THE RELATIONSHIP BETWEEN TEACHERS' EXPERIENCE AND THEIR SELF-EFFICACY REGARDING IMPLEMENTATION OF SELF-REGULATED LEARNING PRACTICES

by

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Liberty University

A Dissertation Presented in Partial Fulfillment

Of the Requirements for the Degree

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ABSTRACT

Twenty-first century learners are growing in a world of rapid change that requires them to be lifelong learners. Due to the uncertainties of the future, education must shift to meet the needs of the new generation. Literature revealed that self-regulated learners have the capabilities of holding themselves accountable for their learning and adjusting to new environments. Thus, the purpose of the proposed study was to explore if there is a relationship between teachers' years of experience and their self-efficacy toward implementing self-regulated learning practices. A quantitative correlation research design was used to determine if the two variables share a relationship. Using the Teacher Self-Efficacy Scale to implement Self-Regulated Learning (TSES-SRL), 262 K-12 public school teachers from the same district zone completed the online survey. A Pearson product-moment correlation coefficient (Pearson's r) was used to assess if the two variables were linearly related, and if so, the degree of linearity. Results showed that there was not a statistically significant relationship between teachers' years of experience and their overall teacher self-efficacy regarding the implementation of self-regulated instructional practices. Being that teachers determine the learning environment, it is imperative to conduct more studies that have teacher self- efficacy for self-regulated practices as key construct.

Keywords: cognition, metacognition, motivation, self-regulation learning, teacher self-efficacy, teacher preparation, teacher professional growth

Dedication

I would like to dedicate this manuscript to myself. Through the ups and downs of life, I was still able to complete a life goal. This manuscript is a tangible testimony of my faith.

Acknowledgments

I would like to acknowledge my God! You were there to order my steps through the highs and lows and didn't allow me to give up. I can truly say that perfection is not obtainable, but God's will, you can count on.

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List of Abbreviations

Adequate Yearly Progress (AYP)

Classroom Management (CM)

Common Core State Standards (CCSS)

Higher Order Thinking Skills (HOTS)

Middle School Concept Implementation Survey (MSCIS)

Next Generation Science Standards (NGSS)

No Child Left Behind (NCLB)

Self-Regulated Learning (SRL)

Social Cognitive Theory (SCT)

Social Cognitive Theory of Self-Regulation (SCT-SR)

Statistical Package for the Social Sciences (SPSS)

Teacher Self-Efficacy (TSE)

Teacher Self-Efficacy Scale to implement Self-Regulated Learning (TSES-SRL)

CHAPTER ONE: INTRODUCTION

Overview

The purpose of this proposed study was to determine if two variables, teachers' years of experience and their self-efficacy towards the implementation of self-regulated learning practices, have a relationship, and, if so, the strength of the relationship. According to Childress (2017), the economy shift minimized routine workers and favored problem solvers and innovators, which revealed the deficiency of the self-regulated learners. Chapter One discussed how this study provided empirical data that may be vital to understanding teachers' perspectives on their capacity to expose students to self-regulated practices. The study will address the following research question: Is there a relationship between teachers' years of experience and self-efficacy beliefs regarding students' implementation of self-regulated learning practices?

Background

Self-regulation requires autonomy, which is essential to students that are living in a rapidly changing environment (Childress, 2017). Self-regulation reflects students' abilities to be independent learners (Cazan, 2012; Zimmerman, 1986) and to develop a core of resiliency (Cazan, 2012). Students with self-regulatory skills can focus their attention, control their emotions, set goals, plan their learning, self-monitor and evaluate their learning, seek help, and manage their thinking, behavior, and feelings (Butler, 1998; Schraw & Moshman, 1995; Winne, 1995; Wolters, 1998; Zimmerman, 2004; Zimmerman, 2008).

According to Zhao (2015), *A World at Risk: An Imperative for a Paradigm Shift to Cultivate 21st Century Learners*, the skills required to prosper in the 21st century reflect the continuously shifting economy, which is driven by technology advances. In the 19th and 20th centuries, America's middle class was formed and thrived in a largely manufacturing-based

economy built on productivity that required basic skills and knowledge (Childress, 2017). But, as technology has become more sophisticated, middle-class America has begun to erode. The author credits the erosion not only to the improvement of technology, but to the birth of globalization. Globalization, a term that describes the interconnections of all nations due to the accessibility of broadband communication, ignited trade agreements that caused the identity of the workforce to change (Childress, 2017). The article also spotlights that the shifting from a predominately production-based economy to an economy that focuses on problem-solving and developing products that enhance humanity's endeavors, workers who were once successful completing routine manufacturing tasks, were being replaced by machines. Workers displacement reflected their inability to gain necessary skills like innovation, creativity, and critical thinking.

Driven by globalization, technology, migration, international competition, changing markets, and transitional environmental and political challenges, workers' failure to adapt and become global competitors revealed their deficiency as lifelong learners (Saavedra & Opfer, 2012b). The absence of lifelong learners who can collaborate with diverse cultures plagues America, which is a reality that is supported by the increasing gap between the wealthy and poor (Childress, 2017; Zhao, 2015). Zhao (2015) identifies massive youth employment, global talent shortages, unemployed, underemployed, and underpaid college graduates as critical, undeniable signs of stagnation.

Because of workforce challenges, the shifting economy has forced decision-makers to turn their attention to the American educational system's inability to produce a workforce that meets 21st century demands. When addressing education's downfall, American policy-makers have begun to pay attention to other countries. This inspired an education system of standards-

based learning and standardized high-stake testing (United States Department of Education, 1983), a combination that represents the pillar of the accountability era (Hursh, 2005). By focusing the students' learning on the learning of facts, students became better test takers. Further, this promoted instructional practices aimed at transmission of information rather than development of critical thinking and innovation skills, which are crucial for success in the 21st-century workplace. Once again, education reform was misaligned with the demands of society by focusing on the common understanding of complex issues while missing the mark on knowledge application. America, along with other countries realized that understanding content was only half of the educational battle. Responding to this realization, education policy-makers adopted standards that reflected rigor and higher-order thinking skills via Common Core (CC) State Standards (National Governors Association Center for Best Practices & Council of Chief State School Officers, 2010) and Next Generation Science Standards (NGSS) (Hayes & Trexler, 2015). The goal was that these higher-order thinking standards would result in what Saavedra and Opfer (2012a) deemed as necessary survival skills: (a) critical thinking and problem solving, (b) collaboration and leadership, (c) agility and adaptability, (d) initiative and entrepreneurialism, (e) effective oral and written communication, (f) accessing and analyzing information, and (g) curiosity and imagination. Even with the current implementation of CC and NGSS (Hayes & Trexler, 2015; Saavedra & Opfer, 2012a), the popularity of transmission learning and the form of assessments that had become entrenched hindered the production of 21st century learners. Instead of educators implementing instructional practices that developed students' higher-order thinking skills, educators became experts of the test and fixated on preparing students to take required standardized assessments (Bhattacharyya, Junot, & Clark, 2013; Hursh, 2005). Zhao (2015) stated that doing the wrong thing more right does not fix the issues of America's education. "To

prepare our children for the new economy, we must begin the shift to a different educational paradigm" (Zhao, 2015, p. 130).

Throughout history, humanity has experienced shifts of educational practices that reflect the demands of society at given moments (Gutek, 2011; Knight, 2006). Ironically, the development of knowledge over the years led to an education system that is consumed with preserving knowledge (Islam, Islam, Zatzman, & Mughal, 2013). The authors go on to say that the pedagogical shift went from practices that encouraged the discovery of knowledge to practices that resembled transmission and storage or monotonous recall of facts. A notable change in instructional strategies that occurred during the industrial revolution, a time of mass production that caused educators to shift to pedagogical strategies that mimic repetitive tasks, similar to the manufacturing workforce (McLaren & Farahmandpur, 2006). This alignment of the economy and educational reform allowed America to be a top contender among nations until the next economic wave (Zhao, 2015). As mentioned before, the next wave of educational reform came in the form of accountability to address the increase of the globalized economy, inequality of education, and content standards (Hursh, 2005). Educators were charged with implementing strategies for the comprehension of society's problem solving skills and test-taking skills; tasks that were still obtainable through transmission learning (United States Department of Education, 1983).

By 2010, with the addition of higher order thinking standards that reinforced the skills of the 21st century, it became clear that student learning was subpar with regard to the demands of self-regulated learning. Because content and instructional expertise are hallmarks of curriculum implementation (Parkay, Anctil, & Hass, 2014), being an expert in both is crucial to vitalize the new higher-order standards. Teachers must be willing and competent to dissect content, as well

as select the best strategies for comprehension and application; however, using traditional instructional methods, teachers have continued becoming experts of the test and applying teacher-centered, transmission instruction to address higher-order thinking standards (Faulker & Cook, 2006; Hayes & Trexler, 2015; Vogler, 2008; Zohar & Agmon, 2018). Saavedra and Oper (2012b) explained that the ties to transmission learning is due to the difficulty associated with changing educational systems, but more importantly, it requires less teacher content expertise and instructional expertise.

The absence of self-regulatory skills among students means self-regulatory practices are not being modeled or implemented in the educational setting, which speaks to educators' capacity to foster the development of self-regulation skills in the classroom (Saavedra & Oper, 2012b). The lack of implementation of self-regulatory pedagogical practices may even speak to teachers' perceived beliefs about their capabilities to foster lifelong learners (Yan, 2018). Since self-regulation is a "social enterprise that involves a learner and knowledgeable individual who can guide the learner through the process of acquiring self-regulatory skills" (Bembenutty, White, & Vélez, 2015, p. 23), examining teachers' confidence and the concept of self-regulation is vital to addressing the deficiencies of self-regulation skills being developed in the education system (Shi, 2014). Without these skills, students will not possess the capabilities to adapt to their forever changing world, thereby limiting their ability to become productive members of their community (Islam, Islam, Zatzman, & Mughal, 2013).

To fully understand the impact that teachers' experiences may have on their beliefs towards implementing self-regulated learning practices in the classroom, an exploration of social cognitive theory must be the baseline. The social cognitive theory takes into account that humans are agents of their behavioral change due to the role that personal experiences, environment, and

behavior have on the development of competences and proficiencies (Bandura, 2005). Applying this notion to the learning environment, the overarching concept of social cognitive theory is that teachers intentionally expose students to self-regulated practices through modeling and engaging activities to obtain the desired outcome of students becoming self-regulated learners. More specifically, the theory's blueprint of self-regulation and self-efficacy provide the foundation for this proposed study.

As stated, the development of self-regulation skills falls under the umbrella of the social cognitive theory of self-regulation (SCT-SR), which explains the interrelationship of cognitive, motivational, and metacognitive learning in a social environment (Ramdass & Zimmerman, 2011; Zimmerman, 2000). It is composed of three cyclical phases: forefront, performance, and self-reflection. Students benefit from learning how to set goals, devise a plan, implement the plan, and evaluate the plan. This cycle of learning gets students in the habit of intentionally thinking about how they learn, a foundational concept of John Dewey (Gutek, 2011) and a springboard for producing 21st century learners. In the educational setting, self-regulation is influenced by the social interactions between student and student, student and teacher, and student and environment; each interaction serves as a model that may affirm or cause a person to adjust their behavior (Huh & Reigeluth, 2017). Early stages of development include a social model, but later the learner is self-reliant. Acknowledging that self-regulatory development begins with social models, it can be inferred that students' deficiencies are due to the lack of self-regulation practices within the school environment (Cleary, Gubi, & Prescott, 2010). More specifically, educators' pedagogical practices are not supporting the implementation of self-regulated practices (Shi, 2014).

Like self-regulation, teachers' beliefs regarding their abilities in the classroom are a social construct known as teacher self-efficacy. Self-efficacy is defined as "a teacher's perception of his or her ability to perform required professional tasks and to regulate relations involved in the process of teaching and educating students, perform organizational tasks, and become part of the organization and its political and social processes" (Friedman & Kass, 2002, p. 287). Self-efficacy scores range from low to high. Self-efficacy is the unifying component between the cognitive theory and behavior theory, which is the theoretical construct from which the social cognitive theory was developed (Bandura, 2006). Bandura highlighted the importance of human agency to show that self-efficacy influences everyday life decisions and actions. If a person has a high sense of self-efficacy, she is more willing to take on challenging tasks; similarly, someone with a low sense of self-efficacy is less willing to take on challenging tasks (Bandura, 1997). In the sphere of education, teachers with a high sense of self-efficacy are more willing to try instructional strategies that are innovative and student-centered (Rubie-Davis et al., 2012). Teachers with low self-efficacy select instructional strategies that are less demanding on students' learning capacity (Spruce & Bol, 2015). When teacher self-efficacy and self-regulation practices intersect, it determines the learning experience, which dictates the type of learner that is produced and, thereby, the characteristics and subsequent productivity of the workforce.

Problem Statement

According to Hayes & Trexler (2015), the foundation of a self-regulated learner is the acquisition of higher order thinking skills (HOTS). Huh and Reigeluth (2017) revealed that even though teachers understand the importance of students acquiring HOTS and their role in fostering the development of these skills, instructors selected conventional forms of practice, which may have prevented students from developing a full range of self-regulated learning

(SRL). Diving deeper, Retnawati, Djidu, Kartianom, Apino, and Anaifa (2018) also supported that teachers acknowledged the importance of HOTS but indicated that their capacity to explain and implement evidence-based self-regulated strategies were out of their scope of experience. Yan (2017) did not determine a significant relationship between teachers' experience and implementing self-regulated practices. Instead the author provided empirical evidence that teachers who did not believe that their students could develop certain skills were less likely to implement strategies to foster the development of the skill. This caused Yan (2017) to recommend additional studies that may impact the implementation of self-regulated learning.

Since teachers' day-to-day choices dictate students' learning, teachers abilities to complete their duties have to become more focused. This proposed study explored teachers' self-efficacy for students implementation of self-regulated learning practices. In past studies, the Ohio State Teacher Efficacy Scale was used to measure teacher's self-efficacy overall, as well as their efficacy for engagement, instructional strategies, and classroom management (Tschannen-Moran & Hoy, 2001). The studies linked teachers' efficacy with student achievement, motivation, and self-efficacy, as well as teacher behavior (Derosier & Soslau, 2014; Jamil, Downer, & Pianta, 2012; Tschannen-Moran & Hoy, 2001).

To continue the progression of understanding the impact teachers' self-efficacy (TSE) has on the learning environment, the intersection of TSE and self-regulated learning has to be explored. The problem is there is not enough research that examines the teachers' experience and their efficacy for implementing self- regulated learning.

Purpose Statement

The purpose of this study was to determine the relationship between teachers' years of experience and their self-efficacy towards implementing self-regulated learning practices. A

quantitative correlational design was used for this study. This design was appropriate for this study because it provides an analysis that expresses the strength and relationship shared between two variables (Gall, Gall, & Borg, 2007). The predictor variable, years of experience, self-reported by teachers as the number of years they have taught in kindergarten through twelfth grade classroom by the time the data were collected (Liu, Jones, & Sadera, 2010). The criterion variable, teacher's self-efficacy towards implementing self-regulated learning practices, is defined as a teacher's perceived ability to successfully integrate activities promoting self-regulated learning (SRL) in their daily classroom practices (Smul et al., 2018). The population of this proposed study comprised of consenting full-time, K-12 public school educators in a southwestern state during the 2020-2021 school year.

Significance of the Study

The hallmark of an ever-changing society is uncertainty. Not knowing what lies ahead leaves educators swirling in educational trends that reflect the demands of today but do not anticipate future change. Acknowledging the gap between students' school experiences and the endless possibilities of their future warrants a shift in educational pedagogy today. In order to develop students into lifelong learners, teachers must be given the tools and support to implement evidence-based self-regulation practices that foster students' self-regulated learning. This solution is rooted in teachers' instructional practices, which are the tools teachers use to motivate, increase student achievement, and manage their classroom in order to shape their students' educational experiences (Wolfgang & Glickman, 1980).

According to White and DiBenedetto (2015), teachers' personal instructional self-regulation impacts students' metacognition, which in turn anchors students' abilities to become lifelong learners. Zimmerman (2013) concluded that teachers' awareness of the benefits of self-

regulatory practices is critical in creating a productive learning environment. Ghonsooly and Ghanizadeh (2013) found that teacher self-efficacy (TSE) and self-regulation share not only a relationship, but also a high correlation with the self-constructs of goal setting and mastery goal-orientation.

In addition to evaluating teacher self-efficacy towards self-regulated learning, this study's findings supported the validity and reliability of the newly constructed Teacher Self-Efficacy Scale to implement Self-Regulated Learning (TSES-SRL) instrument. Since it will take place in a different setting from Smul et al. (2018), examining the interaction between the two constructs from the United States public school teachers' perspective adds to the existing body of work completed by Ghonsooly and Ghanizadeh (2013). In addition, the study's findings attempted to solidify self-regulation as a teacher domain that should be included in teacher preparation programs and continuously developed throughout a teacher's career. The findings attempted to illustrate how the instrument is a viable reflective tool that can provide teachers and administration with a realistic, quantitative depiction of teacher's self-awareness for implementing self-regulated practices in the learning environment (Smul et al., 2018). Lastly, the findings may provide insight into how work experience, as defined by years on the job, contributes to teachers implementing self-regulated learning practices.

