TEACHERS' SELF-EFFICACY IN TRANSITIONING FROM TRADITIONAL INSTRUCTION TO ONLINE LEARNING MODES DURING A PANDEMIC: A CASE STUDY

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Abstract: This qualitative case study explains how teachers with high or low self-efficacy adapted to changing teaching demands for online learning during the COVID-19 pandemic. The study considers how teachers adapted to online learning during the COVID-19 school closings using Bandura's (1971) SET as a theoretical framework. The findings suggest that a person can exhibit one, two, three, or all four self-efficacy tenets on any one day. The four tenets of self-efficacy are enactive mastery experiences, vicarious experiences, verbal persuasion, and physiological arousal and affective states. The results also imply that there were similarities and differences in the transitions and adaptations to asynchronous online instruction that teachers with high and low self-efficacy made to meet student learning needs during the pandemic.

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CHAPTER I

INTRODUCTION

The COVID-19 pandemic was one of the most extreme challenges educational systems have coped with (Daniel, 2020). The Centers for Disease Control and Prevention (2020) reported when COVID-19 hit worldwide, schools suspended face-to-face teaching to reduce the spread of the virus. Consequently, teachers delivered classes in an online format. Though there were no "set consistent expectations for teachers to provide meaningful remote instruction" (Dusseault & Pillow, 2020, p. 1), schools slowly transitioned from face-to-face teaching to virtual. Without a consistent plan for teachers to provide remote instruction, apprehension grew about the unintended notion of encountering something new, such as suddenly transitioning to a new teaching and learning environment (Dolighan & Owen, 2021). The COVID-19 crisis severely impacted traditional educational progress (Sotiria et al., 2021). Teachers struggled to find ways to adapt their practices and teaching methods to virtual learning, such as learning how to deliver all their content online and accommodate students with insufficient internet access (Cleland et al., 2020; Dusseault & Pillow, 2020; Shafer, 2021). Also, teachers faced multiple challenges in adapting to online teaching while supporting students' learning, which led to implementing new strategies and changing the teaching

and learning processes (Gobbi et al., 2021). Research showed teachers did not have access to needed classroom materials and found it challenging to develop objectives for online instruction (Cleland et al., 2020; Dusseault & Pillow, 2020; Shafer, 2021).

Research showed that students also had to adapt to the fluctuating circumstances of the pandemic. For example, students had to adjust to reorganized daily schedules and less socialization with peers, which affected many students' socio-emotional balance (Cleland et al., 2020; Dusseault & Pillow, 2020; Shafer, 2021). Some students were unable to complete the required grade-level competencies within a suitable timeframe because students missed in-classroom experiences (Butnaru et al., 2021; Cleland et al., 2020; Dusseault & Pillow, 2020; Shafer, 2021).

Day (2015) found only a few schools planned for educational emergencies and disruptions. Therefore, only a few schools were prepared for the radically different online instructional approaches teachers were forced to implement (Daniel, 2020; Eyster & Martin, 2010). The shift to various learning and teaching formats prompted intense modification in course scheduling and day-to-day routines, such as start and stop times, online delivery, and dealing with unsatisfactory internet access (Dusseault & Pillow, 2020; Henderson, 2021). In some hybrid model schools, students' assignments and classes were entirely self-directed, while other schools scheduled specific sign-on times (Henderson, 2021). Some teachers were able to adjust to all these changes, and others were not (Daley, 2021; Henebery, 2021; Kowalski, 2020; Rosanes, 2020).

Statement of the Problem

Effective teachers must be able to facilitate student learning by adapting to a variety of teaching modes during unexpected crises (Mpofu, 2020; Sethi & Behera, 2021; Turner et al., 2020). As in the case of the COVID-19 pandemic, some teachers adapt to make these changes, and others do not (Daley, 2021; Henebery, 2021; Kowalski, 2020; Rosanes, 2020). One way to explain this discrepancy is through the notion of teacher self-efficacy, which deals with how well one can achieve courses of actions that are necessary to deal with potentially difficult situations (Bandura, 1977, 1986, 1997).

Self-efficacy theory (SET) posits teachers with high levels of self-efficacy experience less stress in dealing with potential difficulties and change. Teachers with high self-efficacy believe in their abilities to successfully cope with tasks, challenges, and courses of action related to their professional roles and specifically have an openness to change (Caprara et al., 2003; Caprara et al., 2006; "International Journal of Learning," n.d.; Pan et al., 2013). Also, self-efficacy contributes to the behavior an individual chooses (Farah, 2011). If a person believes they are incapable of performing a particular action, they may not attempt to carry out the act (Farah, 2011). However, if the same person believes they can accomplish the act, they in all likelihood may put forth more effort to do so (Azariah, 2021).

Purpose of the Study

The purpose of this qualitative case study was to explain through the lens of Bandura's (1971) SET how teachers with high or low levels of self-efficacy adapted to changing teaching demands for online learning during the COVID-19 pandemic.

Research Questions

The following research questions guided this study:

1. How did teachers with high self-efficacy adapt their teaching to meet student learning needs during the pandemic?
2. How did teachers with low self-efficacy adapt their teaching to meet student learning needs during the pandemic?
3. How did adaptations to teaching differ across teachers with high self-efficacy and low self-efficacy?
4. How does Bandura's self-efficacy theory explain these adaptations?

Epistemological Perspective

The epistemological perspective that guided this research was Constructionism. Crotty (1998) described Constructionism as the "view that all knowledge, and therefore all meaningful reality as such, is contingent upon human practices, being constructed in and out of interaction between human beings and their world, developed and transmitted within an essentially social context" (p. 42). In this study, knowledge was constructed by online course teachers about their perceived self-efficacy through interactions with their

students while facilitating student learning and adapting to different teaching modes, specifically asynchronous learning, during a pandemic.

Theoretical Framework

Bandura's (1977) theory of self-efficacy served as a lens to explore teachers' transitioning and adapting to different teaching modes during a pandemic. Bandura (1977) posited a person's environment, cognition, and behavior are directly responsible for human functions. Bandura (1997) affirmed individuals with a high level of self-efficacy persist with tasks longer and show more interest in learning. Schunk and Pajares (2009) maintained self-efficacy refers to "perceived capabilities for learning or performing actions at designated levels" (p. 1).

Bandura's (1977) work dramatically influenced educational psychology. Since self-efficacy was introduced in psychological literature, other researchers have explored it in fields such as health, wellness, athletics, and education (Bandura, 1977a, 1977b). Moreover, the concepts of self-efficacy, self-confidence, and confidence are frequently used interchangeably throughout the theory (Leigh, 2008). Bandura (1977) placed "special emphasis on the important roles played by vicarious, symbolic, and self-regulatory processes" (p. 2).

Bandura (1977) indicated individuals' beliefs concerning their efficacy could be developed by four methods of influence: enactive mastery experiences, vicarious experiences, verbal persuasion, and physiological arousal. Effective mastery experiences

"provide the most authentic evidence of whether one can muster whatever it takes to succeed" (Bandura, 1995, p. 3). Developing a sense of efficacy through mastery experiences includes attaining the behavioral, cognitive, and self-regulatory tools for performing courses of action to manage life circumstances (Bandura, 2001). The ability of the learner to establish mastery in a real-world setting, such as various instructional modes, is considered learning transfer. Learning transfer is the only source directly offering performance confirmation, making it the most durable for changing beliefs (Bandura, 2001; Stajkovic & Luthans, 1998).

Vicarious experiences of learning through modeling are the second way of strengthening efficacy. Individuals frequently pattern behavior after pictorial or verbal models (Schunk, 1987; Bandura, 1995; 2017). Human behavior is transmitted through exposure to social models, and social learning is encouraged by observing real-life models (Bandura, 2017; 1995; Schunk, 1987). According to Bandura (1994), "Seeing people similar to oneself succeed by sustained effort raises observers' beliefs that they too possess the capabilities to master comparable activities required to succeed" (p. 1). Perceived similarity to the models affects the probability of the model's behavior being imitated by others (Bandura, 1995; Manz & Sims, 1981; Schunk & Rice, 1987). The observed social models are mental guides to help build behavioral patterns (Bandura, 1995; Schunk & Rice, 1987).

The third way of reinforcing an individual's success beliefs is verbal persuasion. Persuading people verbally to be successful can motivate them to try harder rather than doubt that they are capable of mastering comparable activities (Schunk & Rice, 1987; Litt, 1988). Owens and Valesky (2015) found verbal persuasion is useful in helping individuals create more effort in performing tasks. When the feedback is positive, and the speaker offering feedback has more experience, verbal persuasion is more effective (Owens & Valesky, 2015).

During physiological arousal, individuals often see their stress reactions as signs of susceptibility to poor performance (Bandura, 1995). When an individual experiences stress, the stress decreases his or her ability to perform at his or her best; then, stressful thoughts increase the reaction of stress. The increased stress reaction causes a response to an individual's internal physiological state (Bandura, 1995; Owens & Valesky, 2015). These reactions and thoughts to stress can affect a person's mood, affecting their self-efficacy (Bandura, 1995; Owens & Valesky, 2015).

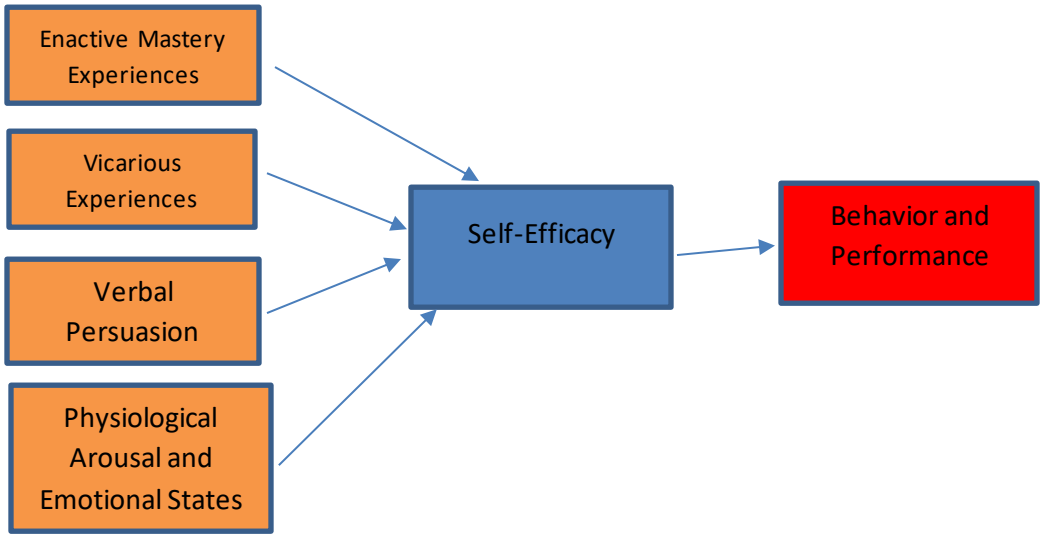
According to Bandura (1995), individuals desire to have some control over events affecting their lives, and noted, "Among the mechanisms of agency, none is more central or pervasive than people's beliefs of personal efficacy" (p. 2). Caprara et al. (2003) proposed teachers' perceptions of their co-workers' behaviors were mediated by their own self-efficacy beliefs. For example, when examining preschool teachers' self-efficacy to determine teachers' needs toward the education of gifted children, Oral (2017) concluded

younger teachers considered themselves to be more efficacious than other teachers. The confidence a person has in his or her capabilities helps regulate his or her functioning. In other words, perceived self-efficacy concerns a person's beliefs in their capabilities to be productive in specific attainments (Bandura, 2001).

Bandura (1995) explained, "Information that is relevant for judging personal efficacy, whether conveyed by mastery skills, vicariously, persuasively or affectively, is not inherently instructive. Rather it gains its significance through cognitive processing" (p. 5). Figure 1 illustrates these interactions portraying the four tenets of self-efficacy.

Figure 1

Major sources of efficacy



Note. Adapted from Bandura, A. (1977). Self-efficacy: Toward a unifying theory of behavioral change. *Psychological Review, 84*(2), 191-215 (https://doi.org.10.1037/0033-295x.84.2.191).

Research Approach and Design

In a case study design, the researcher is the primary data collection instrument using various data sources, such as observations, interviews, and other documents collected over a prolonged period (Creswell, 2014; Patton, 2015). Gay et al. (2012) explained, "case study research is a qualitative research approach in which researchers

focus on a unit of study known as a bounded system" (p. 444). Case studies consist of strategies of inquiry in which a case is explored in-depth in its real-world context (Creswell, 2009; Patton, 2015).

Case study research interprets the meaning of stories from the participants' perspectives. It also allows the researcher to explore and explain how people and groups construct meaning and make sense of their world. In this study, I explained through the lens of Bandura's SET how teachers with high self-efficacy and low self-efficacy adapted to changing teaching demands for online learning during the COVID-19 pandemic.

Procedures

This study was qualitative, bound by time and context, and guided by Merriam & Tisdell (2016). The context was a public middle school located in a midwestern state that quickly transitioned to other instructional modes, specifically, asynchronous online teaching during a pandemic crisis. For this study, twenty-two subject teachers who participated in online teaching because of the COVID-19 pandemic and school closures were purposefully selected to explore how they perceived their self-efficacy and how they prepared to rapidly transition from face-to-face instruction to other modes of instruction between March 2020 and May 2021. The target population included middle school teachers from the selected school who taught in a classroom in a face-to-face format before the pandemic and in an online setting during the pandemic. Teacher

candidates pursuing teaching licenses who had no experience or up to one year experience teaching in the classroom were excluded from the target population.

Data Collection

Through Bandura's SET, I explained how teachers with high or low self-efficacy adapted to changing teaching demands for online learning during the COVID-19 pandemic. Data for this study were collected at a selected middle school in a midwestern state. The middle school included students in grades fifth through grade eighth. The middle school level was chosen because improving middle school education in academic achievement has remained a high priority among individuals concerned with adolescent development (National Middle School Association [NMSA], 2003). Recruitment for this study began with me asking the middle school principal permission for teachers to participate in this study. After I received permission from the principal, I contacted each teacher by email to ask if they would agree to participate in this study.

