by the study, you should inform the investigator of this need. Any expenses accrued for seeking or receiving treatment as a result of the study will be your responsibility and not that of the research project, investigator, or Virginia Tech.

IV. Benefits

No promise or guarantee of benefits can be made to encourage you to participate. But, the benefits of this specific research will be an opportunity to explore your past experience, initial self-efficacy beliefs, and self-efficacy supports. Understanding made by the investigator from your data will be published in a dissertation so that others can learn from your past experiences and principal self-efficacy beliefs.

V. Extent of Anonymity and Confidentiality

The data collected during this research will be conducted in confidential manner and your identity will be held in confidence by the investigator. Demographic and interview data will be deidentified and coded in ways that are only known by the investigator. Data and keys to such coding will be stored in a secured manner, in separate locations from one another. At no time will the investigator release identifiable results of the study to anyone. The Virginia Tech (VT) Institutional Review Board (IRB) may view the study's data for auditing purposes.

VI. Compensation

No compensation will be provided to you for your participation in this research study.

VIII. Freedom to Withdraw

You are free to withdraw from this study at any time without penalty. You may choose to abstain from answering any questions or providing any information about which you do not feel comfortable sharing. There may also be circumstances under which the investigator may determine that you should not continue as a participant.

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PRINCIPAL SELF-EFFICACY BELIEFS: WHAT FACTORS MATTER?

IX. Questions or Concerns

Should you have any questions about this study, you may contact one of the research investigators whose contact information is included at the beginning of this document.

Should you have any questions or concerns about the study's conduct or your rights as a research subject, or need to report a research-related injury or event, you may contact the VT IRB Chair, Dr. David M. Moore at (email) or (phone number).

VII. Participant's Consent

As a retired, elementary school principal, I have read the Consent Form and conditions of this project. I have had all my questions answered. I hereby acknowledge the above and give my voluntary consent:

_____ _____

Participant Signature/Date Including Year   Participant Printed Name

(Note: Each participant must be provided a copy of this form. In addition, the IRB office may stamp its approval on

the consent document(s) submitted by the investigator and return the stamped version to the investigator for use in

consenting participants)

Appendix D: Interview Protocol, Retired, Elementary School Principals

Directions: Think about a personally meaningful challenge you were asked to face when you were an elementary school principal. Consider your initial beliefs about your ability to successfully handle the challenge. Consider what prior experiences and supports might have led to these initial beliefs.

1. Tell the story of the personally meaningful challenge that you were asked to face as a former elementary school principal. How was it resolved?

2. What were your initial beliefs about your ability to successfully handle this challenge?

3. What factors led to these initial beliefs?

   Prompts:

   What were your past successes and failures that may have led to these initial beliefs?

   What past successes and failures of other people may have led you to your initial beliefs?

   What verbal persuasion received from your supervisor or others may have led you to these initial beliefs?

   What emotions did you feel that may have led to these initial beliefs?

4. What supports would have helped increase your initial beliefs that you could successfully handle this challenge?

5. Prior to our conversation today, you took the Principal Self-Efficacy Survey. What is your reaction to these results?

6. What additional information would you like to add to this interview?

TRANSCRIPTION REVIEW

☐ *I would like the option to review the transcripts of this interview. I understand that I will have 7 days to review the transcripts from the date that the researcher sends them to me. If I do not respond with edits during that time frame, the researcher will assume that I do not want to make any changes and will move forward with the transcript analysis.*

☐ *I do not want the option to review transcripts.*

Appendix E: Principal Self-Efficacy Scale (PSES) with Modified Directions

Retired Principal Questionnaire

This questionnaire is designed to help us gain a better understanding of the kinds of things that create challenges for principals in their school activities.

Directions: Please indicate your opinion about each of the questions below by marking one of the nine responses in the columns on the right side. The scale of responses ranges from "none at all" (1) to "A Great Deal" (9), with "Some Degree" (5) representing the mid-point between these low and high extremes. You may choose any of the nine possible responses, since each represents a degree on the continuum. Your answers are confidential.

Please respond to each of the questions by considering the combination of your previous ability, resources, and opportunity to do each of the following when you served as Elementary School Principal.