Acknowledging the importance of self-regulating learning practices in the learning environment will signify one step towards providing an education that equips students with 21st century skills that are vital to future success in a rapid changing environment (National Education Association, 2016). The results could affect teachers' effectiveness due to teachers' increased awareness, how administrators evaluate and aid in teachers' professional development, as well as, ignite interest in instructional practices that engage students in more complex,

challenging learning tasks. Finally, the findings illustrated the cyclical relationship between society's demands, education's purpose, teachers' roles, and students' needs.

Research Question

RQ1: Is there a relationship between teachers' years of experience and their self-efficacy regarding the implementation of self-regulated learning practices?

Definitions

1. *Teacher Self-efficacy* - A teacher's perception of his or her ability to perform required professional tasks and to regulate relations involved in the process of teaching and educating students, perform organizational tasks, and become part of the organization and its political and social processes (Friedman & Kass, 2002).
2. *Self-regulated learning* – learners who are metacognitively, motivationally, and strategically engaged in learning (Winne & Perry, 2000)
3. *Teacher experience* – self-reported by teachers as the number of years they have taught in kindergarten through twelfth grade classroom by the time the data were collected (Liu, Jones, & Sadera, 2010)
4. *Metacognition* - Skills that enable students to understand and monitor their cognitive processes (Schraw et al., 2006)
5. *Motivation* - Beliefs and attitudes that can affect the learning process and the willingness to attempt challenging task (Schraw et al., 2006)
6. *Cognition* - Learning strategies that assist the learner in more effective processing, use, and manipulation of information (Crawford, 2002)
7. *Content knowledge* - Understanding concepts embedded within the curriculum being taught (Hogan, et al., 2010)

8. *Pedagogical content knowledge*- The ability to model understandings of the content knowledge through multiple instructional practices that foster student understanding, comprehension, and achievement (Hogan, et al., 2010)
9. *Pedagogical knowledge* - Teaching skills necessary for developing a safe learning environment that includes classroom management, effective communication, and appropriately assessing student learning (Shulman, L.S., 1986)

CHAPTER TWO: LITERATURE REVIEW

Overview

The purpose of the study was to determine if two variables, years of experience and self-efficacy towards implementing self-regulated learning practices share a relationship and if so, the strength of the relationship. With this goal in mind, this study has been situated within the social cognitive theory (SCT). With the overarching idea of human agency influenced by the reciprocal triadic relationship between personal, environmental, and behavioral factors, the SCT highlights the influence external constructs can have on an individuals' internal perception of self when driven by self-efficacy (Bandura, 1989). Giving credit to observational learning, SCT frames how the mere act of cognitively processing observations and a person's self-efficacy play a major role in the trajectory of a person's behavior and their ability to self-regulate (Bandura, 1977, 2005).

The related literature section will address the constructs of teacher self-efficacy and self-regulated learning, two conceptual concepts that resulted from the expansion of the SCT. Furthermore, due to the study's connection to fostering students' understanding of their cognitive and metacognitive processing aids, the concept of constructivism from the pedagogical perspective was included, coupled with a brief discussion addressing self-regulatory learning strategies and instructional strategies alignment with the obtainment of 21st century skills. The literature concludes with studies and articles that address barriers and the impact teachers' experiences and beliefs have on the learning environment.

Theoretical Framework

Social Cognitive Theory

Identified as a behavior model, the social cognitive theory speculates that learning occurs within a social context that is influenced by a person's interactions with their environment, themselves, and behavior (Bandura, 2005). Linking the fluidity of behavior change to all forms of daily interactions, this triadic reciprocal relationship creates a continuous cycle of actions and reflections that cause a person's behavior to either change or sustain (Bandura, 1977). Due to people having the capacity to control their actions and make decisions, Bandura (1989) infused the idea of human agency within the social cognitive theory.

Deconstructing the idea of human agency as a trifold of modes (Bandura, 1999): direct personal agency, proxy agency, and collected agency, Bandura was able to expound on how different influences shape how a person lives their life, connecting the impact social systems have on the development of human competence and proficiencies (2005). Referred to as a person's personal influence on their environment and experiences, direct personal agency highlights the control individuals show when creating opportunities for self that ultimately leads to achieving self-created goals (Bandura, 2001). In the context of the study, direct personal agency was aligned to a teacher who takes initiative to seek out professional development that focuses on creating self-regulated learning environments.

Proxy agency speaks to a person who gives control to someone else that they feel is capable of achieving the desired outcome. This form of agency uses the personal relationship with others as the determining factor of achieving a goal (Bandura, 2001). Proxy agency takes the opportunity/responsibility from the original source. Unfortunately, studies have shown that the use of proxy agency has an indirect relationship on a person's direct personal agency (Shields

& Brawley, 2006). For example, a teacher may seek out another co-worker to restore order in their classroom. The goal of managing students' behavior is achieved, but the teacher losses the opportunity to gain a mastery experience by managing the learning environment. The teacher's efficacy for classroom management could increase or decrease based on how the teacher internalizes the interaction of the proxy.

The last mode, collected agency, addresses how collaboration and common goals with other individuals aid in accomplishing goals that are otherwise unobtainable in isolation (Bandura, 2001). This form of agency spotlights the dependency of human nature. Educationally speaking, collective agency is the foundation of learning institutions. The vision of an institute can only be upheld if all stakeholders are aligned and working towards accomplishing the desired goal. If the institute's goal is to develop 21st century, self-regulated students, then all school efforts are tied to fostering a self-regulated learning environment that maximize students' exposure.

Continuing making connections, Bandura (2005) further focuses on the idea of how fortuity enhanced by self-regulation helps support the core features of human agency: intentionality, forethought, self-reactiveness, and self-reflectiveness. The article stresses that the presence of the core features allows the construct, observational learning, to have an impact on the sustainment or change of behavior (Bandura, 2005). Observational learning describes the moment when learners observe a live or symbolic model. They proceed to duplicate those actions, strategies, tasks, or skills seen (Bethards, 2014). According to Bandura, observational learning can only take place if the learner cognitively processes the observation. In other words, the learner pays close attention to the desired action, retains it to memory, reproduces the action accurately, and is motivated to acquire the skill (Bandura,1977; Bethards, 2014). "To exercise

self-influence, individuals have to monitor their behavior, judge it in relation to a personal standard of merit, and react self-evaluatively to it" (Bandura, 2005, p. 20).

The process of how social modeling provides a cognitive representation to guide the production of skills and corrective adjustment aids in understanding how a person's cognitive operation is developed with each social interaction (Bandura, 1997, 2005). In terms of this research study, Schunk (1987) states that teachers and students are models whose behaviors, verbalizations, and nonverbal expressions are attended to and serve as cues for subsequent modeling in hopes of behavioral, cognitive, and affective changes (as cited in Zimmermann & Schunk, 2009), but cannot be attained without personal self-efficacy (Bandura, 1977).

Self-efficacy. Extending the theory to include self-efficacy, Bandura cements the constructs of the social cognitive theory and births the conceptual framework for self-efficacy. Defending self-efficacy as being distinct from self-esteem (judgment of self-worth), locus of control (belief addressing outcome contingencies), and outcome expectancies (judgment about the outcome that occurred due to performance) (Bandura, 2006), while at the same time acknowledging the influence self-efficacy have on the three construct, Bandura defined self-efficacy as a judgment of capability to execute given types of performances (Bandura, 1977). Later, Bandura and Wood (1989) introduced a more explicit definition that included the role self-reflection has on a person's belief in their ability to access resources, strategize an action plan, and self-motivate to reach a desired outcome. Bandura (2006) states:

> Efficacy beliefs influence whether people think erratically or strategically, optimistically or pessimistically. They also influence the courses of action people choose to pursue, the challenges and goals they set for themselves and their commitment to them, how much effort they put forth in given endeavors, the outcomes they expect their efforts to

> produce, how long they persevere in the face of obstacles, their resilience to adversity, the quality of their emotional life and how much stress and depression they experience in coping with taxing environmental demands, and the life choices they make and the accomplishments they realize. (p.309)

Sources of self-efficacy include mastery of experiences, vicarious experiences, verbal persuasions, and emotional arousal. Bandura's (1977) integrative theoretical framework study dissects the acquisition of each source. He claims that mastery of experiences is induced by participation modeling, performance desensitization, performance exposure, and self-instructed performance, while live modeling and symbolic modeling create a person's vicarious experiences. Verbal persuasion is promoted by suggestion, exhortation, self-instruction, and interpretive treatment. Emotional arousal is fostered by attribution, relaxation (biofeedback), and symbolic desensitization and exposure. Fortunately, self-efficacy is malleable and domain specific. Self-efficacy grows stronger or weaker as people are exposed to different environments and behaviors (Bandura, 2006).

A strong sense of efficacy describes a person who confidently performs tasks or learns from failed attempts; conversely, a low sense of self-efficacy exposes a person's concern towards failure or their inability to cope with demanding tasks. Abele and Spurk (2009) conducted a longitudinal study that investigated the impact self-efficacy has on objective career goal and subjective career success. Findings from the study supported the notion that workers' occupational self-efficacy when starting positively impacted workers' outlook on salary and status three years later and even seven years later. However, the same study showed a negative correlation between self-efficacy and career satisfaction after seven years for participants that had negative experiences. Similar results were reported by Summers, Davis, and Hoy (2017)

between teachers' general self-efficacy and building relationships with students. Teachers with high self-efficacy for student learning tend to have a closer relationship with students; the opposite occurred for teachers that reported lower self-efficacy for student learning.

Self-efficacy can result in a domino effect of outcomes. Teachers that agreed to participate in this study produced a quantified measurement of their perceived capability to use self-regulated practices as instructional tools, which could be linked to their students' motivation, learning environment, self-regulation, and achievement (Randi, 2004; White & DiBenedetto, 2015; Zimmerman, 2000, 2013). Students' exposure to self-regulated practices via modeling from teachers and peers' illustrations provides the opportunity for observational learning. As students cognitively process their experience, they are able to proactively dissect the self-regulated action and adjust their learning to reach the desired goal.

Related Literature

Teacher Self-Efficacy

The notion of teacher self-efficacy (TSE) is a pillar in the educational field. Friedman and Kass (2002) explicitly define the concept of TSE as "a teacher's perception of his or her ability to perform required professional tasks and to regulate relations involved in the process of teaching and educating students, perform organizational tasks, and become part of the organization and its political and social processes" (p. 287). Simplified, TSE describes an educator's confidence in successfully acquiring desired outcomes from their students (Pfitzner-Eden, 2016; Tschannen-Moran & Hoy, 2001). TSE is the anchoring factor of a teacher's identity. Studies have found links between teachers' TSE and student outcome. It has been reported that teachers with a high TSE increase their students' achievement, motivation, and self-efficacy (Derosier & Soslau, 2014; Jamil, Downer, & Pianta, 2012; Tschannen-Moran & Hoy, 2001). In

addition, the same studies found that high TSE has been linked to teacher behavior, like the reduction of attrition, the increase of persistence, decrease in stress, willingness to try new ideas and strategies, and a positive attitude.

Interestingly, Jamil, Dower, and Pianta (2012) found that TSE builds upon teacher's personal self-efficacy. This is not surprising since studies that include interpersonal skills and TSE as constructs within their model show a decrease in the significance of TSE. A study of 509 pre-service teachers who were completing their student teaching provided supporting evidence that pre-service teachers with a positive, outgoing attitudes and democratic governance had a higher level of confidence regarding their success rate as a teacher. Conversely, pre-service teachers that were more prone to negative effects, anxiety, and psychological distress felt less confident at the end of their student teaching.

Development of Teacher Self-efficacy. Teacher Self-Efficacy (TSE) can be described as a continuum that mirrors the proficiencies of a teacher at any given point. As stated before, self-efficacy is developed via four types of circumstances: vicarious experiences, social persuasion, physiological and emotional arousal, and mastery experiences (the most influential of the four sources). The same holds true for TSE because teachers' level of TSE relies on their daily interactions: teacher-student interaction, teacher-mentor interaction, and peer interaction. Within the teacher-student interaction, teachers have a recurring role that offers the opportunity for active teaching and the opportunity to gain mastery experiences (Filatov & Pill, 2015; Maistre & Paré, 2010). Teacher-mentor interactions provide vicarious experiences through observations and physiological and emotional arousal during lesson planning and reflective conferencing (Goodnough, Osmond, Dibbon, Glassman, and Stevens, 2009; Richter, Kunter, Lüdtke, Klusmann, Anders, and, Baumert, 2013). Peer to peer interactions mimic the benefits of teacher-

mentor interaction by providing social persuasion through shared experiences and collaborations (Goodnough et al., 2009). Physiological and emotional arousal can be obtained within all three interactions types if the opportunities cause an affective impact (Goodnough et al., 2009; Richter et al., 2013; Shwartz & Dori, 2016).

In a study of 149 pre-service teachers enrolled in clinicals or student teaching, Hand (2014) investigated the strength of self-efficacy judgment and the sources of influence within a physical education environment. From this study, the practice of teachers implementing mastery teacher's feedback was considered a TSE enhancing practice. The study also identified the lack of teaching practices, access to current technology in schools, and efficient role modeling from mentoring teacher as practices that stifled TSE development. Flores' (2015) research extends the work of Hands (2014) study that credited early classroom access and pre-service teachers ability to collaborate and personalize course content as driving forces behind the increase of content and overall self-efficacy among 30 undergraduates enrolled in content related teacher preparation courses.

Filatov's and Pill's (2015) study provides evidence that pre-service teachers who are prepared in their content and are given multiple opportunities to gain mastery experiences of challenging situations and develop a high sense of self-efficacy. Pre-service teachers that showed gaps in their content area and experiences displayed a low sense of self-efficacy, which led to identifying the external source, teacher placement, as a significant factor in efficacy development.

Acknowledging the impact the three interactions have on the development of TSE, it can be assumed that teachers with high implementation of self-regulated practices in the classroom have encountered models of self-regulation or have attended professional development that

trained them on how to implement self-regulated instructional strategies in their classroom. Therefore, any personal and professional experience participants encountered have the capability to influence their readiness and learning environment. This directly supports for the importance of social modeling. “Teachers who have a high level of readiness for self-directed learning always question themselves about their methods and strategies and how to develop themselves in order to leave a positive impression on students” (Gencel & Saracaloglu, 2018, p.17).

Specificity of Teacher Self-Efficacy. The difference between an effective teacher and an ineffective teacher dwells within the concept of teacher self-efficacy. As stated before, teacher self-efficacy (TSE) describes the personal belief teachers have about their capabilities to acquire the desired outcome. Tschannen-Moran and Hoy (2001) created the Ohio State Teacher Efficacy Scale, a valid and reliable instrument that measured overall TSE as well as three subscale domains: engagement, instructional strategies, and classroom management. TSE has been the center of understanding the intimate details of the teaching profession due to its predictability. Consequently, TSE has been linked to several defining factors.

Under the umbrella of instructional strategies, Dixon, Yssel, McConnell, and Hardin (2014) compared the TSE of 45 teachers from two uniquely different districts. The teachers received professional development that addressed differentiated instructions, then the researchers conducted a one-way ANOVA data analysis was conducted. The findings provided evidence that pre-service teachers’ TSE correlated to their willingness to provide students with differentiated instructions (DI). The study’s finding was significant to the teaching field because teachers are asked to educate students with different learning abilities, learning styles, and demographics. The capacity to provide personalized learning paths for students is becoming an important skill for teachers due to the increase in student diversity. Similarly, Suprayogi, Valcke, and Godwin

(2017) found there is a layered alignment between teachers' behavior, competencies, and belief when implementing DI.

Uden, Ritzen, and Pieters (2013) reported that TSE contributes to a teacher's perception of student engagement. More specifically, a relationship was found between two entities of engagement: behavioral engagement and emotional engagement. The authors enlisted 195 vocational teachers to complete a piecewise digital questionnaire. They claimed that proximity and pedagogical competence predicted the perception of emotional engagement, and behavioral engagement was the result of teachers' control and didacticism — the ability to create an engaging learning space filters into the production of a positive school atmosphere, which exhibits a safe physical environment, a high moral tone, development of relationships, and a sense of empowerment (Glickman, Gordon, & Ross-Gordon, 2014).

The last of Tschannen-Moran & Hoy's (2001) domains, classroom management (CM), coincides with the idea of creating a safe learning environment. With the understanding that productive learning cannot and will not take place if students do not feel safe and secure at school, CM becomes a subscale of great interest. Sivti and Balc (2015) analyzed the responses of 362 pre-service teachers that were surveyed using the "Classroom Management Self-Efficacy Scale" instrument. This study revealed that effectiveness of CM courses and student GPA had a direct link to pre-service teachers' CM self-efficacy, but their high school experience did not share the same relationship, which indicated that CM efficacy reflects teachers' preparation. Also, the study revealed that as pre-service teachers' confidence in CM increase, their expectancy increases as well; teachers with high self -efficacy work harder and persist longer even when students are difficult to teach (Woolfolk Hoy & Burke Spero, 2005). Teachers that find it challenging to manage class order continuously were more likely to lose confidence and

quit the profession. Even though CM is usually seen through the lens of controlling actual behavior, it also reflects the teachers' ability to build relationships with students. Teachers that can build good rapport with students develop close, trusting relationships, which in turns help students feel connected to their learning environment (Glickman et al., 2014) and less likely to participate in destructive behavior (Summer, Davis, & Hoy, 2017).