Next, I emailed the short form of the Teachers' Sense of Efficacy Scale (TSE) survey (Tschannen-Moran & Hoy, 2001) to twenty-two subject area teachers in the selected school. The short version of the TSE survey was a 9-point Likert scale that I used to measure teachers' evaluations of their own likely success in teaching. Out of the twenty-two surveyed teachers, a total of eight middle school teachers were selected to participate in this study. The eight participants had efficacy levels of low efficacy or high efficacy. The Teachers' Sense of Efficacy Scale (TSE) survey is found in Appendix D.

Data were collected from surveys, interviews, artifacts, and observations. I used purposeful sampling aimed at understanding and establishing insight into teachers' preparations to move to asynchronous online teaching and their self-efficacy perceptions before and after the mandated move. Participants were interviewed and observed from April 2022 to September 2022 at a middle school located in a midwestern state.

Data Analysis

Patton (2015) indicated qualitative analysis is determined by the researcher's pattern recognition ability from beginning to end. Creswell (2014) suggested giving illustrations of "potential codes and themes" (p. 196), which may develop. Merriam and Tisdell (2016) explained the "preferred way to analyze data in a qualitative study is to do it simultaneously with data collection" (p. 197). Each field note, interview, observation, and document were coded with a descriptive notation when it was received or transcribed. All information collected was compared and searched for recurring regularities in the data. The findings were categorized into themes or categories. I personally transcribed all interviews as a means of generating insights and hunches about the data. I created a data set of the entire data inventory, which allowed me more accessible access to the data.

Definitions of Terms

Asynchronous online courses – content and assignments which allow students to log on and work at any time, do not require real-time interaction and permit students to have flexible schedules maintained by set deadlines (Wintemute, 2021).

Physiological and affective state - how people interpret and judge their capabilities on their stress levels and reactions to stress (Bandura, 1995).

Mastery experiences – the personal experiences of success generated in real-life situations (Bandura, 1997).

Online learning- using the internet to augment communication between teachers and their students. It can be asynchronous, using tools for assessment, or synchronous, using email or group chats (Curtain, 2002).

Perceived self-efficacy - "people's beliefs in their capabilities to produce given attainments" (Bandura, 1997; 1995, p. 307).

Verbal/Social persuasion - persuading individuals verbally they possess the capabilities to master given activities (Bandura, 1995).

Vicarious experiences – a method of influencing one's self-efficacy beliefs by demonstrating and transferring competencies through models (Bandura, 1997).

Summary of the Study

When unanticipated situations arise, some teachers adapt quickly and can focus on the demands of their jobs. In contrast, other teachers often demonstrate stress-related behaviors and an inability to perform at his or her best during these situations. This case

study explained how middle school teachers adapted to changing teaching demands for online learning during the COVID-19 pandemic. The context was a public middle school located in a midwestern state. This study sought to understand how middle school teachers with high or low self-efficacy adapted their teaching to meet student learning needs during the pandemic. Bandura's (1995) theoretical framework for self-efficacy guided this study. Chapter II offers a detailed review of existing research related to teachers' transitioning to online teaching and learning during a pandemic. Chapter III provides a detailed explanation of the research methods and procedures implemented in this study, including participant selection, data collection, and data analysis techniques. Ethical considerations are also addressed regarding the researcher's background and bias. Chapter IV presents data and provides a description of the site selected and participants. All data collected through interviews, surveys, observations, artifacts, and field notes were presented in detail. Chapter V provides the data analyzed through the lens of SET. Chapter VI presents the conclusion of the study with interpretations and implications. Implications included the study's significance to practice, research, and theory. Finally, recommendations for future research are provided.

CHAPTER II

LITERATURE REVIEW

This literature reviews the existing research relevant to online teaching and SET. Key topics discussed include (a) COVID-19 and online learning, (b) effective teachers, (c) online learning, (d) types of online instruction, (e) teacher confidence, (f) necessity for teacher self-efficacy when transitioning to online, (g) protocols to open schools, and (h) the framework for self-efficacy.

COVID-19 and Online Learning

Disasters and crises may happen at any time. According to the CDC (2021), the COVID-19 pandemic was a global public health challenge. The relentless virus impacted every facet of society worldwide. Since its beginning, COVID-19 required a considerable response by public health authorities. According to a report,

> the World Health Organization [WHO] (2020) declared that COVID-19 had reached pandemic status in March 2020 ... There are now more than 118,000 cases in 114 countries, and 4,291 people have lost their lives. Therefore, we have assessed that COVID-19 can be characterized as a pandemic. (p. 1)

The threat of pandemics and disasters compelled all school personnel to recognize the mounting need to sustain appropriate learning environments when teaching and

learning face-to- face were not accessible (Day, 2015; SchWeber, 2013). The COVID-19 pandemic caused an abrupt change in the way that individuals live and learn nationwide. Studies demonstrated nationwide effects of COVID-19 resulted in the necessity for distance learning (Barron et al., 2021; Bennett & McWhorter, 2021; Beteille et al., 2020).

The Move to Online Education

Throughout the twentieth century, distance education involved paper, pen, and typewriter, which provided interaction between instructor and student. Electronic technology changed the pen, paper, and typewriter methods (O'Neil, 2009). The first United States online education program was created by a private school in 1991 (Powell & Barbour, 2011). A short time later, online education for PreK-12 public schools began to take shape with the label K-12 online (Powell & Barbour, 2011; Black et al., 2021).

Currently, an interest in online education is prevalent, and more K-12 public schools have resorted to distance learning than before (Bennett & McWhorter, 2021; Black et al., 2021; Koksal, 2020). Rudnicka (2020) indicated the pandemic is the reason for the uptick in online learning and teaching. Before the pandemic, Black et al. (2021) indicated "at least 2% of US students and more globally had already been participating in online instruction" (p. 2). However, the pandemic increased online teaching for all instructors and learning online for all students (Craft et al., n.d.). Notwithstanding, some studies proposed the spike in online enrollment may be temporary, although, throughout

the pandemic, online enrollment expanded progressively (Baragona, 2020; Bennett & McWhorter, 2021; Black et al., 2021).

With the increase in online enrollment, Kulikowski et al. (2021) found there were "many academic teachers who were unwilling to use e-learning or who lacked the appropriate competencies" (p. 1). Other studies reported teachers with high levels of efficacy were inclined to be more agreeable to transitioning to online (Ross & Bruce, 2007; Tschannen-Moran & Hoy, 2001). When transitioning to online, teachers' lack of self-efficacy was a significant concern (Cleland et al., 2020; Gross & Opalka, 2020). Research demonstrated for teachers to be effective and confident when transitioning to online classes, technology training was needed because training was associated with teachers' self-efficacy (Daniel, 2020; Eyster & Martin, 2010; O'Neil, 2009). Nevertheless, Van et al. (2010) suggested even after sufficient training, little research existed on the academic impact of distance teaching and learning when schools shut down.

Students Learning Online

According to Li and Lalani (2020), students who accessed laptops and internet at home may have found learning online effective during a sudden shift away from the classroom. For instance, Cavanaugh et al. (2004) surveyed 116 participants from 14 web-delivered K-12 distance education programs between 1999 and 2004. Results indicated distance education could have the same effect on student academic achievement when

compared to traditional instruction, "indicating no significant difference in performance between students who participated in online programs and those who were taught in face-to-face classrooms" (p. 1).

Contrastingly, another study indicated "on average, students retained 25-60% more material when learning online compared to only 8-10% in a classroom" (Li & Lalani, 2020, p. 5). Increased learning is possible because students can learn at a faster pace when online. Li and Lalani (2020) also reported online learning required 40-60% less time than in a traditional classroom setting. However, the COVID-19 pandemic demonstrated the importance of building resilience in educational systems facing various threats and changes while reminding the world of the skills and adaptability effective teachers need (Kaur & Som, 2020). During COVID-19 school closures, all students switched to online learning (Blume et al., 2020; Einhorn, 2020; Li & Lalani, 2020). Studies indicated students with special needs, English learners, and students without sufficient access to the internet or computers lost extensive teacher support (Blume et al., 2020; Einhorn, 2020; Li & Lalani, 2020). Findings further revealed students from disadvantaged families and students of color were often deprived of quality education (Anderson, 2020; Blume et al., 2020; Einhorn, 2020). Subsequently, studies established the pandemic aggravated educational inequalities for disadvantaged families and students of color (Anderson, 2020; Blume et al., 2020; Einhorn, 2020).

Effective Teachers

There were numerous attempts to ensure effective teachers were placed in every school district. Initially, the Elementary and Secondary Education Act (ESEA) of 1965 established a strategy to guarantee that all students received instruction from effective, highly qualified teachers (Haynie & Stephani, 2008; Paul, n.d.). Then, in 1987, National Board for Professional Teaching Standards (NBPTS) was created to enhance the standard of teaching (Haynie & Stephani, 2008). A policy statement by NBPTS outlined five core propositions necessary for recognition as a national board teacher: (a) membership in a learning community; (b) commitment to students and learning; (c) responsibility for managing and monitoring student learning; (d) understanding of the subject presented and efficient teaching techniques; and (e) improving practice through thorough reflection on practice (Haynie & Stephani, 2008). Further, guidelines introduced by No Child Left Behind (NCLB) Act of 2001 ascribed a teacher as highly qualified if: (a) the teacher held a state teacher certification; (b) passed a subject area competency test; and (c) earned a bachelor's degree or higher in the subject taught (Haynie & Stephani, 2008; Klein, 2015).

Colleges and universities also enhanced their teacher education programs to produce effective teachers. Although numerous investigations implied the teacher education programs received many criticisms about the quality of effective teacher candidates produced, Ducharme et al. (n.d) found, "if the past is prologue to the present, teacher educators in the many preparation environments…will continue to seek better ways so that all may learn" (p.13).

Facilitating Student Learning

The facilitation of student learning online can be traced throughout education and humanistic psychology. Dismukes and Smith (2017) and Gray (2021) concluded the facilitation of students learning online focused on supporting students to learn through their inquiry. According to Fullan (2009), creating conditions for online courses to function according to student inquiries may have provided structures and climates which impacted student learning and more effective teaching. For example, Flores et al. (2021) conducted a study to determine teacher preparations when teachers transitioned to online teaching from the traditional mode during the pandemic. Initially, teachers delivered lectures through live streaming options to facilitate synchronous learning (Flores et al., 2021). However, teachers confirmed student attendance was low and switched to an asynchronous online teaching style by distributing pre-recorded lectures to students. The switch was made because students' preferred learning method was pre-recorded lectures that were more flexible for students. Subsequently, teachers switched methods without any prior training or preparation and used technology already in their possession (Flores et al., 2021). Finally, a few of the problems teachers reported were technical issues, less motivation of students, increased teachers' workload, and lack of student-teacher interaction (Flores et al., 2021).

Impact on Student Learning

Districts serving communities with the lowest incomes experienced educational inequities, creating a digital divide when campuses closed because of COVID-19. Many children struggled for several weeks before families could purchase computers and hot spots, so children could begin online learning (Blume et al., 2020). Researchers indicated society assumed schools would protect children from effects of learning and academic continuity while enduring extreme events (Day, 2015; Kuhfeld et al., 2020). Children's safety and education continuity are frequently threatened by insufficient resources (Day, 2015; Kuhfeld et al., 2020; Tobin, 2019). Studies revealed children displaced from school for long periods of time because of disasters have more criminal activity and higher dropout rates (Day, 2015; Kuhfeld et al., 2020; Tobin, 2019). Studies also showed that missed school days significantly increased vulnerability of children, families, and their communities (Day, 2015; Kuhfeld et al., 2020; Tobin, 2019).

When schools shut down, many students reported feeling unmotivated to do schoolwork and did not know how to do the work without a teacher's help (Blume et al., 2020). According to Peek (2008), "children are psychologically vulnerable … and often experience disruptions or delays in their educational progress as a result of disasters" (p. 1). Soland et al. (2020) completed a study utilizing a nationwide sample with over 5 million students in grades three-eighth who took MAP Growth examinations in 2017-2018. The findings of the MAP Growth exams are made available in the fall, winter, and spring due to several administrations of the exam each year. The results suggested that

after schools shut down in early 2020, students could start fall 2020 school year with only 70% of the learning gains in reading from the prior year and smaller gains in math. Additionally, there are reasons other than COVID-19 affecting student learning, such as missing classes due to truancy, school closures related to weather (Day, 2015; Soland et al., 2020), and teachers' lack of self-efficacy (Barni et al., 2019, p. 1).

Online Learning

Benefits of Online Learning

The design of online courses can be as varied as that of conventional classrooms (Gilbert, 2015). Gilbert (2015) noted, "developing and teaching an online course that benefits students and yields positive learning outcomes is a complex undertaking" (p. 9). Still, thousands of students may prefer online learning (OL). Research indicated OL classes provided students advantages in various ways. For example, Kirtman (2009) conducted a study regarding OL learning in which one of the respondents stated OL learning "is more self-guided, so I can spend more time on the concepts that I need help with and less on concepts that I can pick up quickly" (p. 110). Faux and Black-Hughes (2000) and Gilbert (2015) indicated some students are attracted to OL because traditional face-to-face classrooms cannot meet their needs. For instance, students can work online if they are injured, in the hospital, or suspended from school. In addition to these, another feature mentioned was the asynchronous discussion board, which allows more time for students' responses (Faux & Black-Hughes, 2000; Gilbert, 2015).

Johnson (2006) suggested asynchronous might be better than synchronous when considering students' satisfaction with course requirements. As mentioned in the same report, many students do not prefer one style of communication, even though synchronous conversations are direct and asynchronous communication requires student autonomy. Johnson's (2006) report further implied combining asynchronous and synchronous teaching and learning together would be preferable. Contrariwise, Weitzel (2020) opined synchronous might be a better option because it is conducted in real-time, allowing instructor and students time together in class.

In another study involving 28 online teachers and 65 online students in grades 3-12 to determine their perceptions and experiences of an online program, all participants indicated the online method is differentiated, individualized, and a better learning experience than a face-to-face classroom (Thomson, 2010). Other benefits reported were students have more time to reflect, can work at their own pace, are independent, and engage in self-directed learning.