"In your previous role as principal, to what extent did you feel you could….."	Not at All		Very Little		Some Degree		Quite a Lot		A Great Deal
1. facilitate student learning in your school?	1	2	3	4	5	6	7	8	9
2. generate enthusiasms for a shared vision in the school?	1	2	3	4	5	6	7	8	9
3. handle the time demands of the job?	1	2	3	4	5	6	7	8	9
4. manage change in your school?	1	2	3	4	5	6	7	8	9
5. promote school spirit among a large majority of the student population?	1	2	3	4	5	6	7	8	9
6. create a positive learning environment in your school?	1	2	3	4	5	6	7	8	9
7. raise student achievement on standardized tests?	1	2	3	4	5	6	7	8	9
8. promote a positive image of your school with the media?	1	2	3	4	5	6	7	8	9
9. motivate teachers?	1	2	3	4	5	6	7	8	9
10. promote the prevailing values of the community in your school?	1	2	3	4	5	6	7	8	9
11. maintain control of your own daily schedule?	1	2	3	4	5	6	7	8	9
12. shape the operational policies and procedures that are necessary to manage your school?	1	2	3	4	5	6	7	8	9
13. handle effectively the discipline of students in your school?	1	2	3	4	5	6	7	8	9
14. promote acceptable behavior among students?	1	2	3	4	5	6	7	8	9
15. handle the paperwork required of the job?	1	2	3	4	5	6	7	8	9
16. promote ethical behavior among school personnel?	1	2	3	4	5	6	7	8	9
17. cope with the stress of the job?	1	2	3	4	5	6	7	8	9
18. prioritize among competing demands of the job?	1	2	3	4	5	6	7	8	9

Appendix F: Principal Self-Efficacy Scale (PSES) Scoring Guide

Principal Sense of Efficacy Scale
Efficacy for Management
Handle the time demands of the job
Handle the paperwork required of the job
Maintain control of your own daily schedule
Prioritize among competing demands of the job
Cope with the stress of the job
Shape the operational policies and procedures that are necessary to manage your school
Efficacy for Instructional Leadership
Motivate teachers
Generate enthusiasm for a shared vision for the school
Manage change in your school
Create a positive learning environment in your school
Facilitate student learning in your school
Raise student achievement on standardized tests
Efficacy for Moral Leadership
Promote acceptable behavior among students
Promote school spirit among a large majority of the student population
Handle effectively the discipline of students in your school
Promote a positive image of your school with the media
Promote the prevailing values of the community in your school
Promote ethical behavior among school personnel

To score the full scale, calculate a mean of all 18 items. To calculate each of the subscales, calculate the mean of the six items listed under each heading.

Appendix G: Demographic Data – Retired, Elementary School Principals

Name*: _____

Years Since Retirement: _____

Years as Principal: School 1- Name, County, Dates of Service* _____

                        School 2-Name, County, Dates of Service* _____

                        School 3-Name, County, Dates of Service* _____

Gender: Male Female

Principal Self-Efficacy Scale (PSES) Rating: _____

        Subscale Instructional Leadership Rating: _____

        Subscale Management Rating: _____

        Subscale Moral Leadership Rating: _____

If you were asked to be an elementary school principal next year, would you accept? Y N

Information about Personally Meaningful Challenge

        School Name and Location* _____

        Year it Was Presented _____

        # of years as principal prior to this challenge _____

*coded information

Appendix H: Table Organizing Demographic Data Information

Demographic Data

Participant	Gender	Year of Retirement	Total Years Principal Experience	Principal Again?	School 1	School 2	School 3	School 4	School 5	PSES Total	Efficacy for Management	Efficacy for Instructional Leadership	Efficacy for Moral Leadership	Efficacy for Management	Efficacy for Instructional Leadership	Efficacy for Moral Leadership
Principal Marsha	F	2015	11 years	NO	11 Years					7	6.5	7.8	6.8	3	1	2
Principal Sally	F	2013	6 years	NO	6 Years					7.9	7.6	8	8	3	1 and 2	1 and 2
Principal Hannah	F	2013	13 years	YES	13 Years					8.4	8.6	8.5	8.1	1	2	3
Principal George	M	2010	26 years	NO	7 Years	3 Years	11 Years	2 Years	3 Years	7.1	6.6	7	7.6	3	2	1
Principal Stephanie	F	2013	24 years	YES	14 Years	1 Year	10 Years			7.8	8	7.5	7.8	1	3	2
Principal Frances	F	2010	20 Years	NO	5 Years	15 Years				8	7	8.6	8.5	3	1	2
Principal Alice	F	2014	27 Years	NO	27 Years					7.9	8.7	7	8.2	1	3	2
Principal Michelle	F	2013	8 years	YES	8 Years					n/a	n/a	n/a	n/a	n/a	n/a	n/a

Appendix I: Case Narrative Template

Case Number and Letter

Background Information: include demographics including year of retirement, years of services, resume information, whether or not they'd be a principal again, and PSES mean levels on subscales/overall.