The understanding of teachers' beliefs towards self-regulatory practices should increase as research on the importance of self-regulatory learning in the classroom setting increases. Teachers' awareness of their efficacy for self-regulatory learning is critical to a productive learning environment (Zimmerman, 2013). The Teacher Self-Efficacy Scale to implement Self-Regulated Learning (TSE-SRL) was established (Smul et al., 2018) as an acceptable fit to the Ohio State Teacher Self Efficacy Scale (Tschannen-Moran & Hoy, 2001). It explains the impact of self-regulated learning beliefs among teachers. Like the other identified domains, the self-regulation domain aligns with the idea that teachers determine students learning experiences, and if the education system wants to shift to a more self-regulated workforce, research must include the teacher's perspective. Learning experiences that include self-regulatory learning serves as a form of observational modeling (Schunk & Zimmerman, 2006), encourages students to discover how they learn (Pajares, 2008; Zimmerman & Schunk, 2008), and influences student achievement (Zimmerman, 2008).

Sharing research on the specificity of the teacher self-efficacy construct and the different impacts the domains have on the learning environment helps validate this study's attempt to quantify teachers' beliefs towards self-regulated practices. It is crucial to know how the leaders of the learning environment feel about their capacity to implement self-regulated practices when developing a plan to cut down on students' self-regulated deficiency. Presenting the teacher's

perspective on implementing self-regulated practices provides a clearer depiction of the next steps needed to address the human capital challenge.

Self-Regulated Learning

The concept of self-regulated learning was introduced by Bandura's theoretical framework for social cognitive theory as well. A component of Bandura's concepts of human agency and exercise of control, self-regulation focuses on understanding the dependency between personal control, environment, and behavior. "Through exercise of forethought, people motivate themselves and guide their actions in anticipatory proactive ways" (Bandura, 1991). The influence of the reciprocity between the three processes cannot be assumed equal or bidirectional due to the setting in which the interactions occur (Bandura, 1986); however, one certainty declared by Bandura was that self-monitoring, judgmental, and being self-reactive are self-regulatory structures that mobilize change when propelled by self-efficacy (Bandura, 1991).

Barry J. Zimmerman leads with Bandura's claim that humans are influencers over their behavior and environment and thus extended the self-regulation concept to the educational field. He defined self-regulation as "students' self-generated thoughts, feelings, and actions that systemically affect the learning of knowledge and skills (Zimmermann, 2000), and are filtered through personal beliefs, values and existing cognitive processing (Bandura, 1991). Whipp and Chiareli (2004) stress that the interdependent relationship between cognitive, affective, and motivational dimensions promotes academic success.

The Self-Regulation Theory acknowledges the significant role self-efficacy plays in a person's capacity to self-regulate and is therefore also recognized as the Self-Regulation Theory of Motivation. The addition of the term motivation signifies "the important role self-efficacy

plays in a person's capacity to learn and exert control, as well as interest levels and values attributed to tasks" (Michalsky, 2011, p. 1108).

Phases of Self-Regulated Learning. Multiple researchers have attempted to develop a model that represents the phases of self-regulatory learning (Boekaerts & Niemivirta, 2000; Pintrich, 2000; Winne & Perry, 2000), but Zimmerman's model (due to the acknowledgment of the influence of social modeling) is often referenced when addressing self-regulated learning. The model depicts a cyclical nature of learning that consist of three phases: forethought, performance, and self-reflection. The forethought phase describes learners' ability to proactively set goals and create a plan of action that is based on their self-motivation beliefs; the performance (volitional) phase describes learners' ability to restrain themselves from instant gratification by self-monitoring and self-control. The self-reflective phase describes learners' ability to evaluate self-satisfaction of a completed task, which determines if the learner revisits the task with adjustments or focuses on another task (Bembenutty, White, & Velez, 2015).

Applying the phases of learning to this study, teachers that have strong efficacy about implementing self-regulated practices will exemplify forethought via intentional lesson planning. The plans would center around the lesson's objectives and learning goals and consider methods that carefully facilitate students' mastery of those objectives and goals. The performance phase would include tasks that require self-regulated learning strategies, as well as modeling and encouragement of thinking aloud so students can process the intended form of learning. Lastly, during the self-reflection phase, the teacher would evaluate how her students responded to the learning activities and if the intended learning goals were met or additional teaching and modeling are needed to achieve the desired outcome.

Development of Self-Regulated Learning. "Self-regulation [development] is a social enterprise that involves a learner and a knowledgeable individual who can guide the learner through the process of acquiring self-regulatory skills" (Bembenutty, 2015, p. 23). Since becoming a self-regulated leaner is not a passive endeavor, the development of self-regulatory skills can be described as a reflection of intentional acquisition that starts with modeling. Schunk and Zimmerman (2006) introduce the social cognitive model of development that consists of four phases: observation, emulation, self-controlled, and self-regulated. The observation phase refers to verbal instructions and modeling obtained cognitively; the emulation phase refers to demonstrating skill attainment, but with social guidance and feedback. The self-controlled phase refers to learners' ability to internalize the skill in order to demonstrate it independently; the self-regulated phase refers to learners acquisition of skills with personal adaptation. The four phases shift learners from a social source of learning to a self-dependent learner. For example, teachers that model how to outline a chapter for students will activate the development model. Giving students time to practice the skill with teacher input would be considered the emulation phase. The self-controlled phase would include students outlining a chapter alone. Last, self-regulated would be students outlining information without being instructed to do so in the same or different class setting, in addition to personalizing annotation notes to comprehend information better.

Implementation of Self-Regulated Learning. From the student's perspective, being exposed to self-regulated practices helps develop learning habits and effective study skills. These are fostered by appropriate learning strategies, monitor learning progression, and evaluate learning, which are skills that have been deemed necessary for 21st-century learners in order to compete with the shifting work environment. 21st-century learners must have the opportunity to

be exposed and engaged to an array of self-regulated learning practices in order to gain he skills previously listed. Researchers state that teachers should provide detailed information on the what, how, and when a strategy should be used, lead discussions to allow students the opportunity to explore their understanding of their learning, design open-ended learning activities, minimize objective testing to reduce test anxiety, and make students aware of the benefits of becoming a self-regulatory learner (Bembenutty, 2009; Cubukcu, 2009).

From the perspective of the instrument that will be used in this study, self-regulated strategies in the classroom setting can be implemented via direct instruction or indirect. According to Smul's et al. (2018) newly constructed Teacher Self-Efficacy Scale to implement Self-Regulated Learning, explicitly teaching self- regulation learning strategies stands and indicates that only the teachers' belief regarding students' exposure to self-regulated practices hinders students' development. The authors noted that indirect instruction speaks to teachers' belief regarding student choice, assigning challenging, complex tasks, and self-evaluation opportunities.

Ramdass and Zimmerman (2011) found that tasks given as homework can build students' self-regulatory skills. The data showed a positive relationship between homework tasks and self-efficacy, self-reflection, responsibility for own learning, maintaining focus, managing learning environments, ignoring distractions, delaying gratification, and time management. They emphasize that building students' self-regulated skills does not require new pedagogical methods, but simply being aware and making intentional decisions about activities and strategies can cultivate students' self-regulation skills.

Constructivism Learning Theory: Pedagogy Perspective

The constructivist theory was established by Jerome Bruner stems from Piaget's cognitive learning principles and other philosophers, like John Dewey and Lev Vygotsky. The theory supports the notion that learning is an active process that allows knowledge to be constructed and transferred through experiences (Hsiao et al., 2014; Ke, K. Xie, & Y. Xie, 2016; Yang, 2015; Yang, 2012). Teachers grounded in constructivist theory make it a priority to address and activate students' prior knowledge and experiences that will be used to interpret learning objectives. The introduction of new curriculum can occur in order to develop new learning connections once this step has been completed. If the theory stands correctly, students that are placed in a learning environment that implement self-regulated instructional practices will be able to use the learning strategies to construct and transfer knowledge via assimilation and accommodation of new experiences, an ability that signifies their understanding of their own learning. A teacher's experience level can impact the efficiency and ingenuity by which appropriate instructional practices are implemented (Cornelius-White, 2007).

According to Hein (1991), the constructivism learning theory approach to teaching and learning is grounded with the following eight learning principles:

- Learning is an active process that is ignited by a person's sensory receptors and processed cognitively to construct meaning.
- Learning is a dual process of constructing meaning while constructing systems of understanding.
- Learning is an internal process that requires learners to not only engage in hands-on experience, but also engage in activities that are mentally simulating.

- Learning embraces the use of relevant language since the process of learning includes self-talk.
- Learning is a social activity that is enhanced by human interaction.
- Learning is embedded in a person's worldview.
- Learning is differentiated by a person's pervious knowledge, which necessitates the use of individualized pathways when acquiring and integrating new knowledge.
- Learning is the product of repeated exposure to information that is gained over time from different perspectives.
- Learning is driven by motivation to understand the "why".

In other words, learners do not reinvent the wheel but allow their curiosity of how the world works to motivate them to understand how it turns and functions (Olusegum, 2015).

Focusing more on developing the learning environment that encourages students to be self-regulated learners, the constructivism learning theory will be applied from the pedagogical perspective. A constructivist learning environment provides opportunities for students to take ownership of their own learning by giving students autonomy over how they learn. The learning environment provides authentic experiences that require students to evaluate their learning and collaborate with peers, as well as presenting multiple representations of class information, which all plays a role in increasing students' awareness of how they construct knowledge (Olusegum, 2015).

So, when studying how teachers' beliefs regarding implementation of self-regulated learning strategies based on teaching experience is explored, the study's findings should indicate that teachers with a high self-efficacy towards self-regulated learning practices have pedagogical

goals that include increasing students' ability to understand how their cognitive and metacognitive processing functions. With understanding, students should be able to construct knowledge, which would be driven by external and internal motivation, autonomy, and student-centered learning.

Teacher Experience and Student Achievement

For this study, teacher experience is self-reported by teachers as the number of years they have taught in kindergarten through twelfth grade classroom by the time the data were collected (Liu, Jones, & Sadera, 2010). This decision was made due to multiple studies showing that on the job-training correlates with teachers' effectiveness. Kane, Rockoff, and Staiger (2008) investigated the effectiveness of newly hired teachers in New York City. They looked at teachers' forms of certification to determine whether it affected their effectiveness. The claim of type of certification was not supported, but the notion that some experience is better than no experience was supported. Boyd, Lankford, Loeb, Rockoff, and Wyckoff (2008) supported this study by reporting that among all the descriptors of New York City teachers qualifications (experience, demographics, undergraduate degree, certification type, SAT scores, test performance, Pathway, college recommendation) and school's descriptors (poverty, expenditures, racial and ethnic breakdown and school's average performance), the most significant gains were seen between first and second year teachers, which was credited to teachers' opportunity to gain a full year of teaching experience.

Extending the importance of teacher experience, Clotfelter, Ladd, and Vigdor (2006) determined that a teacher's experience is one of three constructs that impact students' achievement. Strengthening their 2006 finding, Clotfelter, Ladd, and Vigdor (2007) reported that teacher qualifications and student achievement have a positive correlation with the number of

years a teacher has been in the profession. Finally, Harris and Sass (2011) reported that teachers' productivity due to their experience led to significant student gains.

Teacher Experience and Teacher Self-Efficacy's Domains

As mentioned before, Bandura (1997) indicates that a strong sense of teacher self-efficacy (TSE) is developed by mastery experiences, verbal feedback, vicarious experiences, and physiological and emotional arousal, which can all be gained by engaging in the act of teaching. Teachers' years of experience, either good or bad, impact the development of teacher self-efficacy, but the differences based on the specificity of the domain have yet to be presented.

Exploring the impact years of experience have on the domains of teacher self-efficacy provides detailed information about the actual differences among novice and expert teachers in regards to instruction. Multiple studies have revealed that cognitive processing between novice and experienced teachers differs substantially and that it includes the act of analyzing teaching tasks and the assessment of personal teaching competence (Tschannen-Moran, & Hoy, 2001). Cognitive processing considers teachers' content knowledge, pedagogical content knowledge, and pedagogical knowledge (Hogan et al., 2003), all of which influence instructional decisions, reflection, and rationality (Cavojova & Jurkovie, 2017).

Kim and Klassen (2018) investigated the cognitive processing of pre-service, beginner, and expert teachers by observing the similarities and differences in mental representations and confidence ratings when presented with school-based and non-school based challenges. Differences occurred within the area of strategy. Expert teachers used patterns and inference as cues to address the scenario to gain a deeper understanding before solving an issue. Conversely, less experienced teachers used strategies that reflect a cursory level of understanding. Other differences are noted with the level of confidence when responding to unpredictable questions or

situations, a notion that was also supported by Kohler, Henning, and Usma-Wilches (2007). Their study showed that lack of experience was clearly exhibited in novice teachers' reflective practices. Conversely, Kim and Klassen (2018) study found that no difference between expert and novice teachers was demonstrated when addressing scenarios that did not fall within their expertise, supporting Bandura's (1977) self-efficacy specificity claim.

Classroom management's impact on cognitive processing shows that teachers' experience plays a role in how teachers address classroom behavior. Wolff, Jarodzka, Bogert, and Boshuizen (2016) choose to use a mixed method design and collected data that illustrated differences between the representation of classroom management, theme and focus within the class, and knowledge used for inference and processing. Differences found were influenced by the teacher's interpretations based on the reflection of experiences and professional development. Wolff, Jarodzka, Bogert, and Boshuizen (2017) extended their 2016 study by comparing teachers' response to classroom recordings by utilizing visual tracking and verbalization of thought. Experienced teachers focused on areas of interest to pick up cues for cognitive processing and efficient perceptual encoding; the opposite was true for novice teachers. "Thus, the abundant practical classroom experience and ensuring knowledge of experts is likely to influence their ability to search for relevant cues in a focused, efficient manner, whereas novice teachers are likely to engage in a time-consuming, rather indiscriminate search for information" (Wolff et al., 2016, p. 245). In other words, teachers' experience impacts their ability to maximize instructional time. Years of experience has great potential to impact the implementation of self-regulated practices with obvious differences found in the cognitive processing between novice teachers and expert teachers. This study has the potential to provide insight into teachers' beliefs concerning their ability to foster a self-regulated environment, and,

particularly, whether their beliefs reflect on years of experience or personal self-regulation/ teacher training.

Learning Strategies

Learning strategies become noteworthy with the increase in interest to maximize students' academic consumption and application capacity. Schumaker and Deshler (1992) define learning strategies as an individual's approach to completing tasks or understanding an academic or non-academic concept effectively and efficiently by organizing information or selecting a set of skills that produce the desired outcome. From the perspective of Alexander, Graham, and Harris (1998), learning strategies are procedural knowledge that students use or modify depending on the task in hopes of obtaining academic knowledge. Simply stated, learning strategies is the mechanism that drives students' ability to learn the art of learning, an idea that falls under the pedagogical goals of constructivist learning theory (Hein, 1991).

Alexander, Graham, and Harris (1998) identified a relationship shared between obtaining knowledge, selecting strategies, and motivation. The study stated that the three constructs impacted each other directly; a student's current knowledge about the presented information dictates the learning strategy the student selects to accomplish the task. Depending on the level of knowledge and understanding, students will be able to select the best-fit strategy to maximize their learning, which motivates them to continue to increasing their knowledge (Tuckman, 1999).

Several literature sources support three categories of learning strategies related to self-regulated learning: cognitive, metacognitive, and motivational (Zimmerman & Martines Pons, 1986; Zimmerman, 1990), which reflect Boekaerts' (1999) three-layer model of self- regulation learning. Boekaerts' embedded layered model showcases cognition, how learners process information, as the core. Cognitive learning strategies help students gain basic information that

may be content or task-specific (Mayer, 2008). Cognition learning strategies require students to engage in activities that activate students' lower-order thinking skills, such as remembering, understanding and applying information. Through goal progression, students are later engaged in higher-order thinking skills like creating, analyzing, and evaluating authentic task using their experience and point of understanding (Smul et al., 2018). The middle layer, metacognition, refers to learning activities used to regulate the overall learning process. Bembenutty, White, Velez (2015) defines metacognition as a learner's awareness of their strengths and abilities concerning the task, which help in organizing and planning for tasks/goals at hand (Smul et al., 2018). The outer layer of Boekaerts' model is motivation, which speaks to learners' goals, needs, and expectancies. Motivation learning strategies, seen as the mechanism behind learners moving from cognitive processing to metacognitive comprehension, maintain learners' focus and commitment.

Lavasani, Mirhosseini, Hejazi, and Davoodi (2011) state that "self-regulation learning strategies are the necessary instruments for students' success and share a close relationship with learners' self-efficacy and academic development." Zimmerman (1989) provided an overview of student actions that would fall under modeling self-regulated learning:

- Self-evaluating,
- Organizing and transforming,
- Goal-setting and planning,
- Seeking information,
- Keeping records and monitoring,
- Environmental structuring,
- Self-consequences,

- Rehearsing and memorizing,
- Seeking social assistance,
- Reviewing records.

Revisiting the idea of reciprocity between self, environment, and behavior, learning strategies selected by the learner reflects on the sources and depend on the setting. For instance, if students evaluate their work without being prompted by an instructor, their self- regulatory efforts pivots from self, but if they are instructed to evaluate a task, the source becomes environmental (Zimmerman, 1989). Another example would be students' ability to adjust their study environment. Selecting a quiet area to eliminate distractions reflects an environmental source. In terms of seeking social assistance, students regulate themselves from a self-perspective but influenced by social awareness, or lack thereof, based on social interactions in the environmental setting (Zimmerman, 1986).