Challenges of Online Learning

According to Regehr et al. (2017), crisis planning in schools is generally focused on technology recovery and physical safety. However, Regehr et al. (2017) acknowledged while technology recovery and physical safety were significant, many aspects of planning for learning continuity have been ignored, including the delivery of academic curricula for different methods of teaching and learning. The need for

continuity of teaching and learning demonstrates a need for preparation and teacher training to transition to online education effectively.

The threat of pandemics and natural disasters has resulted in a growing interest in academic continuity planning (Schweber, 2013). Many families reported they did not have computers or access to the internet during COVID-19 school closings (Klein, 2015; Li & Lalani, 2020; Zhong, 2020). For example, students from privileged backgrounds indicated they had computers to work on during the pandemic, but 25% of students from underprivileged backgrounds reported they did not, thus creating a learning gap (Li & Lalani, 2020). Further, only 65% of Americans have access to high-speed internet services in rural areas, and those living on tribal lands have only 60%, compared to 97% who have access to internet services in urban areas (Li & Lalani, 2020; Perrin & Atsle, 2021; Roese, 2021).

Studies also showed various other challenges with online learning, such as students multitasking, playing games, logging onto Snapchat, or watching non-educational videos (Kay & Lauricella, 2014; Ravizza et al., 2017; Risco et al., 2013). Studies demonstrated remembering lesson content becomes more complicated when students multitask, negatively affecting their learning (Kirschner & Karpinski, 2010; Risco et al., 2013). For example, Kent State University (2019) conducted research involving 296 college students to determine the effect and how often students multitask simultaneously using three or more internet-connected devices while studying. The

results indicated more students multitask in online classes than in face-to-face classes. Results also indicated multitasking negatively impacts learning more regularly in online courses than in face-to-face methods Lepp et al., 2019).

An inquiry by Ma et al. (2021) showed "teaching transitions during COVID-19 school lockdowns elicited challenges for teachers" (p. 1). Ma et al. (2021) conducted a study designed to investigate online teaching self-efficacy (TSE) during COVID-19. 351 Chinese school teachers participated in the study. Participants' TSE was reported at the beginning and the end of school lockdowns. The results concluded TSE for online instruction did not significantly increase, but TSE for technology applications increased significantly. The factors identified were the separation of teachers from students, lack of experience in teaching online, substandard student academic performance, and school administrative processes.

Types of Online Instruction

Gewertz (2020) concluded pandemic teaching and learning could be very complex. The significance of online instructional types and teaching methods could mean different things to different teachers. While there are many types of online instruction to choose from, it may be helpful to have a working knowledge of a few of them (Lathan, n.d.).

Asynchronous Online Learning

Asynchronous online learning permitted individuals to learn at their own pace and "allows students to acquire new knowledge and practice skills at a pace that is optimal for their learning" (Farmer, 2020, p. 2). The assignments and lessons could be accessed at any time as long as students monitored deadlines. Lessons could occur through prerecorded video lectures, discussion boards, announcements, audio inserted power points, or social media (Farmer, 2020; Majeski et al., 2016).

Synchronous Online Learning

Synchronous online learning requires students to log in simultaneously while collaborating with teachers (Farmer, 2020; Giesbers et al., 2014). It also allows more social interactions for corrections and misunderstandings (Carr et al., 2004; Farmer, 2020). Students best suited for synchronous learning may be those involved in activities, those needing teacher support, and those scheduled to do work as a group collaboratively (Farmer, 2020; Giesbers et al., 2014; Carr et al., 2004).

Blended Learning

Güzer and Caner (2014) maintained "blended learning emerged as one of the most popular pedagogical concepts at the beginning of 2000" (p. 4598). Research has shown it combines virtual learning with some features of traditional learning (Ceylan & Kesici, 2017; Yovanoff et al., 2017). It also combines methods such as collaboration with classmates and independent study (Farmer, 2020). A nationwide study found 65.2% of

participating higher education institutions offered blended courses (Allen and Seaman, 2003; Dziuban et al., 2018; Moskal et al., 2013).

Hy-Flex Learning

The Hy-Flex course design developed and initiated by Beatty (2019) referred to a type of blended learning which implements "a 'student-directed-hybrid' approach to better support student learning" (p. 3). Hy-Flex learning is flexible, permitting students to attend online course sessions or face-to-face (Malczyk, 2019; National Education Association (NEA), 2021). NEA (2021) affirms the significant characteristics of Hy-Flex learning are:

1. The student has some control over the pace, place, and path of learning.
2. The student can participate face-to-face, online, or a combination of both.
3. Students can complete offline assignments at any time, place, or pace.
4. Educators use technology to facilitate live recorded online instructions.

Project-Based Learning (PBL)

Lam (2012) described PBL as a "comprehensive instructional approach to engage students in investigation in which the learning activities are organized around an authentic and meaningful question" (p. 1). Boss (2011) opined problem-based learning had been used as a way to teach economics, engineering, medicine, and other subjects for more than 50 years. PBL puts the student in charge of asking questions and discovering answers (Boss, 2011). According to Boss (2011), PBL has evolved as a method of

instruction addressing core content through relevant hands-on learning. Projects tend to be more open-ended than problem-based learning, giving students more choices to demonstrate what they know (Boss, 2011).

Teacher Confidence

Effective teachers must be able to facilitate student learning by adapting to a variety of teaching modes (Mpofu, 2020; Henebery, 2021; Turner et al., 2020). Some teachers adapt to make these changes, and others do not (Daley, 2021; Gewertz, 2020; Henebery, 2021; Jung et al., 2011; Ma et al., 2021). One way to explain this discrepancy is through the notion of teacher self- efficacy, which deals with how well one can accomplish courses of action which are required to deal with potential situations (Bandura, 1977, 1986, 1997).

In 2017, the National Assessment of Educational Progress (NAEP) reported teachers were not one hundred percent confident to start teaching online. According to NAEP's research, only one-third of eighth-grade teachers considered themselves experienced in using software applications. In like manner, only one-fifth of all teachers considered themselves confident enough to incorporate technology into their instruction (García & Weiss, 2020). Inan & Lowther (2010) additionally noted teachers who have the confidence to instruct students online are likely to have more success with student achievement than those who do not have confidence. Research showed the ability to teach online classes successfully depends on things such as educational priorities (Liguori

& Winkler, 2020), the teachers' preparedness (Anderson, 2020), positive attitudes of teachers, and teachers' self-efficacy (Almaiah & Alyoussef, 2019; Inan & Lowther, 2010).

Research by Al-Fraihat et al. (2018) further noted usefulness, ease of use, student learning, and self-efficacy also significantly affect the acceptance of online teaching. Almaiah and Alyoussef (2019) emphasized unskilled teachers using information technology (IT) may impede others. Gewertz (2021) noted anxieties and stress levels had become overwhelming for many teachers during the transition from face-to-face teaching to online teaching. Countless teachers reported they had never felt this helpless before and had never lacked confidence as much as teaching during the pandemic (Gewertz, 2021). Although Jung et al. (2011) suggested exposure to particular scenarios, interventions, and targeted training for teachers may boost teachers' confidence levels. Finally, Ed Week Research Center (2020) conducted a survey study with a sample of 817 teachers. Three-quarters of the teachers reported their morale was lower than before the pandemic. Eighty-five percent of teachers reported overall teacher morale at school was also lower. In March 2020, only 63 percent of teachers reported low morale. Forty-two percent of teachers reported the coronavirus pandemic has made them feel less motivated. Al-Fraihat et al. (2018) noted that self-efficacy affects the acceptance of online teaching and may help teachers adapt to online more quickly.

Professional Development

Bray-Clark and Bates (2003) posited teachers needed and wanted in-service professional development training to address classroom needs and help them become better teachers. Bray-Clark and Bates (2003) further acknowledged using self-efficacy as a concept for teacher professional development training could be worthwhile. Professional development (PD) could increase teacher efficacy in teachers' instructional skills when teachers apply PD ideas in their lessons and discuss their experiences with co-workers (Ross & Bruce, 2007). Teacher collaboration is a form of modeling that helps to build teacher self-efficacy (Bruce et al., 2010). Evidence showed teachers with a strong sense of efficacy in their teaching skills are more likely to use new techniques and take risks (Bandura, 2001; Hattie, 2012; Stein & Wang, 1988), persist with stressful strategies and positively affect student achievement (Barni et al., 2019; Bray-Clark & Bates, 2003; Bruce et al., 2010).

Adapting From Traditional to Online Instruction

König et al. (2020) noted teacher education opportunities and information technology (ICT) tools are effective in helping teachers to adapt to online teaching. Likewise, "the ability to adapt plays a key role in helping teachers meet the demands of their work" (Rosanes, 2020, pp. 2-3). Studies indicated some teachers were successful in adapting to make changes (Daley, 2021; Gewertz, 2020; Henebery, 2021; Jung et al., 2011; Ma et al., 2021). Studies also determined adaptability focuses on situations not anticipated and reaches beyond complex challenges (Granziera et al., 2019; Ma et al.,

2021). For example, Turner (2020) found many special education teachers reported adapting to technology helped them provide services to their students. One teacher commented: 'I don't think we would be able to do any of what I'm doing right now without it' (p. 9).

Martin et al. (2013) defined adaptability as a person's ability to manage uncertainties and deviations by adjusting their psychological mechanisms. Collie et al. (2018) agreed with the definition and stated adaptability includes a shift in attitude, emotional adaptation, and behavior adjustment. Martin et al. (2013) found three dimensions of adaptability: (a) cognitive, (b) behavioral, and (c) emotional:

> Cognitive adaptability involves thinking about the situation in different ways or changing one's thoughts about the situation or circumstance. Behavioral adaptability involves adjusting one's actions in order to manage the change in a situation or circumstance. Emotional adaptability involves adjusting one's emotions to reduce less helpful emotions (e.g., anxiety) or increase positive emotions (e.g., hope) in the face of novelty, change, or uncertainty. (p. 61)

Teachers' self-efficacy (TSE) and adaptability potentially affected teachers' behaviors, impacting students' academic performances (Loughland & Alonzo, 2018).

Hattie (2012) determined "teachers are adaptive learning experts" (p. 111), implying teachers with high self-efficacy possess the following attributes: (a) have confidence in their teaching skills and are flexible; (b) readily adapt to new situations; (c)

combine new subject matter with students' previous knowledge, helping connect current lesson content to other subjects; and (d) make lessons a priority by combining, changing, and adding to lessons. Likewise, studies also noted teachers with solid self-efficacy are generally advanced planners, organizers and willing to try out new approaches to meet the needs of their students (Bandura, 1995; Stein & Wang, 1988).

Lastly, research determined maintaining rich levels of student engagement correlated with high teacher self-efficacy (Good & Brophy, 2003; Martin et al., 2013). For example, during an interview with college professors, Gillin (2020) explained when teachers designed courses using synchronous group activities, and instructional videos, students' interests maximized, which kept students more engaged in online classes. Gillin (2020) indicated self-influenced goal challenges of one's performances would provide cognitive motivation for adaptation. When making self-satisfaction conditional to matching the standard, individuals gave direction to his or her behaviors and created incentives to persist in his or her efforts until goals are fulfilled (Bandura, 1995).

Difficulty Adapting

Effective teachers must be able to facilitate student learning by adapting to a variety of teaching modes (Loughland & Alonzo, 2018; Rosanes, 2020). However, research demonstrated some teachers found difficulty in adapting to online teaching (Daley, 2021; Henebery, 2020; Jung et al., 2011; Ma et al., 2021). Findings by Mpofu (2020) and Will (2021) argued some tenured teachers may not have been academically

trained in 20 plus years and may have limited knowledge of designing lessons other than for traditional classrooms. According to Jung et al. (2011), teachers with low self-efficacy were more likely than teachers with high self-efficacy to perceive teaching students online as too complex, especially students from low socioeconomic backgrounds. Moreover, individuals who have a low sense of efficacy may have become erratic in their thinking when facing challenging demands under taxing circumstances, resulting in the quality of their performance deteriorating (Bandura & Wood, 1989; Sitzmann & Yeo, 2013).

Additionally, Hattie (2012) explained teachers with low self-efficacy might possess the following characteristics: (a) more likely to view complex tasks as threats; (b) see failures as chances to dwell on personal deficiencies; (c) have a low commitment to goals; (d) are slow to recover confidence. Bandura (1977) maintained that persons with low efficacy give up quickly if they perceive not obtaining the expected results. Quickly giving up persists because "people act on their beliefs about what they can do as well as on beliefs about the likely outcomes of performance. The motivating influence of outcome expectancies is thus partly governed by efficacy beliefs" (Bandura, 1995, p. 7). However, Gillin (2020) stressed teachers with a low sense of efficacy and unfamiliar with online teaching should collaborate with co-workers who have experience. For example, inexperienced teachers working with teacher-leaders or curriculum advisors may be excellent resources. Martin et al. (2013) suggested training teachers to notice situations

that require adaptation could boost their ability to adjust to new situations and encourage change in their emotions, behavior, and cognitive processes.

Ma et al. (2021) opined, "with COVID-19 adding to the existing challenges of teacher self-efficacy (TSE), the need for research in this field cannot be overemphasized" (p. 4). Investigating the impact of teachers' adaptability in online teaching is also needed (Collie et al., 2018; Ma et al., 2021). Teachers' adaptability may have improved when teachers were working in supportive environments, which could be important in online teaching (Collie et al., 2018; Ma et al., 2021).

Differing Results of Adapting

Bandura (2001) argued the self-efficacy belief system is the underpinning of human inspiration and personal accomplishments. Bandura (1995) noted that whereas a person with a strong sense of efficacy displays boldness, a person with a low sense of efficacy may experience uneasiness. Bandura (2001) also noted just because an individual is self-efficacious at specific tasks does not mean they are equally capable in all tasks. For example, Ashton et al. (1983) predicted different cognitive and affective outcomes depending on whether a low sense of efficacy correlates to teachers' belief in their ability to motivate students or a personal sense of incompetence to motivate students. A teacher with a general type of efficacy may have negative expectations and doubts about whether teachers can motivate certain students. However, a general type of

low efficacy will not generate much stress, as the teacher may assume that all teachers are incapable of motivating particular children (Ashton et al., 1983).