Summary Personally Meaningful Challenge and How it Was Resolved

Summary of Initial Self-Efficacy Beliefs

Summary of Factors that Led to Initial Self-Efficacy Beliefs: Mastery Learning, Vicarious Learning, Verbal Persuasion, Emotional Cues, Other

Desired Supports

Other Information Shared

Noteable Quotes

Appendix J: Themes Template

Themes Chart

Adapted from Stake, 2006 Worksheet 2

Research Question: What Factors Attend to the Domains of Self-Efficacy Belief Formation in School Principals?

The research question themes of the Multicase Study

Theme 1: Mastery Learning
Theme 2: Vicarious Learning
Theme 3: Verbal Persuasion
Theme 4: Emotional Cues

Appendix K: Analysis of Themes Template

Adapted from Stake, 2006 Worksheet 3

Case Number: ___

Principal Pseudonym: _____

Synopsis of the Case: (brief descriptive stats, description of challenge, reported self-efficacy belief level, identified sources of information that led to self-efficacy beliefs, suggested supports that would have helped, other information)

Prominence of Theme 1 in This Case:

Prominence of Theme 2 in This Case:

Prominence of Theme 3 in This Case:

Prominence of Theme 4 in This Case:

Uniqueness among other Cases:

Findings:

I.

II.

III.

IV.

Appendix L: Analysis of Findings and Themes Matrix - Single

Adapted from Stake, 2006 Worksheet 5A: A Matrix for Generating Theme-Based Assertions

from Case Findings Rated Important

Principal Marsha

Case Number:	Prominence of Themes		
1M	H	M	L
Theme 1: ML			x
Theme 2: VL	x		
Theme 3: VP		x	
Theme 4: EC		x	

H=high importance; M=middling importance; L=low importance

Appendix M: Multiple Cases Analysis of Findings and Theme Matrix

Case: Marsha	Prominence of Themes		
	H	M	L
Theme 1: ML			x
Theme 2: VL	x		
Theme 3: VP		x	
Theme 4: EC		x	

Case: Sally	Prominence of Themes		
	H	M	L
Theme 1: ML	x		
Theme 2: VL		x	
Theme 3: VP	x		
Theme 4: EC			x

Case: Hannah	Prominence of Themes		
	H	M	L
Theme 1: ML	x		
Theme 2: VL	x		
Theme 3: VP		x	
Theme 4: EC			x

Case: George	Prominence of Themes		
	H	M	L
Theme 1: ML	x		
Theme 2: VL		x	
Theme 3: VP		x	
Theme 4: EC	x		

Case: Stephanie	Prominence of Themes		
	H	M	L
Theme 1: ML	x		
Theme 2: VL			x
Theme 3: VP			x
Theme 4: EC	x		

Case: Frances	Prominence of Themes		
	H	M	L
Theme 1: ML	x		
Theme 2: VL			x
Theme 3: VP			x
Theme 4: EC			x

Case: Alice	Prominence of Themes		
	H	M	L
Theme 1: ML	x		
Theme 2: VL	x		
Theme 3: VP			x
Theme 4: EC		x	

Case: Michelle	Prominence of Themes		
	H	M	L
Theme 1: ML	x		
Theme 2: VL			x
Theme 3: VP	x		
Theme 4: EC	x		

H=high importance; M=middling importance; L=low importance

Appendix N: Reflexive Journal Protocol

Date:

Location:

1. "The pensieve" (Gerstl Pepin & Patrizio, 2009; Rowling, 2000):

2. Thick, rich description (including context):

3. Notable Quotes:

4. Self Reflexivity:

Prompts:" What do I know? How do I know what I know? What shapes and has shaped my perspective? How have my perceptions and my background affected the data I have collected and my analysis of those data? How do I perceive those I have studied? With what voice do I share my perspective? What do I do with what I have found?" (Patton, 2002, p. 495)

5. Reflexivity about Participants:

Prompts: "How do those studied know what they know? What shapes and has shaped their world view? How do the perceive me, the inquirer? Why? How do I know?" (Patton, 2002, p. 495)

6. Reflexivity about Audience:

Prompts: "How do those who receive my findings make sense of what I give them? What perspectives do they bring to the findings I offer? How do they perceive me? How do I perceive them? How do these perceptions affect what I report and how I report it?" (Patton, 2002, p. 495)