Self-regulated learners gain their learning strategies from their learning environment and through teacher exposure (Bembenutty et al., 2015). As a self-regulated learner, the ability to use these learning strategies strategically heightens the learning and develops students into lifelong learners (Tuckman, 1999). According to the survey that will be used for the study, teacher exposure can be direct or indirect depending on the instructional strategy selected.

Instructional Strategies

Teachers can accomplish their desired outcomes for their students by setting the tone of the learning environment. "[Teachers] understand that what the teacher does and what the students do have powerful influences on learning and on the quality of classroom life" (Parkay, Anctil, & Hass, 2014, p.323). One of the critical components of the learning environment is the type of instructional strategies selected to present the curriculum.

The literature about instructional strategies/practices can be divided into two main categories: teacher-centered and student-centered. In a teacher-centered learning environment, students are passive learners, and the teacher transmits knowledge to the students (Vogler, 2008). Teacher-centered instruction is very structured and effective when reviewing facts, organizing information, and connecting concepts (Vogler, 2008). It consists of class lectures and discussions, direct instruction, basic questioning and answering, and the acquisition of lower-order thinking skills (Faulkner & Cook, 2006; Vogler, 2008). With student-centered instruction, the teacher takes the backseat as the knowledge expert and facilitates students' learning with a focus on assessing the students' depth of knowledge and rationale for their thinking (Vogler, 2008). With strategies like cooperative learning, problem-based learning, critical thinking, and hands-on activities, she proclaimed that the student-centered learning environment provides instruction that guides students during discovery that initiates the construction of knowledge. Actively engaged in authentic tasks, students are exposed to instruction that requires them to reflect on real-world occurrences, complete inquiry-based activities, synthesize multiple resources of information, and solve problems; these activities develop their higher-order thinking skills by providing them with authentic practice using those skills (Faulkner & Cook, 2005; Vogler, 2008). Furthermore, students' achievement and attitude toward learning improve when engaged in student-centered authentic learning experiences (Parkay, Anctil, & Hass, 2014).

It is essential to understand the difference between the two types of instructional categories because it depicts the teachers' role in self-regulation learning. Teachers that rely more on teacher-centered instructional strategies decrease their students' exposure to self-regulated learning practices and aid in students' self-regulated deficiency, which counteracts the goal of education today. Teachers that rely on student-centered instructional practices indirectly enhance

self-regulated learning and foster the acquisition of skills deemed necessary for the 21st century (Saavedra & Opfer, 2012a).

Student-centered instructions and 21st-century skills. Since student-centered instructions provide students with the opportunity to explore their learning in a supportive environment, it is important to identify what skills students should obtain during this form of instruction. The important question remains what are 21st-century skills? These may include students working as collaborators, creators, critical thinkers, and communicators (National Education Association, 2016). Urbani, Roshandel, Micheals, and Truesdell (2017) identifies critical thinking, communication, collaboration, and information, media, and technology skills (IMTS) as targeted 21st-century skills and emphasize the importance of digital literacy. The Asia Society and U.S. Council of Chief State School officers defined 21st-century skills from the perspective of globalization. This group supported the competent global student that was able to investigate beyond their environment, acknowledge personal perspective as well as others, communicate ideas effectively with diverse cultures, and solve problems to improve living conditions. Finally, the University of Melbourne-based and Cisco-Intel-and Microsoft-funded Assessment and Teaching of 21st Century Skills consortium organized the skills into four groups: Ways of Thinking, Ways of Working, Tools for Working, and Living in the world. Ways of Thinking group includes skills like creativity/innovation, critical thinking, problem-solving, decision-making, and learning to learn. Ways of Working was defined as knowing how to communicate and work as a team. Tools for Working included a person's literacy level concerning knowledge and information as well as communication technology. The last category addressed a person's capacity to be an upstanding citizen that is culturally aware and competent socially and personally.

Two aspects remained constant when considering these perspectives: 21st-century skills focus on learners being problem-solvers, thinkers, and decision-makers that are competent and competitive in a global society. Savedra and Opfer (2012a) elaborate on the necessity of developing 21st-century skills by pointing out that students are a part of a society that requires them to be able to function in a shifting economy, uphold civic obligations, and adapt to the needs created by globalization. The authors based their claims on the shift from jobs and careers needing individuals suited for procedural tasks to a workplace that thrives on an individual's capacity to figure out innovative solutions. They state that the skills aid students in debating and exercising their rights to enforce or challenge governmental policy. The skills are a global language that prepares students to work together and compete globally.

Education's purpose evolves to developing students with a set of holistic skills that aid in successfully adapting continuously with the focus on what students can do with their acquired 21st-century skills (Greiff & Kyllonen, 2016). Research supports the idea that 21st century skills are fostered by instructions/tasks that require students to engage in higher-order thinking (HOT). Resnick (1987) defines HOT as "non-algorithmic, it tends to be complex, it often yields multiple criteria and solutions, and it often involves uncertainty" (cited in Zohar & Agmon, 2017, p. 244). According to Bloom's Taxonomy, higher-order thinking is cultivated when learners create, evaluate, analyze, and apply knowledge after lower-order skills (foundational skills) of remembering and comprehending information have been obtained. Zohar (2004) provided examples of HOT tasks that included students constructing and evaluating arguments, comparing concepts, researching scientific questions, and synthesizing information, which are congruent to skills that have been obtained through student-centered instructions that require students to monitor their learning.

The importance of highlighting the relationship between teacher instruction, higher-order thinking skills (HOTS), and 21st-century skills was to show the linear interdependence between each factor. Without teachers exposing their students to more student-centered instruction that foster self-regulated learning, opportunities for students to acquire HOTS are minimized, which aids in developing a self- regulated learning environment. Hence, the relationship depicts why it is imperative to consider the barriers within the learning environment that create deficiencies in students' abilities to gain learning habits, effective study skills, learning strategies, learning progression monitoring, and evaluating their learning. In other words, what barriers stop students from becoming masters of their learning?

Barriers to student-centered instruction. One might assume that most of the learning experiences students enjoy are based in this form of instruction from knowing the benefits of student-centered instruction. Unfortunately, student-centered instruction is not the norm for many learning environments for countless reasons (time, teacher's learning experience, testing format, belief/attitude, and curriculum overload). For the purposes of this study, accountability and teacher belief/attitude impact on the learning environment will be explored. Since the study takes place during the era of accountability/high stake testing, teachers' beliefs are a key construct of the study.

The former, accountability/high stake testing simply refers to public schools' ability to provide a quality and equitable education to all students, which is measured by students' proficiency level on state-mandated content standards (Hursh, 2005). Government regulation and audit intensified when President George W. Bush instated the educational policy No Child Left Behind (NCLB). Not only were public schools charged with guaranteeing that their students were able to pass state-mandated tests, but they also had to show adequate yearly progress (AYP)

within disaggregated student groups (gender, race, ethnicity, and disability) that historically have shown inadequate progress. If schools were not able to meet the demands of the policy, yearly consequences were put in place that range from students having the option to enroll in a school that met AYP to replacing an entire staff. With competition among schools increasing, school funding impacted, and teachers' job security decreasing, teachers' learning environments were scrutinized, and their students' scores became a key factor in teachers' evaluations. This shift in accountability influenced teachers to gravitate towards instructional practices that produced higher student proficiency in knowledge-based multiple-choice testing (Madden, 2008).

Vogler (2008) used a stratified sample to study 115 U.S. History teachers' instructional practices from Mississippi and Tennessee. Vogler reported that teachers wanted to include more student-centered instructions, but the pressure for students to perform well on the assessment determined their instructional practices. Selected instructional practices that were selected allowed teachers to cover more material in a shorter amount of time, which favored more teacher-centered instructional practices. The same results were presented by Faulkner and Cook (2006) when they investigated the perceived impact of assessment on middle grades instructional practices. Analysis of data from 216 educators' responses to the Middle School Concept Implementation Survey (MSCIS), revealed that active and student-centered activities are essential for students during learning. However, the curriculum that is tested aligns better with instructional methods that require teachers to lecture, and leading whole-class discussions, and have students complete worksheets.

Interestingly, implementing standards that require students to engage in 21st-century higher-order thinking, like Common Core (CC) and Next Generation Science Standards (NGSS), are not resulting in students thinking more and acquiring 21st-century skills either. Aydeniz and

Southerland (2012) found that standardized testing had a significant influence on instructional practices and claims that if standardized tests focus on knowledge-based facts, students' chances of engaging in higher-order thinking instructional practices decrease. They concluded that practices in used counter the goals of science reformists that would like students to gain a deeper understanding of scientific concepts.

Echoing the same results, Zohar and Agmon (2018) studied the relationship between high-stakes testing and teaching higher-order thinking in science classrooms. The authors used a qualitative research design to conduct interviews with 20 science educators that met two criteria: current science instructor who hold/held a leadership position in their school's science department or has instructed science education professional development. The researchers considered the validity and reliability of the perspective that experienced teachers have regarding instructional practices by choosing veteran teachers who have taken leadership roles.

Unfortunately, the study concluded that due to the testing format, teachers are still applying rope learning and drilled practices to higher-order thinking standards to increase test scores, instead of using student-centered instructions that cater to teaching thinking in a meaningful way for students to obtain necessary skills.

Similar findings were reported by Haynes and Trexler in 2015 when they studied the connection between accountability and elementary science educators' instructional practices. Using demographics, instructional time, pedagogy distribution, and thoughts on science education sections of the Science Instructional Time and Pedagogy survey, Haynes and Trexler reported that across a multitude of dependent variables (science instruction time, textbook, hand-on activities, socioeconomic factors, AYP pressure, grade, professional development hours, years taught, degree, and attitude) instructional practices were compromised significantly by the

pressure of meeting AYP. Schools with lower AYP pressure engaged students in hands-on activities (student-centered instructions) 60% more than schools that had higher AYP pressure.

More interestingly, the difference in engagement in hands-on learning exposed the inequality of education offered to poor and underrepresented students when compared to their more affluent white and asian peers due to them attending schools with a higher AYP pressure. To respond to the inequality, the study suggested that schools must embed student-centered instruction as part of their vision and intentionally offer long-term professional development that aids in shifting teachers' practices.

"It seems that the simultaneous requirements for a rapid movement in test scores and for fostering higher-order thinking create tension and conflict" (Zohar & Agmon, 2017, p. 250). Recognizing the impact accountability/high stake testing has on teachers' instructional practices, could infer that teachers responsible for students in a tested subject will report a lower score for self-regulated practices. In contrast, their colleagues that are not placed in a high-stake testing learning environment will report a higher teacher self-efficacy towards self-regulation practices score.

Diamond (2007) cautions researchers not to focus on high-stakes testing as a barrier of student-centered instructions and points out the inequalities between instructional practices in schools that service low-socioeconomic and underrepresented students. Like Haynes and Trexler (2015), Diamond found that schools with higher AYP pressure, spend more time using didactic (teacher-centered) instructional practices than schools with low AYP pressure. Unfortunately, high-pressure schools serviced low-income households and African American students, causing these groups of students to be less exposed to interactive (student-centered) instructional practices. Interestingly, Diamond's study acknowledged the effect of AYP pressure on teachers'

selection of instructional practices but identified the environment in which the policy is being implemented as more telling of teachers' implementation of strategies. Diamond (2007) claims that teachers' instructional practices are more influenced by their interactions with school leaders, colleagues, and personal beliefs and that teachers' capacity may be challenged when asked to implement interactive instructional practices, especially if didactic instructional practices are the conventional teaching methods of the school system.

Diamond (2007) findings highlight how teachers' beliefs can also be a barrier to student-centered instructions. Teachers' beliefs are described as implicit or explicit subjective conceptions that impact perception and actions (Op't Eynde, De Corte, & Verschaffel, 2002), which in turn influence the development of a person's attitude, which is the actual judgment of a particular entity (Maio and Haddock, 2014). The literature includes studies that investigate teacher's beliefs and attitudes towards instructional practices due to the close association between belief and attitude.

In 2016, Derek Copp conducted a study that concluded like Diamond's findings (2007). Copp (2016) examined the attitudes and instructional practices of Canadian teachers by using both qualitative and quantitative data from the Canadian provincial assessment. Using a mixed-method design, data was collected from surveys and interviews with teachers across Canada. The findings supported four claims. The first two claims state a relationship exists between teachers' attitudes and instructional practices, as well as teachers' attitudes and the use of data to drive their instruction. The third claim states that teachers' who see little value in testing will not use data for instructional purposes; this leads to the fourth claim that adjusting teachers' attitudes is a better investment than providing financial incentives if the desired outcome is to change instructional practices.

Isikoglu, Basturk, and Karaca (2009) presented four significant findings that focused on two questions:

1. What are teachers' beliefs about student-centered education?
2. Is there a difference between teachers' student-centered beliefs and variables such as gender, school level, educational background, teaching subjects, and teaching experience?

They found that in-service teachers recognized the importance of student-centered instruction, but were not confident in selecting appropriate student-centered strategies. Second, student-centered instructional practices beliefs were more prevalent in early grade teachers than higher grade teachers. Third, early grade teachers with a two-year teacher certificate used instructional practices that were more aligned with student-centered education. Last, the number of years in teaching correlated with teachers' beliefs; teachers with more experience expressed stronger belief in student-centered instruction than teachers with less experience, which is consistent with findings from a variety of studies regarding the relationship between teacher experience and the likelihood of using student-centered instruction.

Kumar and Hamer (2012) examined pre-service teachers' beliefs and attitudes toward student diversity and proposed instructional practices. The study's findings from its cluster analysis of cross-sectional, longitudinal data revealed that pre-service teachers with the belief that all students can succeed regardless of diversity barriers were more likely to use mastery-focused instructional practices (student-centered), whereas pre-service teachers that embraced stereotypes concerning minorities and low-socioeconomic status students would use practices that were more performance-based instruction (teacher-centered). In the case of STEM implementation, Thibaut, Knipprath, Dehaene, and Depaepe (2018) concluded that teachers'

attitudes showed a positive correlation to teacher's instructional practices addressing the integration of STEM content, problem-centered learning, inquiry-based learning, design-based learning and cooperative learning, which supports the development of students' personal self-regulation.

Closely related to the findings of Thibaut et al. (2018), Kistner, Otto, Büttner, Rakoczy, and Klieme (2015) compared mathematical teachers' promotion of learning strategies based on their beliefs. Observed videos of the teachers conducting class were classified as either having a formalist (traditional) set of beliefs or a constructivist (progressive) set of beliefs. The results concluded that teachers' beliefs play a role in promoting different types of learning strategies, and the allotted time spent teaching selected learning strategies. The data partly supports a positive relationship between beliefs and constructivist teachers' promoting and engaging in self-regulated teaching strategies, but the only strategies that were observed among constructivist teachers were self-regulated practices that addressed planning. Other self-regulated practices were not impacted by the teacher's constructivist beliefs, which were assumed to be due to constructivist views that students should be active in their instructional process. A negative relationship occurred across the board for promoting self-regulated strategies amongst teachers with formalist beliefs.

In this study, teachers' belief in their ability to implement self-regulated practices would extend studies' findings that focus on the relationship between teacher self-efficacy and self-regulated instructional practices. More specifically, the data collected from this study will provide empirical evidence from teachers' perspectives addressing their self-reported level of competence in implementing practices that teach or model self-regulation.

Summary

In order to determine if there is a relationship between teachers' experience and their beliefs towards implementing self-regulated practices, this study is embedded in the theoretical framework of Bandura's social cognitive theory. The social cognitive theory focuses on how social modeling and interactions provide a cognitive representation of behavior, which guides the production of new skills and influences corrective adjustments of old skills under the premises of humans having the ability to be agents of their behavior (Bandura, 1977, 2005). A person's belief in their capability to execute given tasks is influenced by their self-efficacy because of the reciprocal relationship between the regulation of the self, environment, and behavior (Bandura, 1997). Bandura recognized self-efficacy as the driving force behind self-regulation due to self-efficacy's predictability of how well a person would succeed at a particular task. He presented research that supported the idea that self-efficacy is domain-specific and malleable, which means that it is a continuum that reflects a person's mastery of experiences, vicarious experiences, verbal persuasions and emotional arousal toward a particular area.

Extending the concept of self-efficacy to the education field, teacher self-efficacy explicitly addressed teachers' personal beliefs about their ability to impact different domains of the learning environments. Teachers that had a high self- efficacy in engagement were able to keep their students' attention and involvement in the curriculum; teachers with a high sense of efficacy for instructional practices displayed their ability to select instructional strategies that were beneficial for optimum learning. The same was supported for teachers with a high sense of efficacy for classroom management; teachers who had a high sense of classroom management proactively managed their classroom by creating a safe learning environment. Unfortunately, the inverse was true for teachers with a low sense of efficacy. The direct correlation between

teacher's beliefs in their abilities and class environment was linked to students' achievement, motivation, and personal self-efficacy.