Rad et al. (2021) conducted an online survey to investigate the perceptions of instructors and postgraduate dental students about transitioning to distance learning. The results determined students were less satisfied than instructors with the transition. All participants agreed the transition was advantageous and challenging. Participants reported being able to experience adapting to online teaching and learning allowed them to develop ideas concerning the best way to continue learning and teaching in a crisis. Teachers with a low sense of efficacy who do not report positive experiences when adapting to online teaching were associated with the following styles of teaching: (a) work avoidance and ability avoidance, (b) undermining help-seeking, (c) students involved in cheating, and (d) considered students who asked questions or sought help to be less intelligent Rad et al., (2021). Also, teachers with low self-efficacy were more likely to present students with easy online tasks (Hattie, 2012).

In another study, Dolighan and Owen (2021) investigated the efficacy of secondary teachers during the COVID-19 pandemic when teachers were instructing in a fully online learning environment. Results determined prior experience with online learning builds greater self-efficacy among teachers as they transition to online learning. Teachers with higher efficacy also correlated with enrollment in online courses, online Professional Development (PD), using a board-provided learning management system

(LMS), and using virtual technology supports. Hattie (2012) confirmed that teachers with high self-efficacy do not practice avoiding complex tasks or challenges like teachers with low efficacy. Moore-Hayes (2011) concluded, "research on technology integration in the field of education remains mixed, with some studies purporting significant benefits to teaching and learning while others suggest it has no impact" (p. 1). According to Murray et al. (2020), only a few studies were conducted on TSE at the middle school level during a pandemic.

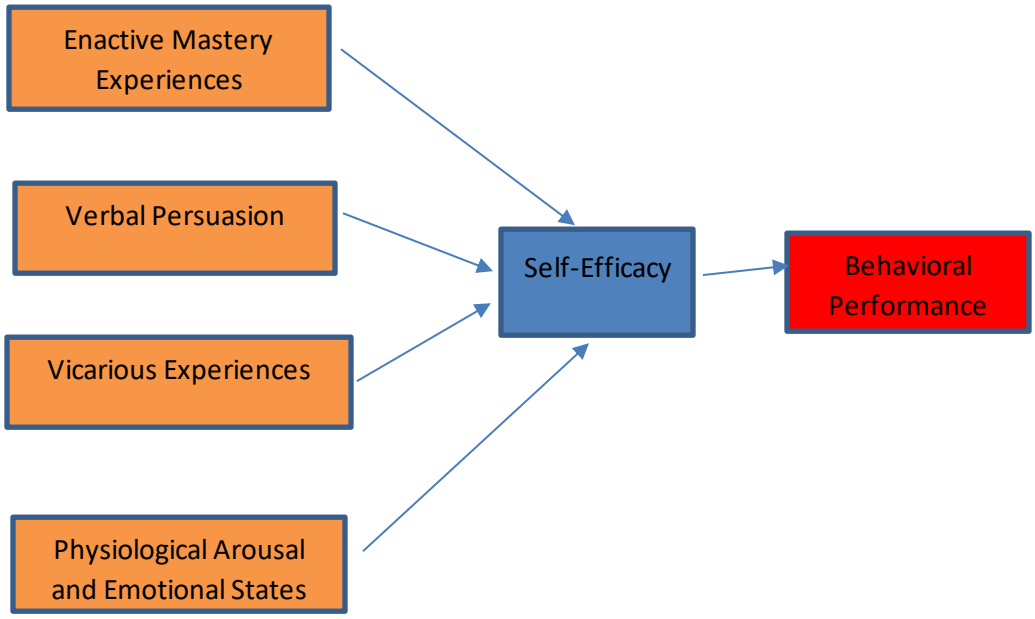
The Necessity for Teacher Self-Efficacy

Research indicated teachers' perception of their technical knowledge and their ability to integrate technology into teaching stems from their self-efficacy beliefs (Levin & Wadmany, 2006; Wang et al., 2004). Technology use continued to increase in education and demonstrated the significance of ensuring teachers develop strong self-efficacy beliefs in their ability to incorporate technology (Moore-Hayes, 2011; Wang et al., 2004). Research indicated self-efficacy is an essential factor among teachers operating online platforms and is the key to success in online teaching (Kundu, 2020; Levin & Wadmany, 2006). According to Perkmen (2008), technology incorporation, self-efficacy, and instructional technology expectations are related to technology adaptation. Individuals with a sense of high self-efficacy will have high outcome expectations. Niederhauser and Perkmen (2010) stressed that self-efficacy beliefs were considered significant for teaching with technology effectively.

A graphic showing mastery experience, vicarious experience, verbal persuasion,

Figure 2

Major sources of efficacy



Note. Adapted from Bandura, A. (1977). Self-efficacy: Toward a unifying theory of behavioral change. *Psychological Review, 84*(2), 191-215.

and physiological arousal, the four tenets of Bandura's SET relating to behavior and performance outcome, is shown in Figure 2.

Teacher Retention

Daley (2021) completed a survey involving 5,500 teacher participants about teachers' commitments to remain in the classroom. Daley (2021) compared data with teacher responses to a pre-pandemic survey and reported:

> During the pandemic, teachers became less confident that they would work in the classroom until retirement. More than 40% of the teachers surveyed said they considered leaving or retiring, and over half of those said it was because of the pandemic. (p.2)

Some of the reasons teachers listed for considering leaving or retiring were transitioning to different instructional modes during the year and health concerns (Daley, 2021). Henebery (2021) surveyed 571 teacher participants and found that 75% of teachers surveyed reported feeling stressed by their work, and one in three (36%) were no longer satisfied with their job. Fearnow (2020) agreed with Henebery and indicated numerous teachers believed remote teaching and learning caused their jobs to be complicated and have opted out of their teaching positions. The New York teacher retirement system reported a 20 percent increase in teachers filing for retirement since 2019. In December, the Rand Corporation surveyed nearly 1,000 former public school teachers and found stress with teaching during COVID-19 caused forty-three percent of teachers to leave before retirement. Comparatively, veteran teachers also reported frustration over technology demands due to the pandemic's virtual learning environment (Cromer, 2020;

Will, 2021). According to Bandura (1995), there are four sources of self-efficacy, explained below.

A sense of efficacy can be developed through mastery experiences. The development of efficacy involves attaining the cognitive, behavioral, and self-regulatory tools for performing courses of action to manage life circumstances (Bandura, 2001). The ability of the learner to establish mastery in a real-world setting, such as various instructional modes, is considered learning transfer which is the most durable for changing beliefs (Bandura, 2001; Stajkovic & Luthans, 1998). Social models provide vicarious experiences (Bandura, 1995; Schunk & Rice, 1987) and are the second way of strengthening efficacy beliefs. Social models are individuals who are observed. The observed social models are considered knowledge structures serving as mental guides to help build behavioral patterns (Bandura, 1995; Schunk & Rice, 1987). Verbal persuasion is the third source of attaining efficacy and could motivate individuals to try harder to succeed rather than quickly giving up (Litt, 1988; Schunk & Rice, 1987). When the feedback is constructive and the person providing it has more expertise, there is a greater possibility that it will be beneficial (Owens & Valesky, 2015). Physiological arousal, the fourth source of strengthening efficacy beliefs, is thought of as stress reactions to inadequate performance (Bandura, 1995). When an individual experiences stress, the stress decreases his or her ability to perform at his or her best; then, stressful thoughts increase the reaction of the stress. The reactions and thoughts to stress can affect a

person's mood, affecting his or her self-efficacy (Bandura, 1995; Owens & Valesky, 2015).

Protocols to Reopen Schools

Unique challenges were brought to the nation's education system by the outbreak of COVID-19. The urgency to slow the spread of the virus led to worldwide school closures, with little to no time to decide how and when to reopen schools or continuity of education (Di Domenico et al., 2021; Dibner et al., 2020). Without careful consideration and following mandated protocols when reopening schools, Di Domenico et al. (2021) thought COVID-19 cases could increase. School districts and states have continuously dealt with how to reopen schools and keep them open safely.

State-level protocols have not mandated school districts to reopen schools; state-level protocols presented questions for districts to consider when deciding to reopen schools (Dibner et al., 2020). The state-level approach to providing guidance allowed for flexibility but left districts obligated to make decisions about the risks of reopening (Di Domenico et al., 2021; Dibner et al., 2020). School leaders should decide to reopen schools according to evidence-based guidance about the virus and the complications of operating school buildings (Dibner et al., 2020). The most significant priority of school leaders reopening schools was for students to return safely to in-person instructions to benefit from in-person learning (CDC, 2021). There was no conclusive evidence of which protocols were most effective for limiting transmission of the COVID-19 virus when

teachers, students, and staff were in school buildings (Di Domenico et al., 2021; Dibner et al., 2020). The CDC (2021) recommended vaccinations as the leading prevention to decrease the effects of COVID-19 but suggested indoor masking by all students, staff, teachers, and school visitors, irrespective of vaccination status, as a primary protocol.

Recommendations also suggested schools keep at least 3 feet of physical distance between students in classrooms to reduce transmission risk (CDC, 2021). A protocol checklist was also issued by the World Health Organization (2020) to help keep schools safe, protect children, and advise local and national authorities on how to implement safeguards against the transmission of the COVID-19 virus. The checklist recommended providing students with information about how to protect themselves, promote hand washing and hygiene practices, provide hygiene supplies, clean, and disinfect school buildings, and increase airflow and ventilation in school buildings. Additionally, Blad et al. (2021) and CDC (2021) encouraged schools to use the following strategies for COVID-19 prevention:

1. Cover both nose and mouth.
2. Use social distancing.
3. Cover your mouth when sneezing and coughing.
4. Students and adults should frequently wash hands.
5. Help to maintain clean school buildings.
6. Use isolation, quarantine, and contact tracing for students, teachers, and staff.

Lieberman & Ujifusa (2021) reported nearly $190 billion was given in Coronavirus aid funding for K-12 schools to reopen. Van Drie et al. (2020) and Abrams (2020) suggested schools could use some of the Coronavirus funding to redesign school buildings to address some of the risk factors resulting from the pandemic. For example, schools could purchase contactless water fountains and use plastic silverware in cafeterias (Van Drie et al., 2020; Abrams, 2020).

Framework for Self-Efficacy

Chapter I introduced Bandura's (1995) Self-Efficacy (SE) theory with its four primary forms of influence: mastery experiences, vicarious experiences, verbal persuasion, and physiological arousal. All four tenets directly correlate to teachers' perceived self-efficacy (Bandura, 1977; Stajkovic & Luthans, 1998). Bandura (1997) described perceived self-efficacy as an individual's belief in their capabilities to produce accomplishments. Bandura (1997) further stated SET addresses the belief of personal efficacy, the structure and function, the processes through which they operate, and their diverse effects. Self-efficacy also provides strategies to improve and enhance human efficacy (Bandura, 1977; Stajkovic & Luthans, 1998). Bandura (1977) affirms these four types of influence can develop an individual's beliefs regarding their efficacy: mastery experiences, vicarious experiences, verbal persuasion, and physiological and affective states.

Enactive Mastery Experiences

Enactive mastery experiences "provide the most authentic evidence of whether one can muster whatever it takes to succeed" (Bandura, 1995, p. 3). Mastery experience is the only source directly offering performance confirmation, making it the most durable for changing efficacy beliefs (Bandura, 1995; Stajkovic & Luthans, 1998). For example, being successful at specific tasks can build self-efficacy and the prospect of succeeding at comparable tasks (Lassiter, 2020; Stajkovic & Luthans, 1998). However, it is essential that individuals set realistic goals and practice resilience when facing failure (Starks et al., 2017). Bandura (2001) affirms successes help to build belief in individuals' efficacy, while failures can undermine it, mainly if failures transpire before a sense of efficacy has been grounded. Self-efficacy development is about more than forming habits to develop mastery experiences. Self-efficacy development consists of acquiring self-regulatory tools for creating and accomplishing courses of action suitable to manage life circumstances, cognitive and behavioral aspects (Bandura, 2015). Each small success achieved helps build a mastery experience, boosting confidence until an individual is fully confident and competent at using various technology-based teaching methods (Bandura, 1995). The ability to overcome difficulties through persistent effort helps produce a sense of efficacy (Bandura, 2001). In other words, failures may be experienced at times, but individuals are not easily discouraged when setting reasonable goals. Therefore, difficulty can serve as a helpful tool in helping individuals to understand success may require continued effort.

Vicarious Experiences

Vicarious experience is the second way of strengthening efficacy beliefs and is provided by social models (Bandura, 1995). Observing individuals who are similar to oneself being successful may increase the observers' belief of success when completing similar activities (Bandura, 1995; Bandura, 1986; Schunk, 1987). Individuals can build confidence to try new things when they see others succeed (Bandura, 1995). Self-efficacy development is about more than forming habits to develop mastery experiences. Gillin (2020) emphasized teachers unfamiliar with online teaching should work in partnership with co-workers who have experience. Successes can be observed, which will help boost a person's inner confidence (Bandura, 1995; Schunk & Rice, 1987). The observations could be demonstrated in an online classroom among teachers learning new teaching methods. The observed models are considered knowledge structures representing effective action, serving as mental guides to help build behavioral patterns. Knowledge structures are formed by behaviors modeled, the outcomes of activities, verbal instruction, and cognitive syntheses of acquired knowledge (Bandura, 1995). If the observed model fails a task, the observers' efficacy may be negatively affected (Bandura, 1995). The effect modeling has on beliefs of personal efficacy is prompted by perceived similarity to the models (Bandura, 1995; Schunk & Hanson, 1985). If models are too different from the observer, there is little influence (Bandura, 1995). For instance, when beginning online teaching, those teachers or models who are more adept at using

computers, Smartboards, or other technology, may be observed by those less knowledgeable.

Participant modeling could help to build self-efficacy. SET affirms all learning can transpire by observing others and the penalties of their actions (Chen & Tutwiler, 2017; Stajkovic & Luthans, 1998). Participant modeling permits observational learners to gain improved behavior patterns without learning from one's own errors. If individuals learn only from the consequences of their actions, opportunities for success could be reduced because of the fear of making errors (Stajkovic & Luthans, 1998).