Establishing a claim that a teacher's self-efficacy dictates the learning environment, the necessity of understanding how teachers impact the acquisition of higher-order thinking skills through a self-regulated learning environment became a primary research focus. Zimmermann (1989) defined self-regulated learning as the degree to which students are metacognitively, motivationally, and behaviorally active participants of their own learning. Zimmermann's definition implies that teachers must have the ability to create a space that allows students to proactively motivate and guide student actions via self-monitoring, judgment, and self-regulatory structures, which indirectly reinforces students self-efficacy concerning their capacity to self-regulate. Teachers who can create self-regulated interactions in a maximizing environment provide their learners the opportunity to observe, emulate, demonstrate self-control, and self-regulate to accumulate desired skills that the teacher or peer possess (Schunk & Zimmerman, 2006).

Since increasing students' self-regulation is accomplished by intentional modeling within the learning environment via teachers and peers by the experience and interactions that occur daily (Smul et al., 2018), teachers' selection of instructional practices is imperative. According to an array of studies, student-centered instructional practices (a constructivist pedagogical approach) foster 21st-century skills (problem-solving, critical and reflective thinking, communication, and collaboration) that can be implemented directly and indirectly (Faulkner & Cook, 2005; Smul et al., 2018; Vogler, 2008). Unfortunately, student-centered instructional practices are still overshadowed by teacher-center practices, which has caused research to focus on implementation barriers.

Two of those barriers include accountability and teachers' attitudes. Several researchers have reported that No Child Left Behind (NCLB) causes a conflict of interest. After finding out that the multiple-choice, high-stake testing covers basic content knowledge with the absence of application, teachers gravitated towards teacher-centered instruction to increase their students' success rate. Teachers' choices conflicted with the intended goal of developing students' higher-order thinking skills (Aydeniz & Southerland, 2012; Faulkner & Cook, 2006; Madden, 2008; Vogler, 2008; Zohar & Agmon, 2018) as well as decreased students' opportunities to be exposed to a self-regulated environment.

Just as destructive to the implementation of student-centered instructional practices, teachers' beliefs have been identified as counterproductive to shifting instructional practices (Isikoglu, Basturk, & Karaca, 2009; Kistner et al., 2015; Kumar & Hamer, 2012; Thibaut et al., 2018). Copp (2016) concluded that focusing on teachers' attitudes is a better investment than providing incentives. Providing support, Prawat (1992) stressed that the lack of student-centered practices is only overcome when teachers rethink and reexamine their current beliefs (as cited in Isikoglu et al., 2009), that are impacted by their experience (Clotfeter et al., 2006). Clotfeter et al. (2006) found that teacher's experience and their cognitive processing (the act of analyzing teacher tasks and competence) within the realm of Tschannen-Moran & Hoy (2001) teacher self-efficacy domains: engagement, classroom management, and instructional practices were linked.

Based on the literature review that has been presented, this study's finding will increase the depth of knowledge concerning teachers' beliefs about their capabilities to expose their students to self-regulated practices, as well as extend Clotfeter et al. (2006) linkage to another domain of teacher self-efficacy and experience. Set-up as a correlational study, the study will determine if there is a relationship between the two constructs of interest, and if so, the strength

of the relationship. Having this empirical data will help navigate the instructional shift from the perspective of the educators who are the first responders of education.

CHAPTER THREE: METHODS

Overview

The purpose of the study was to determine if two variables, years of experience and self-efficacy towards implementing self-regulated learning practices among current educators, share a relationship and, if so, the strength of the relationship. In Chapter Three, a brief description of the correlation research design, as well as, the rationale behind the selection was presented. The study's hypothesis stated that there will not be a significant relationship between the two variables when studied in a K-12 public school population within a low socio-economic area. Using convenience sampling to solicit participants, the population consisted of consenting full-time K-12 public school educators who were teaching in the district zone during the 2020-2021 school year. The population included male and female teachers of various ages, who were elementary (grades K-5), middle school (grades 6-8), and high school educators (grades 9-12) that ranged from one year of college to a doctoral degree. The instrument chosen for this study is a newly constructed teacher self-efficacy scale that focuses on teachers' beliefs about their capacity to implement self-regulated instructional practices. The Teacher Self-Efficacy Scale to implement Self-Regulated Learning (TSE-SRL) consists of 21 questions with a 5-point Likert scale for responses (Smul et al., 2018). Starting with IRB approval, the study was vetted and approved by the district's research committee. Data was collected on the online platform Survey Monkey during a scheduled 2020-2021 January faculty meeting. At the conclusion of the chapter, procedures for how the data was stored and analyzed was discussed.

Design

Quantitative research focuses on an objective reality that is measured through constructs that are accurately represented by the study's sample, which leads to generalizable knowledge obtained by statistical analysis (Gall, Gall, & Borg, 2015). With that being said, this study used a quantitative correlation research design to determine if there is a relationship between public school teachers' years of experience and their self-efficacy towards implementing self-regulated learning practices. The design allows for the evaluation of the linear relationship between two quantitative scores, which in this study is each participant's number of years and their summation score for their perceived ability to implement self-regulated practices (Green & Salkind, 2014).

Mimicking the Page, Pendergraft, and Wilson (2014) study that used a correlation design to determine if there was a significant relationship between teachers' sense of efficacy and their years of experience, as well as Gürol, Özercan, and Yalçın (2010) study that sought to determine if pre-service teachers' self-efficacy is correlated with their emotional intelligence, a correlation design was determined as the best fit. The study focused on the possible direction and strength between two variables, teachers' years of experience and their self-regulation efficacy towards implementing self-regulated learning practices (Gall, Gall, & Borg, 2015).

Years of teaching experience as a full-time K-12 public education teacher served as the study's predictor variable. Teacher experience, self-reported by teachers as the number of years they have taught in kindergarten through twelfth grade classroom by the time the data were collected (Liu, Jones, & Sadera, 2010); this is a different definition that was used in the Boyd et al., 2008 study and the Clotfelter et al., 2007 study. Studies have shown that teachers who engage in the field of teaching, in on the job training as it were, increase their effectiveness,

especially in the first two years (Boyd et al., 2008; Chingos & Peterson, 2011; Harris & Sass, 2011). The criterion variable, teacher self-efficacy towards implementing self-regulated learning practices, is defined as a teacher's belief in their capacity to embed activities that foster self-regulated learning (SRL) (Smul et al., 2018).

Research Question

RQ1: Is there a relationship between teachers' years of experience and their self-efficacy regarding the implementation of self-regulated learning practices?

Hypothesis

$H_0$1: There is no significant relationship between teachers' years of experience and their self-efficacy regarding the implementation of self-regulated learning practices as measured by the Teacher Self-Efficacy Scale to implement Self-Regulated Learning.

Participants and Setting

The participants for this study were full-time K-12 public school teachers located in the southeastern region of a southwestern state during the 2020-2021 school year. The school district is the largest in the state. The district includes 38 high schools, 37 middle schools, and 88 elementary schools all of which service predominately low socio-economic students. Enrolling over 100,000 students, 56% of the students are economically disadvantaged; academically, the district graduation rate averages 80%, and students score an average ACT composite score of 18, with 23% of the enrolled students scoring a 21 or above (Department of Education, 2018). In addition, the district is composed of more than 6,000 educators that have either obtained their teacher licensure via a traditional teacher education program or a state approved alternative licensure pathway.

Not to mention, the district has several charter schools under its umbrella and is

surrounded by 4 affluent suburbs that have school districts that are no longer administratively affiliated with the district (Department of Education, 2018). When compared to the surrounding four districts, with only a 2% difference in attendance, the district's differences are alarming. In regards to economically disadvantaged students, the largest difference between the study's population of students and one of the surrounding district is 56%, while the smallest difference between the study's students and another surrounding district was 45%; following the same trend, academically, graduation rates have the largest differences of 17% and smallest of 7%; ACT composite largest difference of 7.7% and smallest 3.7%; students scoring a 21 or above on the ACT reported the largest difference of 60% and smallest of 30% (Department of Education, 2020).

A convenience sample was used to select participants for the study, which means individuals that are a part of the data set are not randomly selected, but selected because they are employed by the school district of interest and are current k-12 public school teachers. The sample size consisted of 262 teachers that provided consent to participate during a routine faulty meeting. Sine the sample size exceeded 66, which is the minimum required for a statistical power of .7 with a 95 percent confidence level (Gall et al., 2007), the effect size criteria was met.

The researcher invited perspective participants by introducing the specifics of the study, as well as the criteria for participation (any full-time teacher that was hired to teach kindergarten through 12th grade for the 2020-2021 school year by the desired district). The study was administered online via Survey Monkey. Participants used their personal devices to access the survey's link during their school's scheduled faculty meeting. Fifteen minutes was slated for the completion of the Demographic Questionnaire and the Teacher Self-Efficacy Scale to implement Self-Regulated Learning (TSES-SRL) survey. Each participating school was eligible for a $25

visa gift card raffle. After completing the study's survey, participants were redirected to a google form. The form requested participants' phone numbers. Using the google form responses (participants' phone number) and Google's random number generator, the phone number that corresponded to that row on the excel file was declared the winner. The participants' phone numbers were only be used to contact the winner and were not linked to the study's survey. The drawing took place virtually on the same day; the same procedures were used for each participating school.

Instrumentation

In order to test the null hypothesis, there is no significant difference between years of experience and their teacher self-efficacy towards implementing self-regulated learning practices. The study used the self-reported number of years a participant taught in a K-12 public school and the Teacher Self-Efficacy Scale to implement Self-Regulated Learning (TSES-SRL) instrument.

Years of Experience

The predictor variable, years of experience, refers to the self-reported number of years teachers have taught in kindergarten through twelfth grade classroom by the time the data were collected (Liu, Jones, & Sadera, 2010). The construct, years of experience, was self-reported by participants during the completion of the demographic questionnaire, which was completed before the Teacher Self-Efficacy Scale to implement Self-Regulated Learning (TSES-SRL) survey See Appendix A for the demographic questionnaire.

Teacher's Self-efficacy Scale to Implement Self-regulated Learning

The criterion variable, teacher self-efficacy beliefs about self-regulated learning (SRL), was measured with the Teacher Self-Efficacy Scale to implement Self-Regulated Learning

(TSES-SRL) instrument (Smul et al., 2018). See Appendix B for the instrument permission. The purpose of the instrument is to measure teachers' self- efficacy regarding the implementation of SRL strategies (Smul et al., 2018). Consisting of 21 questions, a 5-point Likert-style scale was used for responses. On the Likert- scale a 1 represented cannot do at all, 2 represented can do limitedly, 3 represented can do moderately, 4 represented can do certainly, and 5 represented highly certain can do. The scores noted on the Likert scale were averged, resulting in an overall TSES-SRL score. The highest score possible was a 5 and the lowest score possible was a 1. A high score on the instrument indicates that teachers feel confident in their ability to use self-regulated learning instructional strategies and a low score indicates that teachers lack confidence in their ability to implement self-regulated learning strategies.

James and McCormick (2009) state that the implementation of SRL in classrooms is an essential, distinctive domain that requires teachers to change their instructional strategies. Due to this finding, a newly constructed scale was developed to complement the general Teacher Self-Efficacy Scale (TSES) (Tschannen-Moran & Hoy, 2001). Recognizing that SRL was not represented as a domain, the developers wanted to create a more accurate scale that could measure the shift in pedagogical strategies that are required for SRL, an adjustment supported by Bandura (2006). Using the TSES as a guide for construction, a confirmatory factor analysis deemed the scale as a good fit for an SRL-model (Smul et al., 2018). Using a maximum-likelihood extraction with a Promax rotation during the exploratory analysis, four factors (one factor representing direct instruction and three factors representing indirect instruction) were included by the developers in the model:

1. Teacher self-efficacy for direct instruction
2. Teacher self-efficacy for providing choices (indirect instruction)

3. Teacher self-efficacy for providing challenges and complex tasks (indirect instruction)
4. Teacher self-efficacy for building in evaluation (indirect instruction)

Due to high loading across factors or low communality loading, three questions were omitted from the model, and the remaining questions did not include any reverse questioning (Smul et al., 2018). Out of the 21 questions, factor one, teacher self-efficacy for direct instruction, included seven questions that focused on teachers' feelings of competence to apply both implicit and explicit direct instruction, which produced a Cronbach's alpha of 0.91. Factor two, teacher self-efficacy for providing choice, included five questions that focused on teachers comfort level with providing student choice, which produced a Cronbach's alpha of 0.87. Factor three, teacher self-efficacy for providing challenges and complex tasks, included six questions that focused on teachers comfort level when presenting challenges and complex tasks, which produced a Cronbach's alpha of 0.80. Factor four, teacher self-efficacy for providing challenges and complex tasks, included three questions that focused on teachers' comfort level with self-evaluation, peer feedback, and self-reflection, which produced a Cronbach's alpha of 0.88. The Cronbach's alpha for each factor is displayed in Table 1.

Table 1. Teacher Self-Efficacy for Self-Regulated Learning Cronbach's alpha

Teacher Self-Efficacy for Self-Regulated Learning Cronbach's alpha

Teacher self-efficacy for SRL	P
Factor 1: Teacher self-efficacy for direct instructions	0.91
Factor 2: Teacher self-efficacy for providing choices (indirect instructions)	0.87
Factor 3: Teacher self-efficacy for providing challenges and complex tasks (indirect instructions)	0.80
Factor 4: Teacher self-efficacy for building in evaluations (indirect instructions)	0.88

The construct's validity and reliability were determined by an exploratory factor analysis, confirmatory factor analysis, and reliability analysis. Currently, the TSES-SRL has not been used in other published peer reviewed studies, except Smul et al. (2018), which provided instructions to be included in the overall scale as a cautionary to how instructional practices were defined and to inform users that the scale is a reflective tool to help improve professional development of teachers' SRL strategies. In search of two separate instruments that measured self-regulated learning and teacher self-efficacy, the Smul et al. TSES-SRL instrument was discovered. After becoming familiar with the study and intrigued by the relationship it shared with the Ohio State Teacher Self-efficacy Scale (OSTES), a scale that has been used multiple times to measure self-efficacy, permission was granted by Smul et al. (2018) to use the TSES-SRL scale to collect data from educators participating in the study. See Appendix B for permission to use instrument.

Procedures

Before starting the formal study, approval was granted by IRB. See Appendix C for IRB approval. Followed by an application submission to the district's research team to receive formal approval. See Appendix D for district approval. Once formal approval was granted, a formal invitation e-mail was sent to the zone's leadership team. See Appendix E for the invitation e-mail. During a virtual instructional leadership team meeting, which included all eight schools' principals, the study recruitment letter was read and principals were allowed to give their verbal consent for their school's participation. See Appendix F for the recruitment letter. Individual schools that accepted the study's invitation were given a date and time during the month of January so the researcher could conduct the study.

During the scheduled school meeting, the study's recruitment letter was presented to the teachers, which included the Survey Monkey link and a QR code. Once the recruitment letter

was read, teachers that did not wish to participate in the study were thanked for their time and given permission to leave. Teachers that agreed to be a part of the study were asked to use their personal devices to visit the Survey Monkey link or scan the QR code to access the study's exclusion criterion. See Appendix G for exclusion criterion. Any educator that did not meet the criteria was immediately redirected to the end of the survey, verbally thanked and given permission to leave.

Afterwards, the study's consent form was displayed. See Appendix H for the consent form. After the consent form, a demographics questionnaire was available for completion. See Appendix A for demographics questionnaire. After the demographic questionnaire, the survey's instructions, along with the actual teacher self-efficacy scale to implement self-regulated learning (TSES-SRL) survey was displayed. See Appendix B for directions and survey. Teachers were given 15 minutes to complete the survey. At the conclusion of the 21-question survey, a thank you message was displayed with a Google link for the $25 visa gift card raffle. See Appendix I for Thank you message.

Redirected to the virtual $25 Visa Gift card raffle google form, participants were asked to provide their phone number. See Appendix J for the virtual $25 Visa Gift card raffle google form. Participants' responses generated an excel spreadsheet. Using the excel spreadsheet and Google "random number generator", a number was selected and the number that corresponded to the row in the excel spreadsheet was the winner. The research called the winner and the $25 Visa Gift card was delivered.

Since data was collected using Survey Monkey, only the head researcher had access. After the last participating school's faulty meeting was completed, participants' self-reported

years of experience and survey responses were imported to the SPSS® data analysis program, where it was stored on the researcher's private computer, secured by a password.

Data Analysis

Since the study was examining the relationship between the predictor variable, years of experience, and the criterion variable, teacher's self-efficacy towards implementing self-regulated learning practices, a bivariate Pearson correlation was used to analyze the data (Gall, Gall, & Borg, 2007). With the data collected, descriptive and inferential statistics were calculated and reported. Expressed as continuous variables, the product-moment correlation coefficient (r) was computed to provide more information for comparison (Gall, Gall, & Borg, 2015). The sample consisted of 262 respondents, who met the criterion and volunteered during a routine faculty meeting. Since the sample size exceeded 66, which is the minimum required for a statistical power of .7 with an alpha level of a=.05 (Gall et al., 2007), the sample met the minimum for a medium effect size.

After screening data for completion and outliers, descriptive statistics were computed, which included the mean and standard deviation (S.D.) for each variable. The Pearson Product Moment Correlation required three assumptions to be met: bivariate outliers, linearity, and bivariate normal distribution (Gall, Gall, Borg, 2007). Bivariate outliers were examined using a scatter plot, looking for extreme bivariate outliers between the predictor variable and the criterion variable. Outliers were identified using a box and whisker plot. The assumption of linearity was examined by using a scatter plot and looking for a straight line. The assumption of bivariate normal distribution will be explored by looking for the classic cigar shape within the scatter plot. Assumption of Normality was determined by examining a histogram for each construct.

The Pearson Product Moment Correlation was appropriate due to its ability to determine if a relationship exists between two variables and its strength (Gall, Gall, & Borg, 2007). Reporting both descriptive and inferential statistics, the design allowed the evaluation of the linear relationship between the two quantitative scores, which in this study was each participant's number of years and their average score for their perceived ability to implement self-regulated practices (Green & Salkind, 2014). All statistical analyses were considered at a 95% confidence level with a *r-stat* reported, along with the degree of freedom (df) and level of significance. Since the study falls under the umbrella of behavioral sciences, a correlation coefficient r (proportion of explained variance, eta square) of .10 was interpreted as small; a correlation coefficient of .30 was interpreted as medium and a correlation coefficient of .50 was interpreted as large (Green & Salkind, 2014). Producing a Person r-value between -1.00 and +1.00, signifies if the relationship has a positive correlation (positive values) or negative correlation (negative values). The absolute magnitude of the Pearson's r-value provides the strength of the relationship; Pearson's r-values that are close to zero represent a weak relationship, while a number close to one indicates a stronger relationship between the two variables (Warner, 2013).

CHAPTER FOUR: FINDINGS

Overview

The purpose of the study was to determine if two variables, years of experience and self-efficacy towards implementing self-regulated learning practices among current educators, share a relationship and, if so, the strength of the relationship. The predictor variable was the self-reported years of experience. The criterion variable was the reported level of teacher self-efficacy regarding the implementation of self-regulated instructional practices.

Chapter Four begins with the reintroduction of the study's research question and null hypothesis, followed by the descriptive statistics of the full-time public school K-12 educators that participated in the study. The chapter concluded with the results of the data analyses obtained from the bivariate Pearson's correlation test.

Research Question

RQ1: Is there a relationship between teachers' years of experience and their self-efficacy regarding the implementation of self-regulated learning practices?

Null Hypothesis(es)

$H_0$1: There is no significant relationship between teachers' years of experience and their self-efficacy regarding the implementation of self-regulated learning practices as measured by the Teacher Self-Efficacy Scale to implement Self-Regulated Learning.

Descriptive Statistics

Data were obtained for the predictor variable, *years of experience*, and the criterion variable, *overall teacher self-efficacy regarding the implementation of self-regulated instructional practices*. Data were analyzed using the SPSS 27® software (Green & Salkind, 2014). A Pearson product-moment correlation coefficient (Pearson's r) was used to assess the

degree that the two variables were linearly related. Each variable was measured among 262 full-time K-12 public school educators that were evaluated using a 5-point Likert scale. The descriptive statistics were based on the self-reported *years of experience* and the *overall teacher self-efficacy regarding the implementation of self-regulated instructional practices*. See Table 2 for descriptive statistics.

Table 2. Descriptive Statistics

Construct	Mean	Standard Deviation	N
Overall TSES-SRL	1.979	.573	262
Years of Experience	12.85	9.501	262

Results

Data Screening

Data screening was conducted to examine possible outliers and missing data points for both the predictor variable, *years of experience*, and the criterion variable, *overall teacher self-efficacy regarding their ability to implement self-regulated instructional practices*. No individual was removed due to missing information. The online survey system would not allow the individual to move through the survey without responding to all questions. A scatter plot between the two variables was constructed to perform a visual inspection for extreme outliers. (See Figure 1 for scatter plot.) The researcher sorted and scanned the scatter plot for inconsistencies and noticed two data points outside the reasonable boundaries. To identify the exact cases, box and whiskers plots were deployed (Green and Salkind, 2014). Surveys for participants 158 and 164 were removed from the data set as outliers prior to analysis based on

the nominal potential impact on the data set. Doing so did not impede the required number of data points needed for data analysis. See Figures 2 and 3 for box and whiskers plots.

Figure 1. Scatter Plot of Years of Experience and Overall Teacher Self-Efficacy to implement Self-Regulated Practices (TSES-SRL)

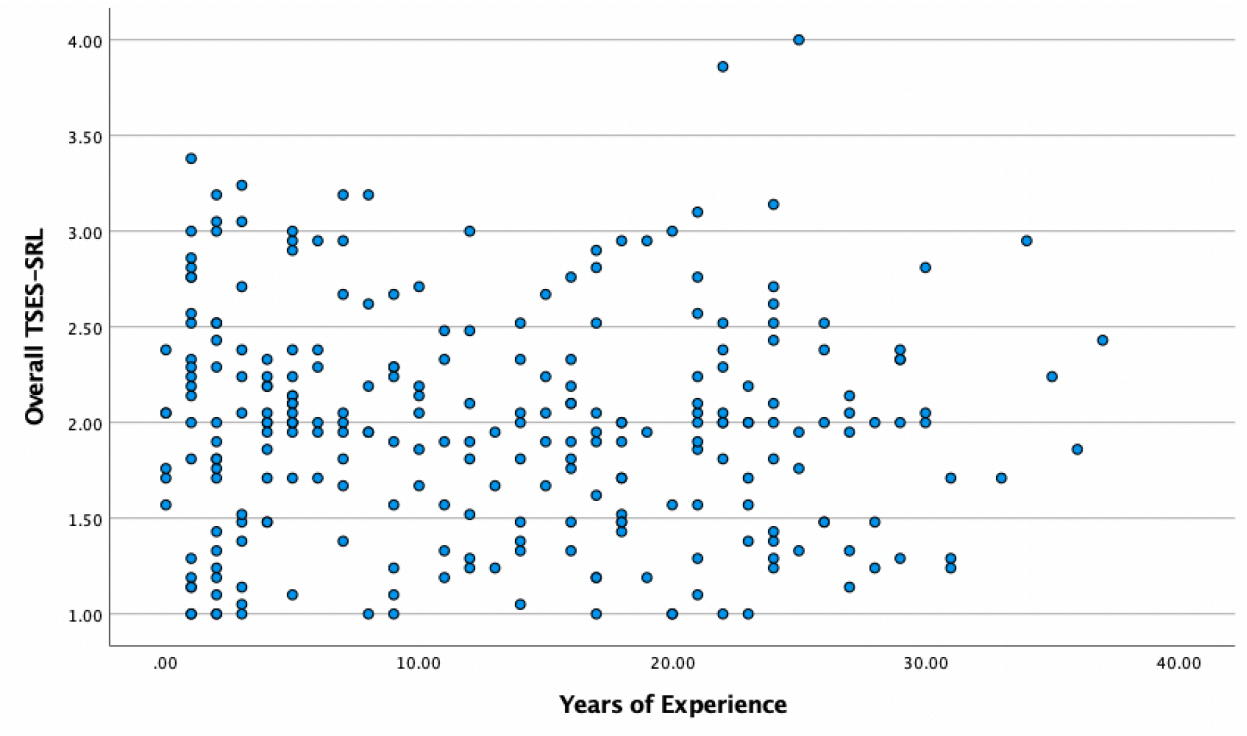


Figure 2. Box and Whisker Plot for Years of Experience

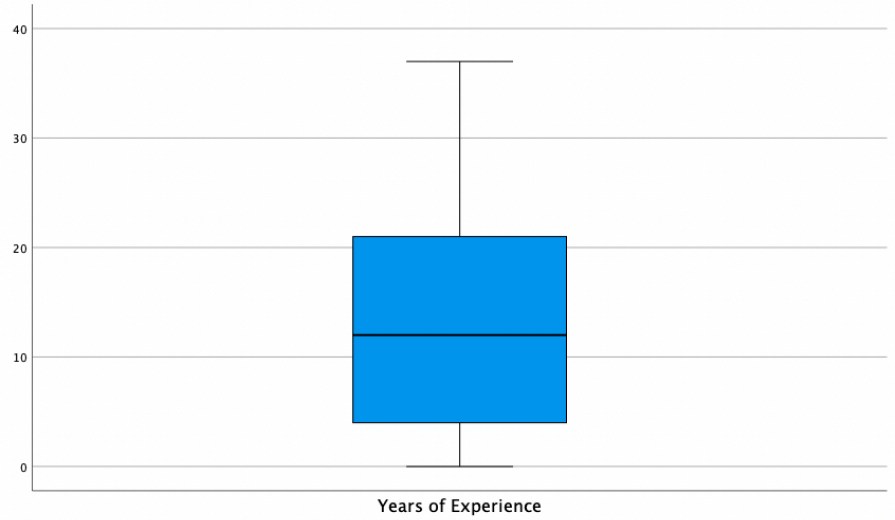
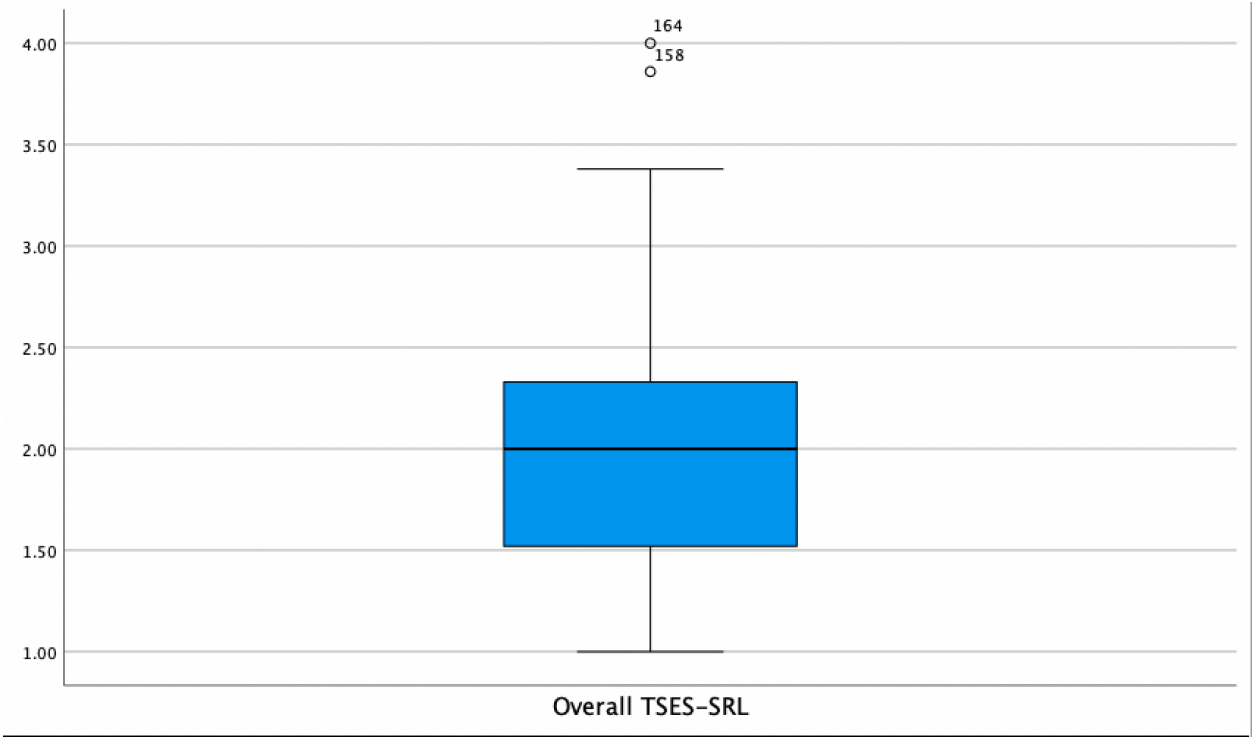


Figure 3. Box and Whisker Plot for Overall Teacher Self-Efficacy to implement Self-Regulated Practices



Assumptions

A Pearson product-moment correlation coefficient was used to test the null hypothesis, which evaluated the relationship between K-12 full-time public school teachers and their teacher self-efficacy for implementing self-regulated instructional practices. This test required the assumptions of bivariate outliers, linearity, and bivariate normal distribution to be met (Green & Salkind, 2014).

The assumption of bivariate outliers was determined using a scatter plot and box and whisker plots. See Figures 1-3 for scatter plot and box and whisker plots. As a result, the assumption of bivariate assumption was met, and the outliers were removed from the data analysis. See Figure 4 for removed outliers scatter plot.

The assumption of linearity was determined using a scatter plot with a linearity line of fit and the presence of a "cigar shape" output (Warner, 2013). The visual inspection of the scatter plot with the linearity line of fit indicates that a linear relationship is present, so the assumption of linearity was met. See Figure 5 for scatter plot with linearity line of fit.

The assumption of bivariate normal distribution was determined by scanning the scatterplot and creating histograms for all variables. Figures 6 and 7 reveal no violation of normal distribution. The data adheres to the classic “cigar shape” and a typical histogram visual representation. See Figures 6, 7, and 8 for scatter plot and histograms.