Verbal Persuasion

Verbal persuasion is the third way of reinforcing individuals' beliefs about success. Verbally persuading people to be successful may motivate them to try harder rather than doubt themselves (Kadden & Litt, 2011; Litt, 1988; Schunk, 1990). Verbal persuasion, unfortunately, can be positive or negative. Owens and Valesky (2015) found verbal persuasion "is most useful in helping an individual create greater effort and persistence in performing a task" (p. 140). When feedback is positive, and the speaker has more experience when offering feedback, it is potentially more effective (Owens & Valesky, 2015).

Hattie (2012) notes four levels of verbal feedback: (a) task, (b) process, (c) self-regulation, and (d) self-level. The task level is targeted and aims to provide additional information significant to the task at hand. The task level serves as a basis for processing

and building self-regulation levels (Hattie, 2012). Examples of this level of feedback are specifying correct or incorrect responses. The second level of feedback is the process level. It intends to help with error detection, reduce an individual's mental load, recognize relationships between ideas, and develop learning strategies (Hattie, 2012). It may also improve self-efficacy and task confidence. Examples include providing strategies to help individuals identify errors and learning from mistakes (Hattie, 2012). Self-regulation is the third level of verbal feedback. Its goal is to give individuals greater confidence to engage further with a task (Hattie, 2012). Self-regulation often occurs through reflective questions and focuses on individuals "monitoring their own learning processes" (Hattie, 2012, p.134). This level may enhance a person's self-evaluation skills and provide greater confidence to engage further with a task. The fourth and final level of verbal feedback is self-level which provides praise (Hattie, 2012). Praise does not include information about one's performance on a task and does not help build self-efficacy (Hattie, 2012). Therefore, one should be careful to provide praise and not to weaken the influence of verbal persuasion.

Teacher-leaders and instructional coaches may potentially be prime candidates for modeling and offering verbal persuasion. These leaders are often looked up to and trusted as reliable resources. It may be effective when teacher-leaders and instructional coaches offer positive feedback to their peers during training.

Physiological Arousal and Affective States

Bandura (1995) acknowledged individuals often see their stress reactions as signs of poor performance. This perception may cause a response to one's internal physiological state (Bandura, 1995; Owens & Valesky, 2015). When an individual feels stressed or fretful, their ability to perform at their best is decreased; then stressful thoughts increase reactions to the stress (Bandura, 1995; Owens & Valesky, 2015). Stressful thoughts and reactions could also affect a person's mood, affecting their self-efficacy (Bandura, 1995; Owens & Valesky, 2015). Bandura (1995) explained, "information that is relevant for judging personal efficacy, whether conveyed by mastery skills, vicariously, persuasively or affectively is not inherently instructive, rather it gains its significance through cognitive processing" (p. 5). Not only this but self-efficacy is not acquired by a person's inner forces but by mutual interactions of personal contacts in their environment (Bandura, 1977). An individual can have high self-efficacy when performing one task, such as teaching in a traditional face-to-face classroom. The same individual may have low self-efficacy when performing another task, such as teaching an online course. An individual may experience low and high self-efficacy because self-efficacy is situation-specific (Lassiter, 2020; Bandura, 1995).

Chapter Summary

This study is organized into six chapters. Chapter I provided an overview of the study and included the problem statement, purpose of the study, and research questions. Case study methodology was utilized to understand how middle school teachers with

high or low self-efficacy adapted their teaching to meet student learning needs during a pandemic. The theoretical framework utilized for this study was Bandura's (1995) SET.

Chapter II reviewed the literature about teacher self-efficacy and teachers' transitioning to online instruction during the COVID-19 pandemic. The first topics reviewed were COVID-19 and online learning, effective teachers, and online learning. Also discussed were types of online instruction, including asynchronous, synchronous, blended, project-based learning, and hyflex learning. The chapter then focused on teacher confidence and the necessity for teachers' self-efficacy. The chapter further discussed the framework for self-efficacy, explaining Bandura's (1995) four tenets of self-efficacy, including effective mastery, vicarious experience, verbal persuasion, and physiological arousal.

Chapter III provides a review of the methodology used for this research study. In addition to stating my role in the research process, potential areas of researcher bias and the trustworthiness of findings are also addressed.

CHAPTER III

METHODOLOGY

The purpose of Chapter III is to provide an account of the research procedures. Key topics discussed include (a) researcher role, (b) research design, (c) data collection strategies, (d) data analysis strategies, and (e) data verification strategies.

Statement of the Problem

Effective teachers must be able to facilitate student learning by adapting to various teaching modes (Turner et al., 2020; Sethi & Behera, 2021). When the pandemic hit and schools were mandated to close, some teachers were able to adapt to make these changes, while others were not (Rosanes, 2020; Kowalski, 2020; Henebery, 2021). In this inquiry (Bandura's, 1977, 1986, 1997), SET was used as a lens to explain how teachers with low self-efficacy and high self-efficacy adapted to changing demands during the pandemic.

Purpose of the Study

The purpose of this qualitative case study was to explain through the lens of Bandura's SET how teachers with high or low self-efficacy adapted to changing teaching demands for online learning during the COVID-19 pandemic.

Research Questions

The following research questions guided this study:

1. How did teachers with high self-efficacy adapt their teaching to meet student learning needs during the pandemic?
2. How did teachers with low self-efficacy adapt their teaching to meet student learning needs during the pandemic?
3. How did adaptations to teaching differ across teachers with high self-efficacy and low self-efficacy?
4. How does Bandura's self-efficacy theory explain these adaptations?

Researcher Role

Researcher Bias

My personal experiences have helped shape my perception of online and distance education. In August 2020, I was the Assistant Principal of Accelerated Curriculum Education (ACE) online school. During this time, the COVID-19 pandemic first broke out, and we had to suspend schooling. There were approximately 150 students enrolled from grades 9 through 12. Each student was issued a Chromebook for academic work. We used a grade and calendar pacing scale to ensure students were progressing as they should. During the process of this research study, I was not in a position of authority for the teachers that I will be interviewing and observing.

Before my role as an assistant principal, I was an academic counselor and a member of the district leadership committee. As a district leadership member, I was directly involved with other principals, superintendents, teachers, staff, and community

members making decisions and scheduling events. I was responsible for reporting the information I received from the monthly district leadership meetings to teachers and staff at district school buildings. I helped to organize and plan professional development training for teachers and staff. I worked alongside parents and community members to address any concerns in the school community. I was the liaison for two local colleges to assist our concurrently enrolled students.

I believe these involvements helped enhance my understanding, awareness, sensitivity, and knowledge of many of the challenges and decisions made during the pandemic. I developed a personal belief that the training and support teachers received would directly benefit student achievement. I bring awareness of the virtual education structure and the assistant principal's role. This awareness will assist me in working with the participants in this inquiry with an open mind.

Research Design

Crotty (1998) stated that constructionism is "the view that all knowledge, and therefore all meaningful reality as such, is contingent upon human practices, being constructed in and out of interaction between human beings and their world, developed and transmitted within an essentially social context" (p. 42). Crotty (1998) and Burr (2015) explained constructionism supports ways of understanding the world stems from people in our past and present rather than from objective realities because much of what we perceive as reality depends on shared assumptions (Crotty, 1998; Burr, 2015).

A qualitative case study is described as a bounded "unit of analysis" (Merriam & Tisdell, 2016, p. 24) that offers "ways of finding out what people do, know, think, and feel by observing, interviewing, and analyzing documents" (Patton, 2015, p. 170). Qualitative inquiries allow the researcher to explore and "uncover participants' understandings of their experiences" (Merriam & Tisdell, 2016, p. 24) and align with the constructionist way of constructing collective understanding. "The experience a person has includes the way in which the experience is interpreted" (Merriam & Tisdell, 2016, p. 9). The epistemological perspective of Constructionism helped me explore the significance and understanding of how teachers experienced and interpreted their perceived self-efficacy. This study was a qualitative case study guided by Merriam & Tisdell (2016). The unit of analysis for this study was a selected middle school in a midwestern state.

Data Collection Strategies

Participant Selection

Merriam and Tisdell (2016) noted, "Purposeful sampling assumes that the investigator wants to discover, understand, and gain insight and therefore must select a sample from which the most can be learned" (p. 96). Data for this study were collected at a selected middle school in a midwestern state. Recruitment for this study began with me asking the principal of the selected middle school permission for middle school teachers to participate in this study. After receiving permission from the school principal allowing

teachers to participate in this study, I emailed twenty-two middle school teachers to ask if they would agree to participate. The twenty-two teachers included all subject areas, including electives that are taught at the selected middle school.

Next, I emailed the short form of the Teachers' Sense of Efficacy Scale (TSE) survey to the twenty-two middle school subject area teachers in the selected school. A total of eight out of twenty-two middle school teachers were selected to participate in this study. The eight participants had a low sense of efficacy or a high sense of efficacy. The Teachers' Sense of Efficacy Scale (TSE) survey is in Appendix D.

The Teacher Sense of Efficacy Scale was formerly called the Ohio State Teacher Sense of Efficacy Scale. It was developed by Tschannen-Moran and Hoy (2001) to determine the Efficacy in Student Engagement, Efficacy in Instructional Practices, and Efficacy in Classroom Management. The sub-scale scores are computed by un-weighted means of the items that load on each factor. Generally, these groupings are: (Short Form)

Efficacy in Student Engagement: Items 2, 3, 4, 11

Efficacy in Classroom Management: Items 1, 6, 7, 8

Efficacy in Instructional Strategies: Items 5, 9, 10, 12

After participants took the TSE survey, scores were analyzed. Scores of 4 and below represented a low efficacy, and scores of 5 and above represented high efficacy. In the event that all participants' scores were similar, I would have expanded the TSE survey group to include more teachers. After participants took the TSE survey, scores

were analyzed and divided according to high or low scores in accordance with the research questions of participants with high efficacy or low efficacy. I then started scheduling one-hour interviews with teachers who agreed to participate in this study. The interviews were held during teachers' planning periods in person, according to teachers' preferred methods. An overview of data collection strategies and their alignment with the research questions can be found in Table 1, Appendix A.

Tschannen-Moran & Hoy (2001) developed a teachers' sense of efficacy scale to measure teachers' efficacy, and the sense of efficacy scale is based on the following:

A. *Efficacy in student engagement.* A sense of efficacy in student engagement includes the following. Do teachers have abilities to motivate students who demonstrate low interest in school? Can teachers assist students to realize the significance of learning? Do teachers aid students to believe they can do well on school assignments? Do teachers support families to help children be successful in school?

B. *Efficacy in instructional strategies.* A sense of efficacy in instructional strategies includes the following. Do teachers have abilities to ask thought provoking questions to students? Do teachers have abilities to use a variety of assessment strategies? Do teachers have abilities to provide alternative explanations when students seem confused? Do teachers have abilities to implement alternative teaching strategies in the classroom? and

C. *Efficacy in classroom management*. A sense of efficacy in classroom management includes the following. Do teachers have abilities to control disruptive classroom behavior? Do teachers have abilities to calm a student who is disruptive? Do teachers' have abilities to get students to follow classroom rules? Do teachers have ability to establish classroom management with each group of students?

Composite scores were used to determine teachers' self-efficacy scores, allowing for a broader range of scores.

Documents and Artifacts

Erlandson et al. (1993) described documents as "the broad range of written and symbolic records, as well as any available materials and data" (p. 99). Patton (2015) also described documents as written material such as social media postings, photographs, memoranda, reports, and correspondence. According to Patton (2015), "documents prove valuable not only because of what can be learned directly from them but also as a stimulus for paths of inquiry which can only be pursued through direct observation and interviewing" (p. 377). Artifacts are materials that provide an understanding of the culture's physical environment and social interactions, such as writing instruments, visual sources, computer printouts, or artwork (Erlandson et al., 1993; Gay et al., 2012).

For this inquiry, hard copies, digital documents, and artifacts included the following: newspaper articles, teachers' lesson plans, student assignments, emails,

photographs, websites, and any other pertinent information that was a valuable source of data. During the COVID-19 pandemic, teachers often videoed or audio-recorded lessons for students, which I also reviewed.

Observations

Patton (2015) concluded observational inquiry requires discipline, readiness, and preparation. He further noted observational data are thorough descriptions of people's behaviors, movements, activities, and interactions. Patton (2015) outlined six observational strategies:

- learn to pay attention in both seeing and hearing.
- use descriptive writing.
- use discipline and expertise when recording field notes.
- separate trivia from detail.
- triangulate and validate systematically.
- use self-disclosure reporting one's own limitations and strengths.

Erlandson et al. (1993) also noted, "Observation allows the researcher to discover the here-and-now interworking of the environment via the use of the five human senses" (p. 94). I systematically gathered significant information firsthand for these observations and was as unobtrusive as possible, not allowing information to be disregarded. I did this

by adhering to Patton's (2015) six observation strategies listed above and using the following protocols of Merriam and Tisdell (2016):

- The researcher should observe physical settings, technologies present, and space allocation.
- Notice the role and number of people present; notice who is not present.
- Note activities, interactions, rules as typical or unusual.
- Summarize conversations, and paraphrase direct quotes.
- Note subtle things, nonverbal communication, clothing, spacing, and what does not happen or what is not said.
- The researcher should notice his or her behaviors and thoughts (Merriam & Tisdell, 2016).

As Merriam and Tisdell (2016) suggested, I used a code sheet to observe and record specified behaviors according to the above list, separating descriptive notes from reflective notes to obtain thick, rich descriptions of the observation(s). The code sheet is available in the appendices as Appendix C.

Interviews

Patton (2015) indicated, "Open-ended questions and probes yield in-depth responses about people's experiences, perceptions, opinions, feelings, and knowledge" consisting of data, which includes verbatim spoken words with context that is interpretable" (p. 14). Interviews also initiate conversations to "elicit views and opinions

from participants" (Creswell, 2014, p. 190), finding out what the participants know, think, and do (Patton, 2015).

Interviews allowed me to explore and "uncover participants' understandings of their experiences" (Merriam & Tisdell, 2016, p. 24) while adapting to online teaching. I interviewed core subject online teachers to gain better understanding and vivid descriptions of teachers with high self-efficacy and low self-efficacy and their experiences adapting to the changing teaching demands for online teaching during the pandemic. The interview protocol I used is in Appendix B.