Figure 4. Removed Outlier Scatter Plot

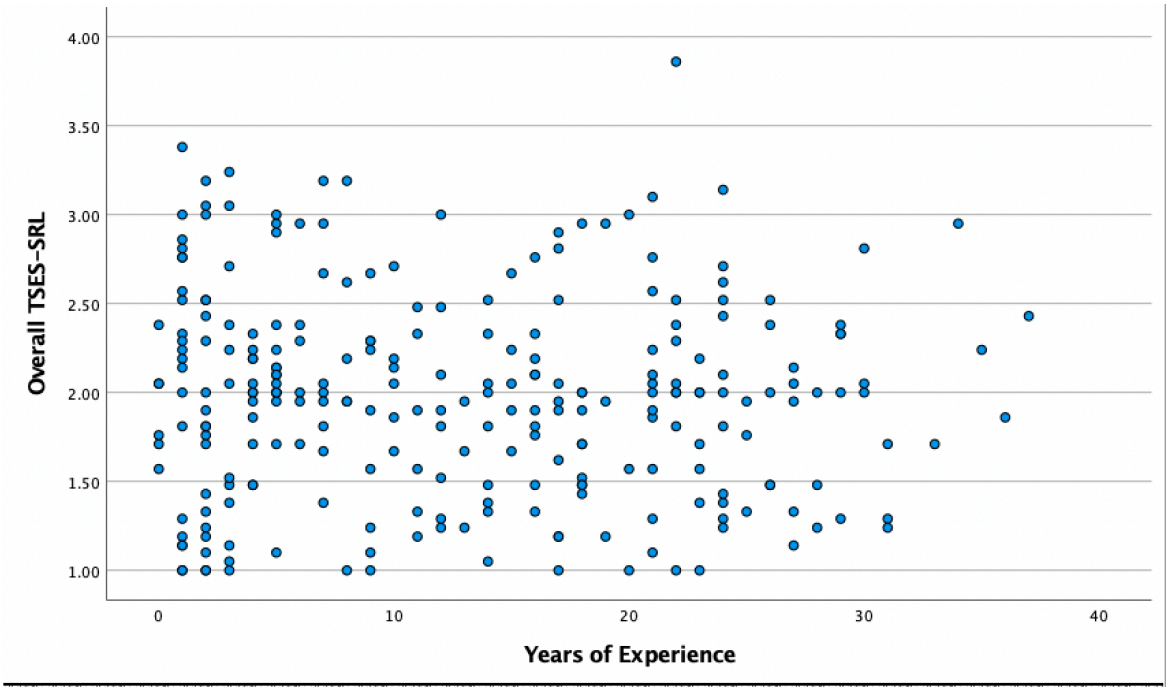


Figure 5. Assumption of Linearity

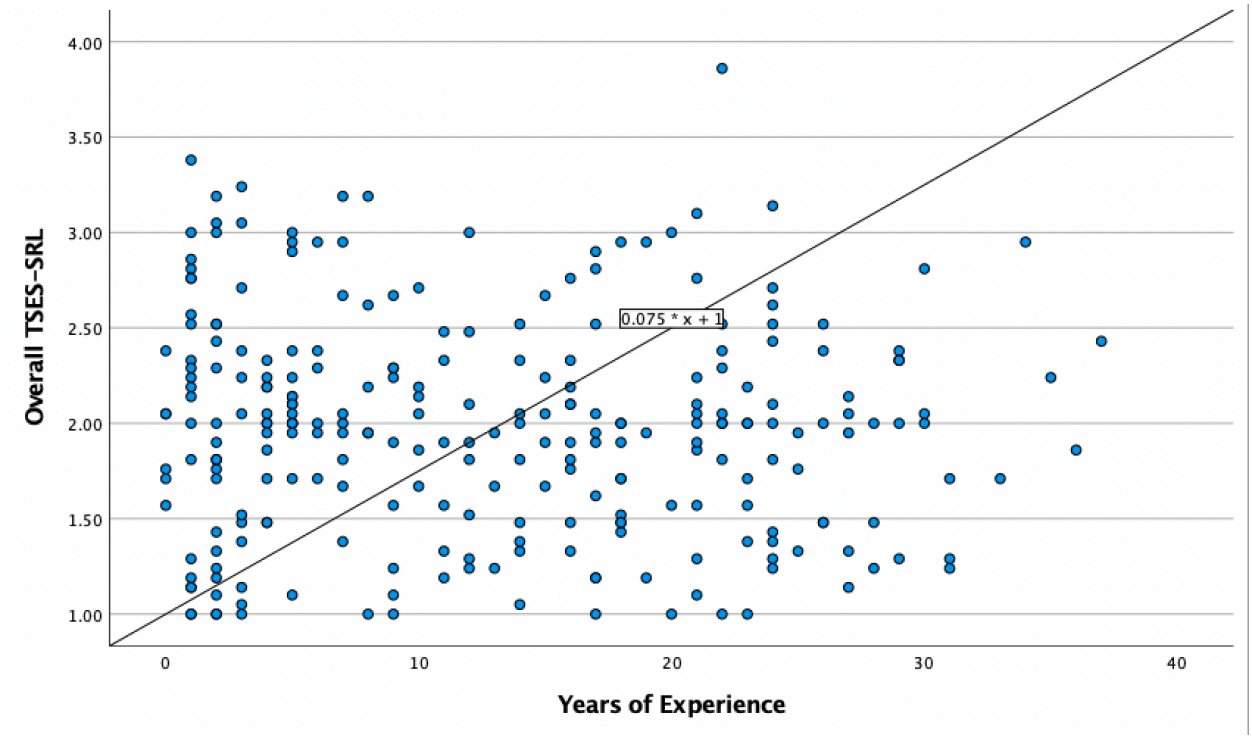


Figure 6: Assumption of Normal Distribution

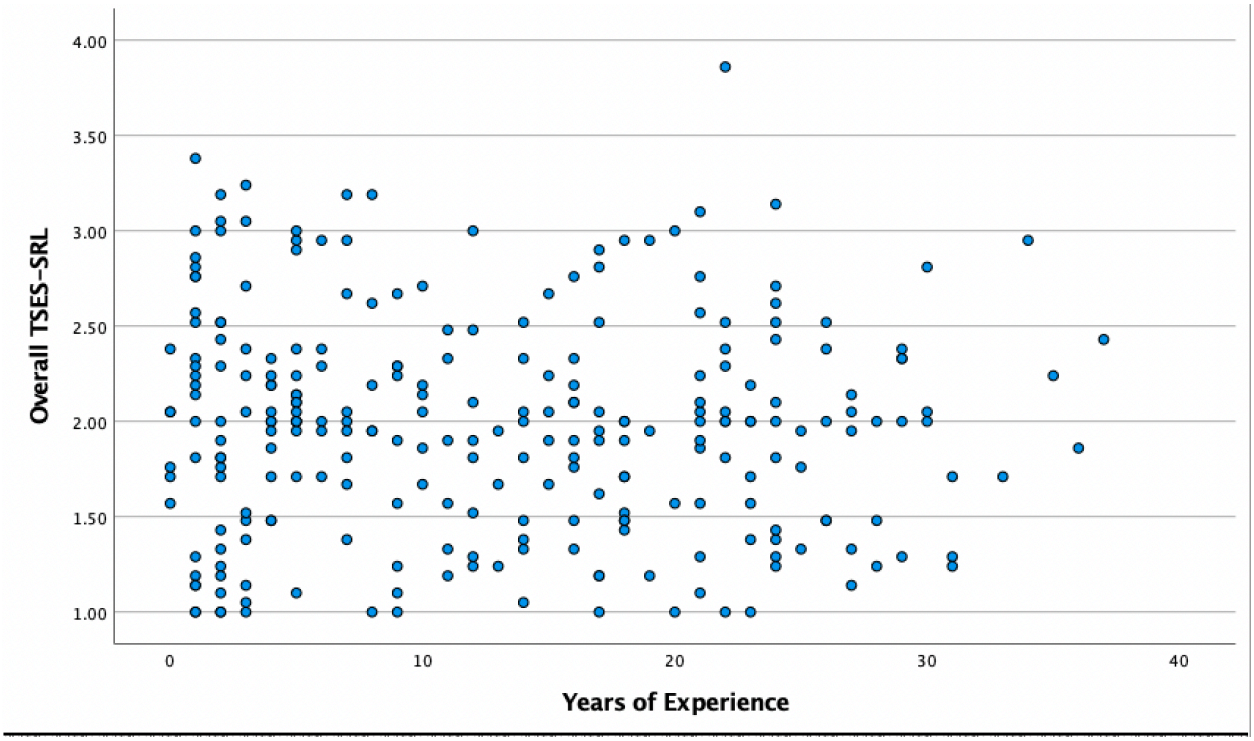


Figure 7. Histogram for Years of Experience

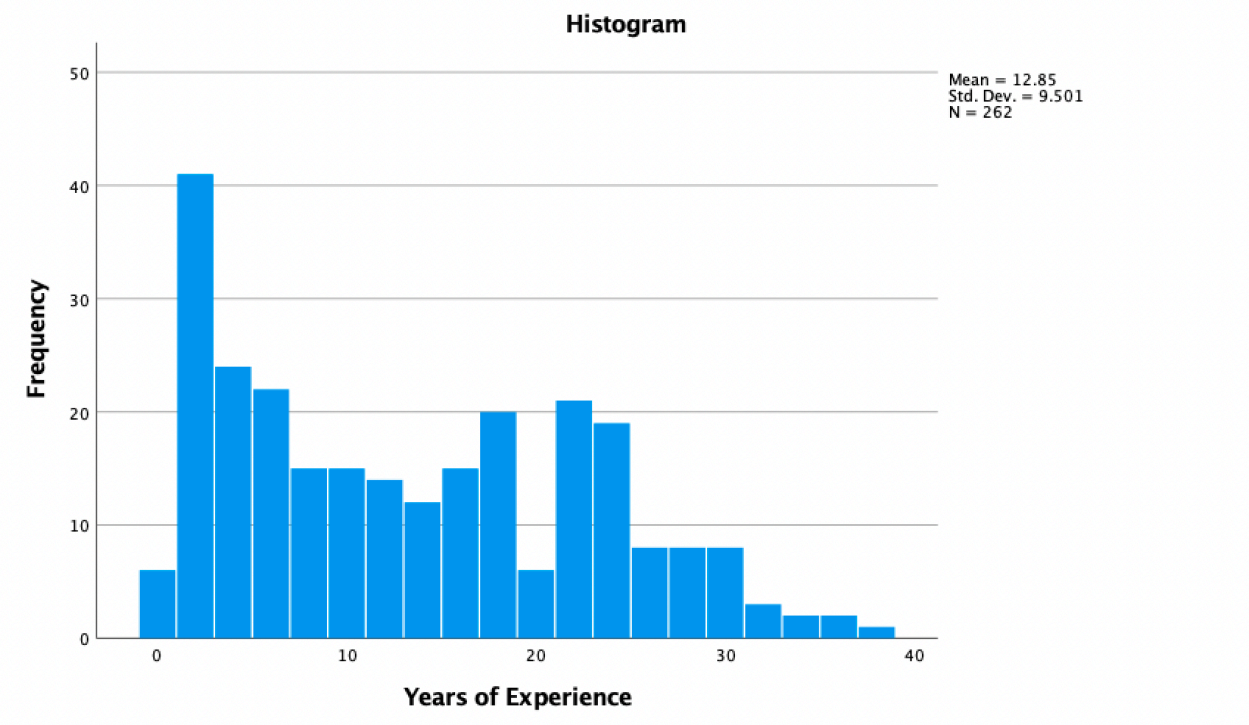
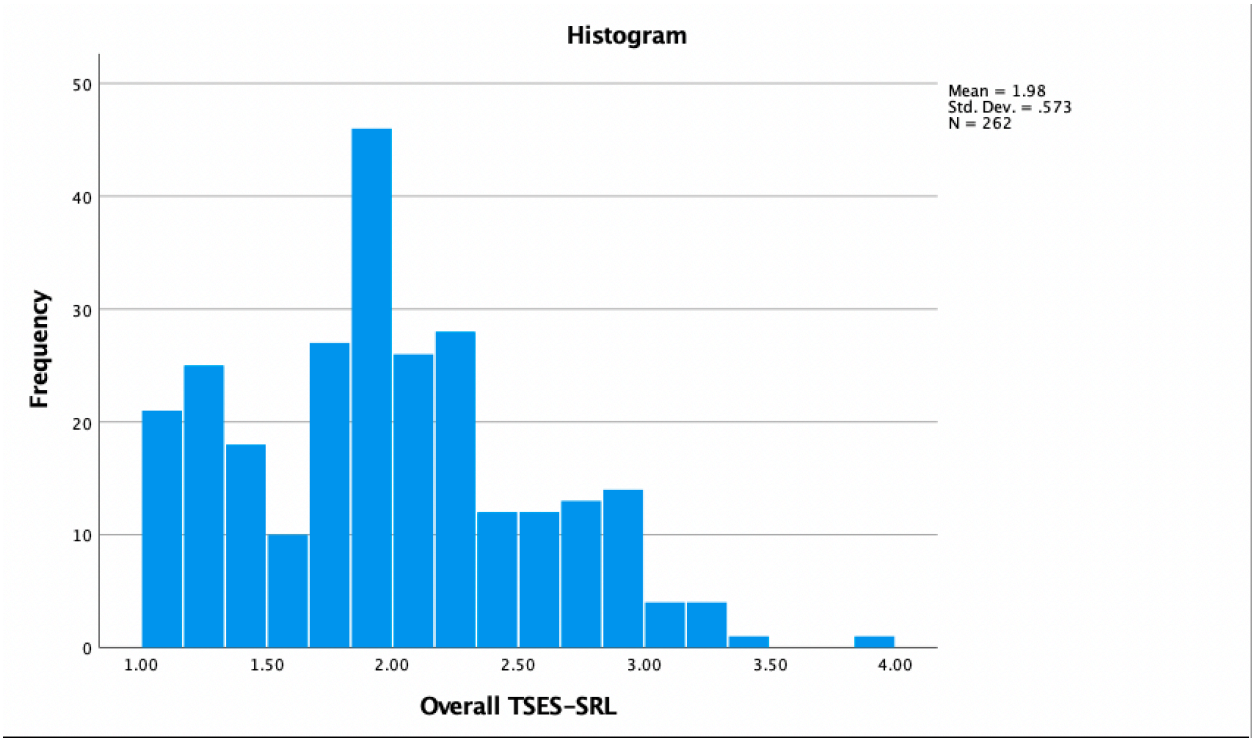


Figure 8. Histogram for Overall TSES-SRL



Results for Null Hypothesis One

A Pearson product-moment correlation (r) was performed to evaluate if the criterion variable, *years of experience*, had a relationship to the criterion variable, *overall teacher self-efficacy for implementing self-regulated instructional practices*. The test revealed that there was not a statistically significant relationship between teachers' years of experience and their overall teacher self-efficacy for implementing self-regulated practices. The researcher failed to reject the null hypothesis at a 95% confidence level, where $r(260) = -.054$, $p < .385$. Overall, there was a weak correlation between teachers' years of experience and their self-efficacy for implementing self-regulated instructional practices. See Table 3 for the Pearson product-moment correlation.

Table 3. Pearson Product-moment Correlation

Construct		Years of Experience	Overall TSES-SRL
Years of Experience			
	Pearson Correlation	1	-.054
	Sig (2-tailed)		.385
	N	262	262
Overall TSES-SRL			
	Pearson Correlation	-.054	1
	Sig (2-tailed)	.385	
	N	262	262

CHAPTER FIVE: CONCLUSIONS

Overview

Chapter Five begins with a review of the research and statistical analysis of the results from this study. Examining the results through the lens of the social cognitive learning theory and other related literature, the researcher compared this study to prior research and details how this study provided another layer to the current body of knowledge. After presenting results and implications, the chapter concludes with limitations and future research recommendations.

Discussion

The purpose of this correlational study was to determine if two variables, *years of experience* and *overall self-efficacy towards implementing self-regulated instructional practices* among current educators, share a relationship and if so, the strength of the relationship. Teachers' self-efficacy towards implementing self-regulated instructional practices is defined as a teacher's perceived ability to successfully integrate activities promoting self-regulated learning (SRL) in their daily classroom practices (Smul et al., 2018). Data was collected using the newly constructed Teacher Self-Efficacy Scale to implement Self-regulated Learning (TSES-SRL) instrument that consisted of 21 questions on a Likert scale. *Years of experience* were self-reported during the demographic questionnaire, and overall teacher self-efficacy towards implementing self-regulated instructional practices was determined after participants completed the TSES-SRL. Administered using an online survey platform, data was transferred to the SPSS® software and analyzed using a bivariate Pearson product-moment correlation, also known as the Pearson's r, since the study focused on the relationship between the two constructs.

Null Hypothesis

The null hypothesis states: There is no significant relationship between teachers' *years of experience* and *overall teacher self-efficacy regarding the implementation of self-regulated instructional practices* as measured by the Teacher Self-Efficacy Scale to implement Self-Regulated Learning (TSES-SRL).

A teacher's years of experience has been deemed a vital construct when evaluating the learning environment offered to students. Self-reported by teachers as the number of years they have taught in kindergarten through twelfth grade classroom by the time the data were collected (Liu, Jones, & Sadera, 2010), *years of experience* has been linked to students' achievement and teacher self-efficacy. Seen as on the job training, Kane, Rockoff, and Staiger (2008) claimed that some experience is better than no experience. Supporting this notion, Kim and Klassen (2018) compared novice and expert teachers' cognitive processing and provided evidence that expert teachers' experiences allow them to gain a greater ability to analyze teaching tasks and assess their teaching competence, all of which influence instructional decisions, reflection, and rationality (Cavojova & Jurkovie, 2017).

Teacher self-efficacy, a construct grounded in the social cognitive learning theory, is defined as teachers' belief in their ability to accomplish desired tasks and goals (Friedman & Klass, 2002). Measured on a high to low spectrum based on a specific teaching domain, the construct is impacted by teachers' mastery of experiences, verbal feedback, vicarious experiences, and physiological and emotional arousal during the act of teaching (Bandura, 1997). Bridging the gap between observational learning of desired skills to possessing those desired skills, teacher self-efficacy is a major determining factor of student experience and student outcome (Derosier & Soslau, 2014; Jamil, Downer, & Pianta, 2012; Tschannen-Moran & Hoy,

2001). Social modeling within the learning environment creates a cognitive representation that guides the production of desired skills and corrective adjustment aids (Bandura, 1997, 2005). Applying this notion to self-regulated learning, teachers' ability to successfully create a self-regulated learning environment depends on their own self-efficacy for implementing self-regulated practices, directly and indirectly (Smul et al., 2018). Through these practices, teachers may expose their students to independent learning (Bembenutty, 2009; Cubukcu, 2009).

The results from this study show that there was not a statistically significant correlation between the variables of *teacher self-efficacy towards implementing self-regulated instructional practices* and *teachers' years of experience*. The strength of the correlation between the two variables, Pearson correlation $r(260) = -.054$, $p < .385$, suggests that teachers' self-efficacy to implement self-regulated instructional practices is not caused by the predictor variable, *years of experience*. The present study's results contradicted those of Kane, Rockoff, and Staiger (2008) and Whyckoff (2008), which supported the claim that more years of experience equates to more on the job training and suggested an increase in teachers' abilities to offer the desired learning environment. In addition, this study contradicts Ghonsooly and Ghanizadeh's (2013) finding that suggests teachers' self-regulation increases over time with years of experiences. If the relationship was statistically significant, then teachers' years of experience could be deemed as a predictor variable of teachers' level of self-efficacy regarding the implementation of self-regulated instructional practices. As Warner (2013) noted, "Correlation does not imply causation" (p. 265). So, a lack of correlation also does not necessarily imply a lack of causation.

Implications

According to the National Education Association (2016), acknowledging the importance of self-regulating learning practices in the learning environment will signify one step towards

providing an education that equips students with 21st-century skills vital to their future success in a rapidly changing environment. Knowing that teachers are the front line for students' learning experiences, acknowledging the importance of self-regulated learning is the tip of the iceberg. It is essential to explore, identify, and understand all factors that may impact if, when, and how teachers implement self-regulated practices in the classroom. One of those factors includes learning more about if the implementation of self-regulation learning is an additional subscale of teachers' self-efficacy. Teachers' self-efficacy towards their professional duties can determine how successful they are at accomplishing goals. If the goal is to shift instructional practices for the development of life-long learners, studies must be specific to self-regulated learning and checking the pulse of current educators. Bandura (1977) stated that self-efficacy is specific to each domain of study, meaning that teachers' self-efficacy can be different for each domain of teaching. Currently, the Tschannen-Moran and Hoy (year) instrument, Teacher Self-Efficacy Scale (TSES), recognizes overall teacher self-efficacy and three subscales: engagement, instructional strategies, and class management, but not the implementation of self-regulated instructional practices. This study used the newly constructed Teacher Self-Efficacy Scale to implement Self-Regulated Learning (TSES-SRL) that was deemed valid and reliable for quantifying teachers' self-efficacy for implementing self-regulated learning (SRL). To increase the validation and reliability of the TSES-SRL instrument results, the study's participants were screened to make sure they fit the study's criteria, which was being a current public K-12 school educator within the desired district zone. The study's sample size was 262, which exceeded the 105 participants needed for a medium effect size for a regression analysis (Warner, 2013). Conducting studies to increase awareness of educators' belief in their capabilities to implement

self-regulated instructions provides a compass for the next steps that need to be taken to shift instructional practices.

Diving deeper, the results suggested that teachers' ability to offer a self-regulated learning experience depends on their level of self-regulation. Teachers' education experiences, either good or bad as a student or professional, may have impacted their self-regulated development, which can be deducted by the similarity of scores between teachers' years of experience and their level of teacher self-efficacy regarding the implementation of instructional practices. Teachers who are already self-regulated have the ability to self-generate thoughts, feeling, and actions that impact their students' learning and are confident in their perceived capabilities for performing actions at a designated level (Gencel & Saracaloglu, 2018; Michalsky, 2012; Zimmerman, 2004). Self-regulated teachers accept the challenge of exposing students to more learning strategies and skills that are beneficial to increasing their independence as learners (Bandura, 1991; Schunk & Zimmerman, 2016).

Another factor that should be explored is how teachers' self-efficacy for self-regulated learning is fostered in the profession. "It is not possible that teachers who have been educated by [the] traditional system can successfully raise a generation as a lifelong learners with high level of thinking skills" (Gensel & Saracaloglu, 2018, p. 17). The results of this research may not have supported a relationship between teachers' years of experience and their self-efficacy regarding the implementation of self-regulated instructional practices; however, it does suggest that teachers' self-efficacy, like all other self-efficacy domains, is developed through the opportunities of mastery of experiences, vicarious experiences, social persuasion, and physiological and emotional arousal at all levels of a teacher's career. Self-regulation should be modeled and directly taught during teacher preparation programs, as novice teachers develop

their practices in their actual classroom environment, and as experts since self-regulatory modeling is a continuous cycle.

As social models, teachers could use self-regulatory processes to empower learners to achieve high personal, academic, and professional outcomes (White, 2017). Before this shift can occur, more studies are needed to examine factors that may impact educators' self-efficacy for implementing these practices because teachers' beliefs are the driving force behind the implementation of such practices (Gregoire, 2003).

Limitations

There were several limiting factors for this study. The first factor was the survey was given to one of 15 zones within the largest school district. Consisting of eight schools, this zone was different from the other zones due to its make-up, one high school, and all its feeder schools. This zone shares the same vision and practices due to its school district's vertical alignment, and leaders of each school make-up one governing body. For this reason, participants may have similar mindsets, no matter the years of experience, when answering questions about their teacher self-efficacy for implementing self-regulated instructional practices.

The second limiting factor was the self-reported number of years of experience. Due to the study's anonymous nature, validation of the number of years reported could not be completed and could have introduced bias. The operational definition of years of experience was given to offset the possible bias; however, depending on the educator's path to licensure, an internship could have been included, as well as partial years of experience.

The third limiting factor was the unforeseen Covid-19 pandemic that put a halt on how schools operate. Education itself entered a state of trauma for learning and teaching. Educators found themselves at the bottom of Maslow's Hierarchy of Needs, in the physiological and safety

zones. Providing an education to students while going through a traumatic experience, such as the national COVID-19 pandemic, could have caused some participants' self-efficacy to change. While teacher self-efficacy is defined as the belief in self capability, the reliability of responses could have been impacted.

The last limiting factor piggybacks on the third limiting factor in the sense that the educational setting abruptly changed due to the pandemic. The study took place during a time of transitioning from brick and mortar instruction to a virtual setting. Depending on the participants' level of comfort with technology, educators' ability to offer the same quality of education may have been impacted, causing the reliability to be of concern. Keeping this in mind, the study's timeline was changed from the beginning of the year to the second half of the year to allow educators to adjust to their new form of teaching.

Classified as a non-experimental research design, a quantitative correlation study came with its own limitation. Correlation research limits the researcher's ability to express the study's results definitively. According to Warner (2013), the nature of the design and not the statistical description of the variables' relationship and strength determines if a causal inference could be made. The researcher could only express the study's results as an exploration of a possible causal relationship between the number of years of experience teachers reported and their overall teacher self-efficacy towards implementing self-regulated instructional practices (Gall, Gall, & Borg, 2015).

Recommendations for Future Research

1. Utilizing the Teacher Self-Efficacy Scale to implement Self-Regulated Learning instrument, conduct a correlation test between educators' self-efficacy and a different

operational definition of years of experience based on educators' evaluation scores could be studied.

2. Utilizing the Teacher Self-Efficacy Scale to implement Self-Regulated Learning instrument, conduct a correlation test between educators' self-efficacy for implementing self-regulated instructional practices and the educators' state testing scores could be studied.
3. Utilizing the correlation already completed, educators' responses could be analyzed and scored by self-regulated instructional practices subscales: cognitive instructional practices, meta-cognitive instructional practices, and motivational instructional practices.
4. Utilize the Teacher Self-Efficacy Scale to implement Self-Regulated Learning instrument to compare educators' self-regulation levels.
5. Utilize the Teacher Self-Efficacy Scale to implement Self-Regulated Learning instruments to examine educators' in the public and private sectors.
6. Conduct qualitative studies that examine teacher preparation programs' curriculum and the inclusion of self-regulated learning.
7. Additional studies could be completed utilizing the Teacher Self-Efficacy Scale to incorporate the Self-Regulated Learning instrument to educators' actual practices in class.
8. Conduct a qualitative study that measures students' exposure to self-efficacy instructional practices.
9. Conduct studies that question the impact trauma learning may have on the implementation of self-regulated instructional practices.

10. Conduct a mixed-methodology study. Utilize the Teacher Self-Efficacy Scale to implement Self-Regulated Learning instrument, along with classroom observations to compare teachers' self-efficacy to implement self-regulated practices to their actual classroom practices.

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Appendix A: Demographic Questionnaire

1. Sex
- ☐ **Female**
- ☐ **Male**

2. Age
- ☐ **18-24**
- ☐ **25-34**
- ☐ **35-44**
- ☐ **45- 54**
- ☐ **55-64**
- ☐ **65 & up**

3. School Sector
- ☐ **Elementary K-5**
- ☐ **Middle 6-8**
- ☐ **High 9-12**
- ☐ **Hybrid K-8**
- ☐ **Hybrid 7-12**

4. Number of Years Teaching: _____

5. Highest Degree Conferred
- ☐ **Bachelor's Degree**
- ☐ **Master's Degree**
- ☐ **Master's +45**
- ☐ **Ed.S**
- ☐ **Ed.D**
- ☐ **Ph.D**
- ☐ **Other: _____**

Appendix B: Instrument Permission

RE: Permission to use TSES-SRL instrument

Mona De Smul <Mona.DeSmul@UGent.be>
Tue 6/12/2018 1:18 AM
To: Frazier, Latoya <lfrazier5@liberty.edu>

Hi LaToya,

I am very glad to hear you enjoyed the article of the study. I would be happy to give you permission to use the instrument. Please keep me posted about your research. Sounds very interesting! If you need any more help, please let me know.

Kind regards,
Mona

Van: Frazier, Latoya [mailto:lfrazier5@liberty.edu]
Verzonden: dinsdag 12 juni 2018 3:24
Aan: Mona De Smul <Mona.DeSmul@UGent.be>
Onderwerp: Permission to use TSES-SRL instrument

Hello-

My name is LaToya Frazier, and I am a doctoral student at Liberty University, located in Lynchburg, VA (USA). While exploring the literature on teacher self-efficacy and self-regulated learners, I discovered your study, How competent do teachers feel instructing self-regulated learning strategies? Development and validation of the teacher self-efficacy scale to implement self-regulated learning". Impressed by the elements of the official report and validated instrument, I am e-mailing you today to get permission to use the TSES-SRL instrument. By studying the correlation between work experience and teacher self-efficacy towards self-regulating instructional strategies, I too would like to contribute to the body of literature Please respond either way.

Thank You in Advance
LaToya Frazier

Appendix C: IRB Approval

June 4, 2020

Latoya Frazier
Wesley Scott

Re: IRB Exemption - IRB-FY19-20-344 THE RELATIONSHIP BETWEEN TEACHERS' EXPERIENCE AND THEIR SELF-EFFICACY REGARDING IMPLEMENTATION OF SELF-REGULATED LEARNING PRACTICES

Dear Latoya Frazier, Wesley Scott:

The Liberty University Institutional Review Board (IRB) has reviewed your application in accordance with the Office for Human Research Protections (OHRP) and Food and Drug Administration (FDA) regulations and finds your study to be exempt from further IRB review. This means you may begin your research with the data safeguarding methods mentioned in your approved application, and no further IRB oversight is required.

Your study falls under the following exemption category, which identifies specific situations in which human participants research is exempt from the policy set forth in 45 CFR 46: 101(b):

Category 2.(i). Research that only includes interactions involving educational tests (cognitive, diagnostic, aptitude, achievement), survey procedures, interview procedures, or observation of public behavior (including visual or auditory recording).
The information obtained is recorded by the investigator in such a manner that the identity of the human subjects cannot readily be ascertained, directly or through identifiers linked to the subjects.

Your stamped consent form can be found under the Attachments tab within the Submission Details section of your study on Cayuse IRB. This form should be copied and used to gain the consent of your research participants. If you plan to provide your consent information electronically, the contents of the attached consent document should be made available without alteration.

Please note that this exemption only applies to your current research application, and any modifications to your protocol must be reported to the Liberty University IRB for verification of continued exemption status. You may report these changes by completing a modification submission through your Cayuse IRB account.

If you have any questions about this exemption or need assistance in determining whether

possible modifications to your protocol would change your exemption status, please email us at irb@liberty.edu.

Sincerely,
G. Michele Baker, MA, CIP
Administrative Chair of Institutional Research
Research Ethics Office

Appendix D: District Approval Letter

February 18, 2020

To: **LaToya Frazier**

Re: **Research Proposal**

After considering your proposal, "The relationship among teachers' work experience and their self-efficacy regarding implementation of self-regulated learning practices," we can **conditionally** approve your request to conduct this study in [redacted] Conditional approval serves as a means for you to obtain IRB approval from your school. The actual study cannot begin until you supply evidence of your having obtained IRB approval and have subsequently received the final approval letter from this office.

Be advised that final approval does not obligate any school or any person to participate in your project. The principal of any participating school must still approve the project before the study can begin at that school. Note, too, that we require that you give subjects the option of not participating. Finally, our approval requires that you use your findings for only the purpose of the research described in your proposal.

We look forward to working with you in the completion of this project.

[redacted]

Appendix E: Invitation E-Mail

Dear Leadership Team,

Your zone is cordially invited to participant in a research study that addresses teacher's personal belief regarding implementing self-regulated instructional practices by completing a survey. The purpose of the study is to measure educators' awareness of their self-regulated instructional practices in order to improve teacher preparation and professional development. An example would be, how well can you let your students reflect on their own learning process? Using a five-point scale, you would select a response ranging from 5 to 1. Five being highly certain can do and one being cannot do at all. All participates must be a K-12 educator. If your school decide to be a part of the study, your teachers will be asked to complete the survey in its entirety, during a scheduled faculty meeting. The survey completion estimate is 15 minutes. Participation will not, in anyway, impact your job and all responses will be secured by the researcher. To express appreciation, a drawing for a $25 gift card will occur after all submissions at each individual school. If you would like more information or have any questions, please contact me at (865) 909-7472 or lfrazier5@libertyuniversity.edu.

Thank You

LaToya Frazier

Appendix F: Recruitment Letter

As a graduate student in the School of Education at Liberty University, I am conducting research as part of the requirements for a Doctor of Education Degree. The purpose of my research is to investigate if there is a correlation between teachers' years of experience and their perception of their capacity to implement self-regulated instructional practices. I am writing to invite eligible participants to join my study.

Participants must be 18 years of age or older and a full-term 2020-2021 Whitehaven Empowerment Zone educator. Participants, if willing, will be asked to complete a demographic questionnaire, as well as the Teacher Self Efficacy for Implementing Self-Regulated Practices survey. It should take approximately 15 minutes to complete the procedures listed. Participation will be completely anonymous, and no personal, identifying information will be collected.

A consent document is provided as the first page of the survey. The consent document contains additional information about my research. After you have read the consent form, please click the link to proceed to the survey. Doing so will indicate that you have read the consent information and would like to take part in the survey.

Participants will be entered into a raffle to receive a $25 visa gift card. At the end of the survey, a thank you message will display a google link. Participants' phone numbers will be requested for compensation purposes; however, they will be requested using a separate survey to maintain anonymity.

In order for you to participate, please click here https://www.surveymonkey.com/r/D65W63M or scan the QR code and complete the attached survey.

Appendix G: Exclusion Criterion

- ☐ **Yes, I am 18 and older**
- ☐ **No, I am not 18 and older**

- ☐ **Yes, I am a full-time 2020-2021 Zone 14 educator**
- ☐ **No, I am not a full-time 2020-2021 Zone 14 educator**

Appendix H: Teacher Consent Form

CONSENT FORM

Is there a relationship between teachers' years of experience and their self-efficacy beliefs regarding students' implementation of self-regulated learning practices?

Latoya D Frazier
Liberty University
School of Education

I, LaToya Frazier, am pursuing a doctoral degree in education with a curriculum and instruction concentration at Liberty University. I have decided to focus on the impact teachers' experience has on their self-efficacy regarding implementing self-regulated practices. Increasing teachers' awareness of their perceived capacity to implement self-regulated practices is of great importance since it has been linked to students' achievement.

You are invited to be in a research study that will investigate the relationship between teacher experience and self-efficacy regarding implementing self-regulated instructional practices. You were selected as a possible participant because you are a full-term K-12 public school teacher within the Shelby County School District- Whitehaven Empowerment Zone (Zone 14). Please read this form and ask any questions you may have before agreeing to be in the study.

Background Information: A quantitative correlation design has been selected to investigate if there is a relationship among the number of years teachers taught and their self-efficacy to implement self-regulated practices, and if so, the strength of the relationship. After data has been collected, a correlation value between years of experience and self-regulatory efficacy will be reported.

Procedures: If you agree to be in this study, I would ask you to do the following things:

1. Click on the survey link and proceed to the demographic questionnaire, followed by the anonymous self-efficacy survey.
2. At the end of the survey, a thank you message will appear with a link to a google form. The form will be used to identify participants by their phone number for the dispersal of the school supply gift bags and a ticket for the $25 gift card drawing. This step is voluntary.

Risks: The risks involved in this study are minimal, which means they are equal to the risks you would encounter in everyday life.

Benefits: Participants should not expect to receive a direct benefit from taking part in this study. However, increasing participants' awareness of their instructional practices regarding implementing self-regulated instructional practices could ignite a desire to implement more self-regulated practices in the classroom, which will directly impact students' learning and achievement.

Appendix H (Continued): Teacher Consent Form

Compensation: Participants will be compensated for participating in this study. Each participant will receive two matching tickets for the $25.00 gift card drawing after survey submission. A $25 gift card drawing will occur at each participating school.

Confidentiality: To keep potential risk low for all participants, data will only be accessible to the researcher. Participants will take the survey individually on their device or a paper copy if requested by the participant due to technology malfunction. The online platform, Survey Monkey, requires a password to view any results submitted, which will be privy only to me, the researcher. The records of this study will be kept private and will be stored securely on the researcher's computer. When data is written or presented, participants will be grouped by their years of experience and demographics, which removes the need to use participants' names or pseudonyms. The same will be true when disseminating results to schools, the district, and Liberty University's dissertation committee and faculty. After three years, all electronic records will be deleted. Due to the nature of the study, I cannot assure participants that other participants will not discuss with persons outside of the study.

Conflicts of Interest Disclosure:
The researcher serves as a science instructional coach at A. Maceo Walker Middle School and Whitehaven High School. To limit potential conflicts, the study is anonymous. This disclosure is made so that you can decide if this relationship will affect your willingness to participate in this study. No action will be taken against an individual based on his or her decision to participate in this study.

Voluntary Nature of the Study: Participation in this study is voluntary. Given prior permission from Shelby County Schools, participation in the study will in no way impact your employment nor your current or future relations with Liberty University. You will be able to opt-out of the study at any time with no penalties. Once the survey is completed, if you would like a copy of the study, a copy will be provided to you.

How to Withdraw from the Study: If you choose to withdraw from the study, please exit the survey and close your internet browser. Your responses will not be recorded or included in the study.

Contacts and Questions: The researcher conducting this study is LaToya Frazier. You may ask any questions you have now. If you have questions later, **you are encouraged** to contact me at lfrazier5@liberty.edu. You may also contact the researcher's faculty chair, Dr. Wesley Scott, at wlscott@liberty.edu.

If you have any questions or concerns regarding this study and would like to talk to someone other than the researcher, **you are encouraged** to contact the Institutional Review Board, 1971 University Blvd., Green Hall Ste. 2845, Lynchburg, VA 24515 or email at irb@liberty.edu.

Please notify the researcher if you would like a copy of this information for your records.

Appendix H (Continued): Teacher Consent Form

Statement of Consent: I have read and understood the above information. I have asked questions and have received answers. I consent to participate in the study by clicking on the survey link.

Appendix I: Thank You message

Thank You!!!

Thank you for participating in this study. Your participation will help in building awareness of teacher self-efficacy for implementing self-regulated instructional practices. Also, your assistance has provided data that will be used to fulfill Liberty University Curriculum and Instruction Doctoral program.

A link has been provided below. The link will direct you to a google form that is not linked to your responses. Once you have entered your phone number/ turn-in your paper copy, you will receive a gift bag and a ticket for the $25 gift card drawing. Please note that this is voluntary.

Survey Link: https://forms.gle/sE59qjPH7zsEXt119

Appendix J: Virtual $25 Gift Card Raffle

Survey Participation

Not linked to survey responses; only used for the distribution of gift bags and gift card drawing tickets

* Required

Participant's Phone number *

Your answer

This is a required question

Submit

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$25 Visa Gift Card Raffle

Please provide phone number to be entered into the school-based raffle.

* Required

1. Participant's Phone Number *

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