Data Analysis Strategies

Creswell (2014) maintained data analysis is a "process of focusing in on some of the data and disregarding other parts of it" (p. 195). Creswell further noted that data must be taken apart and put back together to make sense. Merriam and Tisdell (2016) posited that the main reason for analyzing data is understanding and conveying the case. Patton (2015) indicated making sense of documents is the task of analyzing data, and researchers should have the best intentions to represent the data fairly and communicate what it reveals.

Data Analysis and Interpretation

The data for this study were collected and analyzed simultaneously, according to Merriam & Tisdell (2016). Each field note, interview, observation, and document was coded with a descriptive notation. I compared collected information looking for recurring

regularities in the data, which will be assigned into categories. I personally transcribed all interviews as a means of generating insights about the data. The ongoing analysis of data produced categories, themes, and findings. I was able to explore emerging categories more thoroughly using Merriam and Tisdell's (2016) methods which include: Think about the purpose of the study; think about the lens of the epistemological framework; code the data; think about the main themes that emerge; support the themes that emerge; develop categories to combine the codes into fewer categories.

Data Verification Strategies

Trustworthiness

Lincoln and Guba (1985) determined in qualitative inquiries, transferability, credibility, confirmability, and dependability are values that help create trustworthiness. Trustworthiness stems from being consistent, thorough, and ethical during the research study (Merriam & Tisdell, 2016). Erlandson et al. (1993) outlined techniques for establishing trustworthiness: audit trail, purposive sampling, reflexive journal, thick description, member checking, peer debriefing, referential adequacy, triangulation, persistent observation, and prolonged engagement.

Internal Validity

Gay et al. (2012) posited validity refers to the degree to which qualitative data accurately gauge what the researcher is trying to measure (p. 633). Erlandson et al. (1993) explained validity as the relationship between the data of an inquiry and the

phenomena those data represent (p. 30). Merriam and Tisdell (2016) concluded validity and reliability "can be approached through careful attention to a study's conceptualization and the way in which the data are collected, analyzed, interpreted, and the way findings are presented" (p. 238). Internal validity in all research depends on the essence of reality and how research findings duplicate reality (Merriam, 1998). There are six strategies to augment internal validity: peer examination, long-term observations, triangulation, collaborative research, researcher biases, and member checks (Merriam, 1998).

Reliability

Erlandson et al. (1993) asserted the inquiry of a study must meet the criterion of accuracy, consistency, stability, and predictability. The establishment of reliability depends on replication, meaning "the assumption is being made that the repeated application of the same or equivalent instruments to the same subjects under the same conditions will yield similar measurements" (Erlandson et al., 1993, p. 34). Ensuring reliability in qualitative research includes researchers conducting investigations ethically and striving to describe and explain the world according to participants' lived experiences (Merriam, 1998; Merriam & Tisdell, 2016). Merriam (1998) condensed the meaning stating, reliability of science depends on repeated measurements of a phenomenon. Internal validity and reliability techniques are found in Table 2 and explained below.

Table 2

Trustworthiness Techniques

Internal Validity

Technique	Results	Examples
Prolonged-engagement	Trust developed Developed rapport Created relationship Obtained accurate data Obtained accurate data	Many long observations
Persistent observation	Obtained in-debt data Divided relevant from irrelevant data	Attention on behaviors and conversations of situations significant to study
Triangulation	Verified data	Used multiple sources
Peer debriefing	Added perspectives and guidance from trusted sources	Discussed with peers via scheduled Zoom calls
Member checking	Verified documentation and conclusions	Continuous checking
Purposive sampling	Site selection provided good venue to observe mastery, vicarious, verbal, and physiological behaviors	Purposeful by providing broadest information

Reliability

Audit trail	Allowed determination of trustworthiness of study	Interview guide, notes
Reflexive Journal	Documented researcher decisions, thoughts	Bi-weekly written diary
Thick description	Provided a database for transferability	Descriptive relative data

Note: Adapted from Erlandson, D. A., Harris, E. L., Skipper, B. L., & Allen, S. D. (1993). *Doing naturalistic inquiry: A guide to methods*. Sage publications.

Limitations of Study

The presence of the researcher was one limitation regarding interviews of participants (Creswell, 2009). Another limitation was that I collected data during 2022-2023, but I asked participants to recall their lived experiences during the COVID-19 pandemic of 2020. One last limitation is the TSE scores of teachers indicated there was

not a great distinction between low and high scores because all scores fell between 4 and 8.

Summary of the Chapter

Chapter III provided an outline of the research methodology I used to answer the research questions. The chapter discussed the procedures, study participants, data collection, my role as a researcher, and the bias I may have had. The research design, data collection methods, data analysis, and verification were also discussed.

Chapter IV presents the data and provides a description of the site selected and participants. All data collected through interviews, surveys, observations, artifacts, and field notes are presented in detail.

CHAPTER IV

NARRATIVE DESCRIPTION OF DATA

Chapter IV offers a narrative description of a midwestern public middle school, Foundation Middle School (FMS). At the time of this study, FMS was in the school district of Northwest Public Schools (NPS). The chapter begins with a description of the case, followed by a description of COVID-19 and its impact on FMS, a description of study participants, and teacher accounts of behaviors associated with and meanings of Self-Efficacy (SE). The illustrations utilized in this chapter aimed to create a vivid picture of the overall impact of COVID-19 and the detailed descriptions of study participants. The purpose of this study was to explain through the lens of Bandura's self-efficacy theory (SET) how teachers with high or low self-efficacy adapted to changing teaching demands for online learning during the COVID-19 pandemic. This case reflected FMS teachers' abilities to provide and support relevant student learning through the COVID-19 pandemic.

Northwest Public School District

At the time of this study, NPS District was located in a small community of approximately 15,000 residents. The city is adjacent to two large lakes, which citizens are drawn to during summer for boating, fishing, hiking, and camping activities. A large portion of the city's population is American Indian. According to the Northwest

Historical Society, in the early 1900s, the town of Northwest was an oil boom town with a population of approximately 35,000. World War II and the Great Depression caused the population to drop to nearly 19,000. Then in 2010, that number decreased to 15,000 and had remained consistent. The district served approximately 1,372 students in grades PK-12 and had an approximate student-teacher ratio of 18 to 1. The district had one high school, one middle school, one primary school, one technical school, and one alternative school. According to the state's school report card, NPS's district's demographics included 24.4% White, 39.3% American Indian, 1.2% Asian, 20.4% Black, 4.3% Hispanic, and 10.4% two or more races. Also, the teacher demographics included 82.3% White, 11.8% Black, and 5.9% of two or more races. The district was a Title 1 and Title VI school district. The district also participated in Impact Aid, which assists school districts that have lost property tax revenue due to tax-exempt federal property or that have increased costs due to the enrollment of children living on Indian lands. Further, the district participated in the Johnson O'Malley (JOM) program, a federal supplementary support program that benefits American Indian and Alaska Native students.

Even though the district's enrollment had decreased over the years along with the city's population, all teachers were highly qualified with either bachelor's or master's degrees, and the district's graduation rate was 79.1%, according to the school report card. The state's school report card showed the district's assessment performance was 7%, with 25% the state average. The calculation showed the percentage of students who met

or exceeded grade-level standards by scoring at or above the proficient level on the state test. One hundred percent of the district students received free breakfast and lunch.

Study Setting: Foundation Middle School (FMS) Profile 2020/2021

FMS is a public middle school in the Midwest that served approximately 360 students in grades five through eighth. According to the school's state reports, the student demographics reflect the district's makeup and included 25.8% White, 16.4 % Black, 3.6% Hispanic, .03% Asian, 33.6% American Indian, and 20.3% two or more races. Also, the teacher demographics included 82.3% White, 11.8% Black, and 5.9% of two or more races. The state's report card indicated that 7% of FMS students met or exceeded grade-level standards by scoring at or above the proficient level on the state test compared to 25% in the state. The student/teacher ratio was 17/1. There were 22 faculty members, including one principal, one assistant principal, one dean of students, one counselor, two roving /teacher support personnel, and two in-school suspensions (ISS) support personnel. The student body consisted of 201 male students and 159 female students. Of this number, there were 86 students with individualized education plans (IEPs). An IEP is a legal agreement outlining the steps to guarantee that teachers and parents work together to develop a defined lesson plan that will specifically address each student's requirements (Zeitlin & Curcic, 2014). FMS offered students general education courses in English Language Arts, math, science, and social studies and elective courses in band, robotics, health and physical education, and science, technology, engineering, and math (STEM).

Before desegregation, FMS was an all-Black teacher/student population school, referred to as Foundation Public School. It was during the time of desegregation when Black students attended Black schools in Black communities, and White students attended White schools in White communities. The Jim Crow laws made racial discrimination the law of the land. Then in 1954, the U.S. Supreme Court issued the Brown vs. Board of Education, establishing that segregated schools are unconstitutional. Brown vs. Board of Education called for the desegregation of all schools throughout the nation. FPS involuntarily shut down, requiring all students to be unwillingly bused across town to attend an all-White High School. Shortly after FPS shut down, the school's name was changed to FMS.

District Initiatives

FMS's mission statement matched the school district's, which is "prepare and develop confident and responsible students to be lifelong learners." The district has had many initiatives to help prepare students to support this mission through the years. One such initiative was the STEM lab on the FMS campus. The purpose of the STEM lab was to incorporate all subject areas in third through eighth grades through an interdisciplinary approach to STEM. Another district initiative was the Learning Center (LC), created in 2014. It was one of the first schools in the state to offer individualized learning for students. Individualized learning is a learning environment that helps students take charge

of their future by connecting what students learn in school with their college, job, and career goals. Unfortunately, with the rise of the COVID-19 pandemic, and the change in teaching demands for online learning away from traditional instructions, the LC school was discontinued.

COVID-19's Impact

The Centers for Disease Control and Prevention [CDC] (2020) reported that when COVID-19 hit worldwide, schools were ordered to suspend face-to-face teaching to reduce the COVID-19 pandemic spread. When schools were mandated to suspend face-to-face teaching during the pandemic, teachers started providing academic courses to their students in various ways (Ortiz, 2020; Shafer, 2021). Consequently, teachers began to deliver classes online, forcing both students and teachers to adapt their educational learning and instructional modes to the fluctuating circumstances linked to the pandemic (Cleland et al., 2020; Shafer, 2021; Dusseault & Pillow, 2020.

COVID-19's Impact on FMS

NPS's superintendent sent email notices to the staff at all sites, and the principal of FMS sent email notices to the FMS staff. The notices also were displayed on the district's social media app about the immediate changes the district experienced and would be experiencing during the school closings of the pandemic. The social media app was used for two-way group messaging or district-wide alerts and notices. Some of the

details of the notifications received by employees and families leading up to the transition to asynchronous online teaching and learning shared by participants were as follows:

Superintendent Shallow's Email, March 20, 2020

1. Students will not return to the classroom for the remainder of the current school year to prevent the spread of COVID-19.
2. Students will complete the school year at home via a continuous learning plan.
3. All extracurricular activities and special events are canceled.
4. NPS District will ensure your child will have opportunities to learn academically through lessons provided by teachers.

FMS Principal Sudan's Email, March 23, 2020

1. Foundation's school campus will be closed and sanitized Friday, March 27.
2. Please collect anything needed before March 27 at 2:00 p.m. Foundations School will be closed until April 10. All instruction, grading, and activities are discontinued.
3. NPS District's child nutrition department will provide lunch and breakfast bags for students beginning March 23. Students can pick up bags at their bus stops.

According to FMS teachers, COVID-19 impacted every FMS student, teacher, employee, and class. Each participant in this study completed interviews individually.

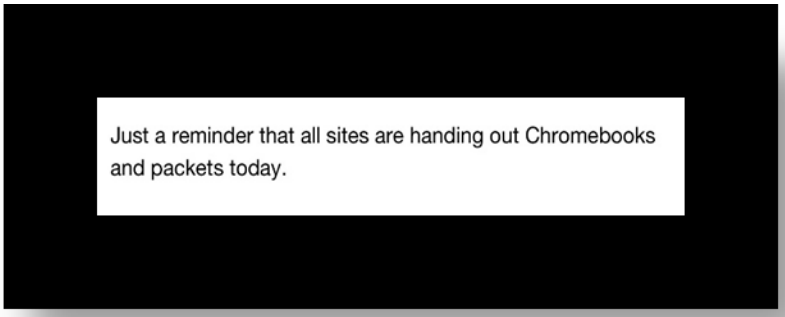
Participants indicated that teachers did not start with online instructional delivery at the beginning of the COVID-19 school closings. Math teacher Mrs. Demar confirmed:

> The initial continuous learning plan for students were worksheets copied and placed in packets for each grade level. Teachers' instructions were to gather paper assignments for fifth–eighth-grade students and coordinate with the building secretaries to make copies to be placed in packets for families to pick up from the foray in front of the school building. (Mrs. Demar)

Furthermore, Mr. Da'miels, Mr. Penny, and Mrs. Sha'ban reported that Chromebooks and various other school supplies were included in the student check-out packages. Although, "mobile hotspots" for internet connection were not yet available. Mrs. Da'miels commented, "Worksheets aimed to keep students occupied with academic lessons until something further could be established." Figure 3 represents the notice the FMS principal sent to parents via social media.

Figure 3

Notice to Families to Pick up Lesson Packets/Chromebooks



Participants

Interview participants for this study included eight core subject teachers, three of whom also taught elective subjects. All teachers were interviewed from the standpoint of the subjects they taught during COVID-19. The core subjects were Math, Science, and English Language Arts (ELA). The elective subjects were STEM, Robotics, and Health & PE. All interviewees participated in an individual 60-minute, in-person interview. The participants had varying levels of teaching experience. Table 3 contains a profile summary of each participant.

Table 3

Foundation Participant Profile Summary

Name	Position	Years Teaching	Years at Foundation	Additional Duties

Mr. Carpenter	5th/6th Grades Science	4	2	None
Mr. Da'miels	8th Grade ELA	23	3	Girls track coach
Mrs. Demar	5th/6th Grade Math	4	3	Girls basketball coach
Mr. Norkan	5th/6th Grade ELA	16	6	STEM, robotics, librarian
Mr. Penny	7th/8th Grade Math	21	6	Intervention class
Mrs. Sha'ban	7th/8th Grade ELA, Health & PE	39	12	Assistant Principal
Mr. Timire	7th/8th Grade Math, Health	15	6	Test coordinator, intervention class
Mrs. Wettell	5th-8th Grades Core Classes	15	2	None

Teachers

Mr. Carpenter

Since going to FMS, Mr. Carpenter had been the Science teacher for the fifth and sixth grades. He is certified to teach all subjects from 1st through eighth grades. He had been in the teaching profession for four years. He previously taught Health, ELA, and

Math during intervention, a tutoring class. Before going to FMS, he taught in a preparatory school for a year and a half.

Mr. Da'miels

Mr. Da'miels was a veteran teacher with 23 years of experience. He taught eighth-grade ELA. Before teaching at FMS, he lived and taught at a school in Dallas, TX. His aim for applying to teach for the NPS district was to be closer to his family, who lived locally. Mr. Da'miels had two children who attended the district's primary school.

Mrs. Demar

Mrs. Demar taught for four years after being alternatively certified. She had taught in the district for four years. Her initial assignment in the district was at the primary campus, teaching first-grade students. This was Mrs. Demar's third year at FMS. She taught fifth and sixth-grade Math classes. She was also the FMS's girls' basketball coach. Mrs. Demar moved to the NPS district from Houston, TX.

Mr. Norkan

Mr. Norkan was a veteran teacher with 16 years of experience. He taught ELA, STEM, and Robotics and was also the librarian. Additionally, he spearheaded the distribution and return of Chromebooks to students. FMS's Twitter page was also kept up to date by Mr. Norkan. He started his career in the district as the NPS alternative school's librarian and academic coach. He had been at FMS for six years.

Mr. Penny

Mr. Penny was a veteran teacher with 21 years of teaching experience. He started his career in the district at the local high school, teaching students with Individual Education Plans (IEPs) and as a baseball assistant coach. Mr. Penny also taught at the LC school before transferring to FMS. He had been at the FMS campus for six years, teaching regular and special education math to seventh and eighth-grade students. Mr. Penny also taught an intervention class instructing ELA. Five of his children attended and graduated from the district, so he also had a parental perspective regarding the building and district.

Mrs. Sha'ban

Mrs. Sha'ban has been a teacher since 1983. She served as the assistant principal. Because of the years she had worked in the district, Mrs. Sha'ban had developed solid relationships with faculty and students, fostering a sense of community, continuously saying, "We are Foundation's family." During the 2018-2019 school years, Mrs. Sha'ban won votes for the assistant principal of the year. She was a girls' baseball coach for many years. She worked at the district's high school before transferring to FMS. During COVID-19, she taught ELA, Health, and PE.

Mr. Timire

Mr. Timire was a veteran teacher with 15 years of experience. He taught seventh and eighth grade Math, Math Intervention, and Health classes. Mr. Timire taught Math at

the district high school for three years before transferring to FMS. He also served as the building test coordinator.

Mrs. Wettell

Mrs. Wettell had 15 years of teaching experience. She taught self-contained special education classes, including ELA, Math, Science, and Social Studies. Before transferring to FMS, she taught at the district's primary and high school campuses. She had four children who attended primary school. Although she enjoyed her position at FMS, she stated, "I applied for a Director of SPED position." She applied for a SPED position at a neighboring school district.

The following themes emerged during data analysis: online teacher preparations, and teacher perspectives of self-efficacy.

Online Teacher Training

The teachers interviewed for this study admitted they needed to receive solid training before teaching asynchronously online. Each teacher acknowledged that initially, they were unsure how to adapt and adjust their teaching methods from traditional to online to meet student learning needs during the pandemic. Teachers relied on their limited prior knowledge, colleagues, Google, and the internet for information and training. The information below presents a synopsis of the teachers' preparations and online instructional delivery styles.

Asynchronous Teacher Preparations

When Mr. Carpenter described his preparation to transition to asynchronous online teaching, he commented:

> I had to scratch and claw to figure something out. My main concern was getting internet connectivity to students and figuring out something that would work for them. I don't see how anyone prepared to transition online because everyone was thrown into it. I had to look into the research to see how the Spark educational system worked. (Mr. Carpenter)

After researching the system, he contacted the district's information technology (IT) employee with specific questions and assistance.

Mr. Da'miels said he had no preparation or training for virtual teaching before transitioning to online teaching and stated:

> I taught myself how to use Google Classroom. It was rough not being well-prepared. All of us just had to do it. I never used computers much for assignments before COVID. I lectured my classes and created worksheets for kids to work on. (Mr. Da'miels)

He said that he had to study the lessons prior to assigning them to students because there was no teacher's manual to show how to teach online.

According to Mrs. Demar, preparation for transition was gathering paper assignments to put into packets for distribution to students. She did a lot of research on how to teach online before she transitioned to asynchronous online teaching. She

expressed, “I eventually gathered and uploaded various academic lessons to suit the different learning styles of students.”

Mr. Norkan prepared small science kits that students could use for simple home experiment projects. He asserted, “Students needed something different to work on besides the worksheets in the packets.” The science kits were distributed along with student paper packets. Science kits were purchased before the COVID-19 school closures. As for the transition to asynchronous online, he stated, “I didn’t have any training or preparation. The district said teachers were gonna have to make a switch, so that’s what I did.”

When Mr. Penny was asked whether he had any training to transition to asynchronous online teaching, he mentioned that he received training to a certain extent because he already liked technology and did not need much training: “It wasn’t hard for me to start using technology to teach online. I had a document camera that I enjoyed using before COVID school closures, which helped with virtual lessons after schools closed.”

Mrs. Sha'ban described her preparation to transition to online teaching, declaring, “I didn’t have any training or preparation time.” She was moved to a classroom during the middle of the school year. She said, “It had been six years since I taught in a classroom.” She acknowledged that she struggled for a while but finally got back into it.

Mr. Timire reported that things started ordinarily. He initially created and copied worksheets for each of his classes for distance learning. He stated that soon afterward, he had to build all his lessons into Spark, a relatively new program, without training. “I enjoyed working with my Smartboard and document camera, which came in handy during the school closings when I had to teach online.”

Mrs. Wettell shared that she had training on student contingency plans to show her how to continue serving students on IEPs while working from their homes. It was not necessarily training on how to teach online, but her training helped her to assist students. Mrs. Wettell was required to comply with the Americans with Disabilities ACT (ADA). She said, “My main concern was ensuring my students knew how to log onto their Chromebooks.”

Asynchronous Instructional Delivery Methods

According to participants in this study, the transition to asynchronous online was difficult and, at times, emotionally exhausting. However, all teachers demonstrated various levels of self-efficacy, using unique adaptation methods. Additionally, teachers had yet to be given a set method to provide remote instruction and were without a reference point for where to start; therefore, all teachers started their asynchronous online teaching, adapting their lessons using various methods. Some were teaching using Spark Education, an online technology platform that provides classes in an assortment of

academic subjects and allows teachers to create interactive academic classes. Other teachers were using Google Classroom, Google Meets, or Zoom.

Nonetheless, all teachers delivered courses in a recorded lecture format. Mrs. Demar, Mr. Penny, and Mr. Timire coordinated their instructions using document cameras and Smartboards, allowing students to see and hear the lessons they taught. Mr. Timire stated, "Facilitating lessons that way was significant because a visual display was better for students learning." Each of these teachers also set up Zoom meetings for students who needed individual assistance with their coursework.

Moreover, Mr. Penny extended invitations to students who needed direct instructions by offering to meet with them after the group Zoom ended because "some students would not ask questions during group meetings." Therefore, he stayed on Zoom for up to five extra minutes to determine if any student also remained on Zoom for assistance. Mr. Penny additionally encouraged students to email him to schedule one-on-one tutorial sessions if needed.

Mr. Carpenter, Mr. Da'miels, Mr. Norkan, Mrs. Sha'bon, and Mrs. Wettell each created PowerPoint presentations for their classes, then uploaded them to either Spark or Google Classroom with links to teacher emails. Mr. Carpenter and Mrs. Wettell added a voice-over feature to their PowerPoint presentations. Mrs. Wettell explained, "The aim of adding the voice-over feature was to give the assignments a personal touch." What's more, Mr. Da'miels and Mrs. Sha'bon teamed up to do a little extra for their students by

making drive-by-home visits to keep students encouraged. The drive-byes consisted of teachers driving slowly by students' homes and blowing their car horns to let students know they were concerned.

Teaching Adaptation Methods

According to Martin et al. (2013), adaptability is a person's ability to manage uncertainties and deviations by adjusting their psychological mechanisms. Collie et al. (2018) agreed with the definition and confirmed that adaptability includes a shift in attitude, emotions, and behavior. Cognitive adaptability includes thinking differently about a situation. Behavioral adaptability includes adjusting actions to manage the change in situations. Emotional adaptability includes adjusting emotions to reduce less helpful emotions and increase positive emotions. Each teacher in this study agreed that the pandemic greatly affected their psychological mechanisms and teaching methods. For example, direct or guided instruction and personal interactions with students, such as offering personal one-on-one instruction to students, were no longer available teaching methods. Each teacher also agreed they had to adjust their attitudes, emotions, and behaviors to meet student learning needs and adapt their teaching to online methods.

Teachers used various methods to adapt their teaching during COVID-19. For example, Mr. Carpenter said, "I did all I knew to encourage parents so they could keep their kids engaged." He explained that he adapted lessons by scheduling open time slots for students to join him on Google meets. He further stated, "I thought meeting with

students that way would encourage them to be more receptive to communication and completing assignments." Individual or group discussions with him were optional for students. The open time slots also accommodated parents and guardians to establish communication with the teacher. Mr. Carpenter said parents often assisted their children when lessons were challenging. The majority of his lectures were taught using Google Classroom. He said, "I felt that communication and teaching were challenging during COVID school closings because when students were not in class, it was challenging to keep them on task." He revealed that he made telephone calls daily to students. He stated, "I had never made that many calls to students and parents before."

Mrs. Damar stated, "I sometimes used less challenging lessons for math, such as using a shopping list. I asked students to compare product prices and upload the results of their findings." Mrs. Demar said, "It was challenging to compete with video game-playing time." She noted several students admitted to playing video games rather than completing school assignments. She stated, "I adapted my lessons using Zoom." When she used Zoom, she could determine if students were receptive, comprehending, and listening to her lectures. To elaborate, she said, "As I taught active online lessons, I wanted to see my students' facial expressions." She noted that when students could see her, they responded better. She added, "It was easier to motivate students when they could see me. However, after I realized that some parents didn't want the cameras on, I allowed students to participate with their cameras off." Mrs. Sha'ban stated, "My students

were prepared to do assignments and logged on to Spark almost daily to complete assignments." Mrs. Sha'ban shared that she felt students were ready each day to do lessons because she made the lessons exciting, and many parents encouraged their children. According to Bandura (1995), individuals with high self-efficacy show more interest in specific tasks and have knowledge of the subject taught and effective teaching methods.

Mr. Penny and Mr. Timire used document cameras and Smartboards to adapt their math assignments. Using document cameras and Smartboards helped them create individualized math lessons to meet each student's learning needs. Mr. Penny said, "Students thought math was challenging, so I simplified assignments and gave students choices." For instance, he inquired if students preferred working with more or fewer fractions or more or fewer graphs, plus various other choices. The strategy aimed to engage, motivate, and encourage students to believe they could do well.

Mr. Penny and Mr. Timire also informed students about the LMS built-in calculator feature to help simplify solving math problems, and they created pacing calendars to encourage students to stay on task. They used math problems as review lessons rather than introducing new concepts. Mr. Timire also used the LMS built-in features, adding color codes to assignments**.** The assignments that students completed turned a different color from unfinished assignments. That way, students knew their progress each time they logged onto Spark math courses. Mr. Penny and Mr. Timire

prepared weekly assignment modules set to timers to help students regulate their time. All teachers organized asynchronous styles of teaching without any prior training or preparation. Their instructional strategies were adapted to methods using technology and resources already in their possession.

Mr. Norkan said, “I adapted my lessons by including a few picture-type answer responses to the PowerPoint lessons.” He said pictures helped motivate students to do the work. He wanted students to choose responses from pictures with fewer requirements of reading. He said too much reading contributed to less motivated students. Therefore, at the beginning and the end of his presentations, he included questions that allowed students to answer by choosing pictures from the slides.

Mr. Da’miels, Mrs. Sha’ban, and Mrs. Wettell assigned students to work on Alpha Plus, ELA. They wanted students to review previous lessons rather than introduce new concepts to students. Mrs. Sha’ban said students needed to review lessons to prepare for school reopening. Although, Mr. Da’miel said, “I was more concerned about students’ social and emotional states than assignments. In consideration of students’ physiological and affective states, Mr. Da'miel adapted his assignments by modifying them to half the length they would typically be. He stated, “Students worked on computers all day, unable to interact with teachers and friends as they were accustomed to.” He mentioned that he wanted to ensure students’ workload was manageable, considering they had at least three additional classes.

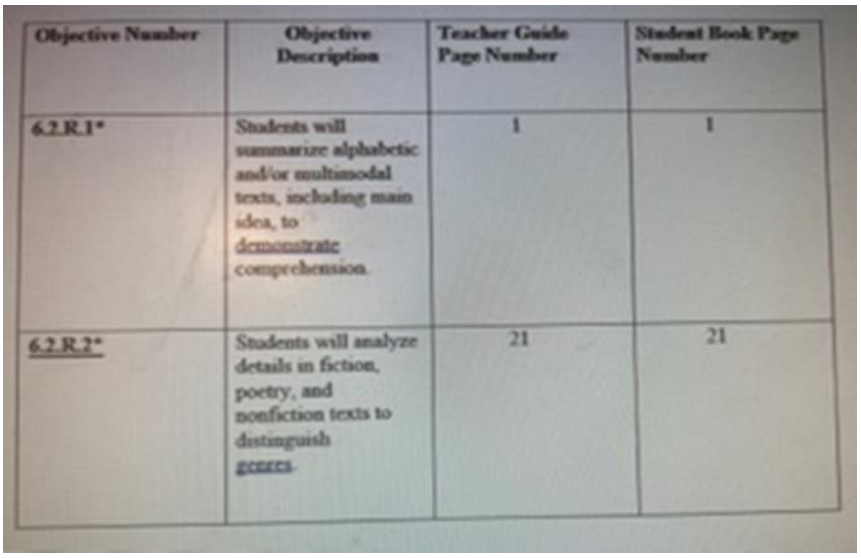
Finally, Mrs. Wettell shared that she wanted to avoid adding more worry to her students in SPED classes or their families lives. Mrs. Wettell said that worry was a given whenever her students faced new situations, and COVID-19 was worry enough without students worrying about learning new content. Therefore, she uploaded assignments for review lessons. Each teacher's asynchronous lessons were restricted so that students could only complete them according to a timeline, requiring students to move through lessons at a controlled pace. Mrs. Sha'ban noted, "Since students were already adjusting to separation from teachers, school, and friends plus learning to work online, it was best to have lessons paced to keep students' academic lives as uncomplicated as possible."

Additionally, Mr. Da'miel said, "I suggested that teachers who taught the same core subjects collaborate on lesson plans to have the same or very similar lessons. She said some students had siblings who were in the same core subjects but with different teachers." Each teacher in this study agreed that they adjusted mentally to help think differently about the COVID-19 situation. They also adjusted their behaviors, actions, and emotions to reduce anxiety and stress.

Figure 4 is provided as an example of Mr. Da'miel, Mrs. Sha'ban, and Mrs. Wettell's adaptation of an Alpha Plus PowerPoint lesson to meet student learning needs.

Figure 4

Mr. Da'miel, Mrs. Sha'ban, and Mrs. Wettell Adapted PowerPoint Lesson

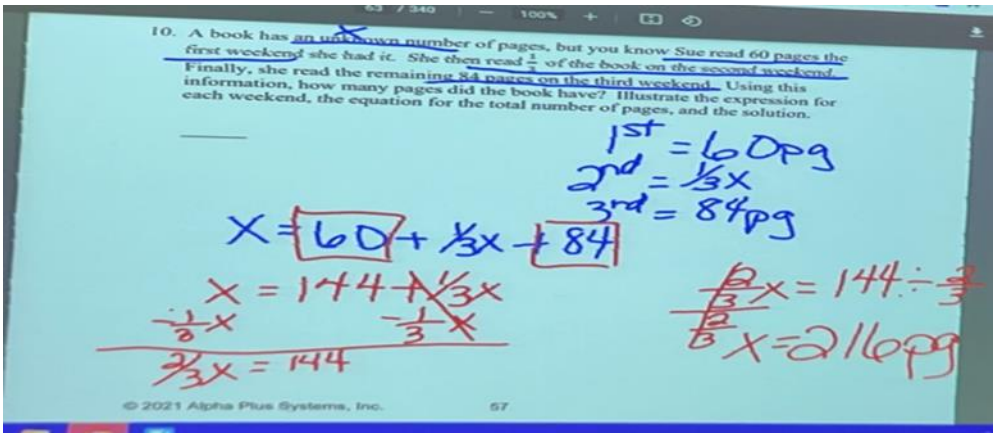


Objective Number	Objective Description	Teacher Guide Page Number	Student Book Page Number
6.2.R.1*	Students will summarize alphabetic and/or multimodal texts, including main idea, to demonstrate comprehension.	1	1
6.2.R.2*	Students will analyze details in fiction, poetry, and nonfiction texts to distinguish genres.	21	21

While working on math problems, Mrs. Demar, Mr. Penny, and Mr. Timire adapted their lessons using document cameras and interactive Smartboards. With a document camera, teachers could show students slides, 3-D objects, math concepts, and various other images while working online. Document cameras were substantial for student comprehension, allowing students to see the text clearly from anywhere they were. The interactive Smartboard allowed images from the computer screen to be shown on the classroom board using a digital projector. Teachers could interact with the images directly on the screen using their fingers or a tool.

Figure 5

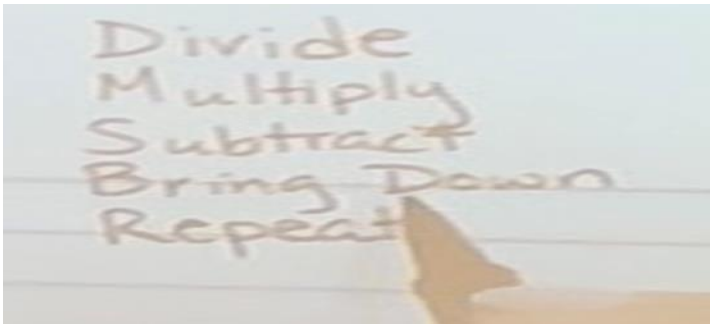
Mrs. Demar, Mr. Penny, and Mr. Timire Smartboard Math Lesson



Lastly, Mr. Timire mentioned when students watched the Zoom presentations, he solved math problems step-by-step, which allowed students to observe the process. Mr. Timire stated, "Allowing students to observe math problems as they were solved helped students understand how to solve the problems." Solving math problems live on Zoom allowed students to ask questions while viewing the live lesson. Figure 6 is an example of Mr. Timire working on math problems during a live Zoom class meeting using a Smartboard and document camera.

Figure 6

Mr. Timire facilitating a live Zoom Math class using an interactive Smartboard

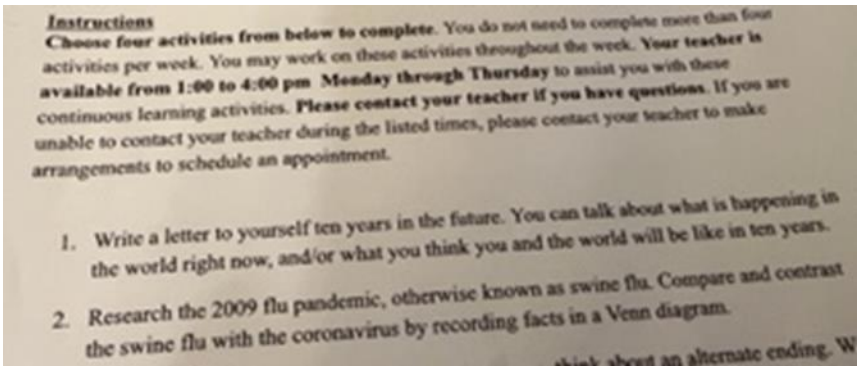


Mr. Carpenter and Mr. Norkan adapted their lessons by editing content questions to be less complicated for their students before uploading the assignments to Google Classroom. Mr. Carpenter described himself by saying, "I'm a kinesthetic learner." He said he preferred teaching his classes in a kinesthetic style, which COVID-19 made impossible. Mr. Carpenter shared, "I felt that students learned better by participating rather than lectures." Additionally, Mr. Norkan mentioned that it was difficult for him to remain still for long periods, and he thought the same for students. He is also a kinesthetic learner and believed that his students learned better by participating in activities and lessons. Mr. Norkan mentioned, "I adapted my lessons by encouraging students to find something at home or outside their homes related to science." He explained that it could have been a rock, a picture of a rock, or anything else. He then offered suggestions, such as mixing oil and water in a jar to see if the content blended, or building a paper airplane, then measuring the distance it flew. He asked his students to be creative in their findings and ask an adult to assist them if needed.

Additionally, Mr. Carpenter said his students needed access to materials to do rigorous science activities; therefore, he modified his lessons by requiring students to view online science experiments or short films about science facts. He uploaded several of these to Spark so students could choose which to watch. He posted questions on Spark regarding the assignments to discuss during Zoom meetings. Question number one on an assignment suggested writing about something currently happening worldwide. Mr. Norkan said, "Most of the students were very opinionated, and this question would hopefully motivate students' interest in the assignment." Figure 7 shows an example of Mr. Carpenter's adapted worksheet questionnaire for his Zoom meeting.

Figure 7

Mr. Carpenter's adapted questionnaire worksheet.



Instructions

Choose *four* activities from below to complete. You do not need to complete more than four activities per week. You may work on these activities throughout the week. **Your teacher is *available* from 1:00 to 4:00 pm Monday through Thursday** to assist you with these continuous learning activities. **Please contact your teacher if you have questions**. If you are unable to contact your teacher during the listed times, please contact your teacher to make arrangements to schedule an appointment.

1. Write a letter to yourself ten years in the future. You can talk about what is happening in the world right now, and/or what you think you and the world will be like in ten years.
2. Research the 2009 flu pandemic, otherwise known as swine flu. Compare and contrast the swine flu with the coronavirus by recording facts in a Venn diagram.

Mr. Norkan also videotaped himself doing a STEM/Science activity and required his students to videotape themselves with their Chromebooks, doing an activity to upload.

One of the activities began with using tape to construct a 3-D triangle figure out of straws. Students' instructions were to use whatever materials they had access to and make a similar figure with the assistance of an adult if necessary. They were encouraged to be creative. The assignments, activities, and lessons were adapted based on student learning needs and as a way to review lessons. Teachers mentioned that the easiest way to prepare students for the future of school reopening was to review lessons. The live Zoom lessons aimed at lessening the physiological affective strain on students by connecting them with their teachers and classmates and encouraging students to complete their assignments.

Other assignments, such as the STEM/Science activity with straws, allowed students to demonstrate learning and creativity based on their individual learning strengths. It provided challenging tasks and increased student motivation giving them a break from their Chrome- books. When teachers created the pacing calendars, it helped students stay on task, and adding color codes to assignments, helped students recognize completed assignments. The lessons prepared as reviews prepared students for the reopening of school, and the open time slots for Google meets allowed parents to listen to academic assignments along with their students.

Throughout the study, I observed the participants as they engaged with and instructed students in online courses using recordings that would be uploaded. I observed teachers making telephone calls to parents. I also observed teachers verbally persuading each other. Each teacher exhibited self-efficacy in various ways, such as adapting and

modifying their courses to online methods and reaching out to students and families. Teachers also supported each other by creating support groups. They vicariously modeled strategies for each other with suggestions for transitioning courses online. None of the teachers' backed away from their professional responsibilities. They learned how to adapt their lessons to online methods and manage new technology tools. Many learned through self-directed learning and persistence. The teachers' persistence increased through their professional determination to reach and teach students.

Lastly, Mrs. Wettell allowed some of her students with IEPs to come into the school building while wearing masks to receive direction instruction. All teachers made numerous telephone calls to encourage students and families.

Teacher Perspectives of Self-Efficacy

When teachers described how they understood self-efficacy, they mainly related it to confidence in their teaching skills or whether students comprehended what was taught. They talked about self-confidence in self-training to teach online classes, the ability to work through anxieties, and encouraging students to get schoolwork done. They provided descriptions that correlated with SE factors.

Confident Teaching

Most participants attributed student comprehension as a significant factor of confidence or self-efficacy. Mr. Norkan's comments focused on his confidence in being effective when he taught lessons and realized that students understood concepts. He

explained, “I could tell when students comprehended because they asked appropriate questions about specific items in the lesson.” He conveyed that his confidence also stemmed from his ability to adjust to online teaching, knowing he was helping students.

Mrs. Sha’ban’s comments focused on her ability to impact her students’ learning. She explained:

> The students were the reason we were here. If we did not put students’ education as our priority, none of us had any reason to feel confident. I had not taught in a classroom for a while, but when COVID-19 came and they asked if I would teach English, I felt that I returned with a positive attitude. I had problems trying to figure out how to work Spark. I didn't know anything about teaching online, but I knew I would learn if I stuck with it. Yes, it was overwhelming initially, and I felt helpless. Although, one thing that we had was a sound support system here. People jumped in and helped each other. (Mrs. Sha’ban)

Some teachers expressed concern that the lack of time to teach students in the classroom negatively affected their confidence. They were not sure if they were making an impact on student learning. Mrs. Sha'ban also conveyed that when students finally returned to the classroom, many students and teachers had to quarantine, which required the school to shut down again. A few teachers explained that each time the school shut down, the morale and motivation of students and teachers were negatively affected.

Also, Mr. Timire commented about the difficulty of teaching online to unmotivated students and how stressful and strenuous it was. However, he was co-teaching, which helped to build his self-confidence. He stated:

> I felt terrible because none of us had prepared for this. However, I had one thing going for me. I know math. I love math, and I think I was flexible. I don't know everything, but I know how to do addition, subtraction, and decimals, and I was willing to try something out if it helped my kiddos to learn. My co-teacher knew a little something about computers, and we were able to bounce ideas off each other to try to figure out what was best for our kids. Plus, we came to an empty classroom every day to set up Zoom meetings. (Mr. Timire)

Mrs. Wettell said she established positive relationships with her students and their families. She was confident in her ability to differentiate her student's assignments. She said:

> Being a SPED teacher made my kiddos and their parents more dependent on me. My kiddos helped to build my confidence. They think I know everything, even when I don't. I had to help them and their parents adapt to using their Chromebooks. It's easy to feel confident when other people depend on you for help. (Mrs. Wettell)

Student Comprehension

All the teachers said students lost motivation to do schoolwork being out of school for too long during COVID-19. Teachers also said student comprehension was hindered when the school shut down too long. Mr. Carpenter said, “I began questioning myself when students were scoring low on exams and continued emailing me about not understanding how to do assignments.” He said:

> I thought I was pretty good at explaining how to do my assignments. They are not that difficult; I scaled them down a lot. I knew how to give solid examples and explain lessons in different ways. So I do not know if the kids were trying to get out of doing the work or if they didn’t understand. When they were at school, I never got those kind of questions. It was difficult to know what level they were on, so you had to talk to them to know if they lost some information they had learned. The one thing that helped was when parents got involved. Then I noticed significant improvements in grades. (Mr. Carpenter)

Mr. Da’miels remarked that he did a lot of videos and work pages because they were easier for his students to understand. He maintained:

> I put on videos and hoped the kids would understand it enough to ask questions. It seemed like parents, instead of kids, were showing up for my Zoom meetings and asking questions. So I hoped the parents were explaining it to the kids. However, I thought parents or somebody else was completing the assignments. It was difficult to tell for online classes. However, one thing for sure was the kids were making

> good grades on the assignments they turned in. But I know if kids were not doing their own assignments, we will have to re-teach them once school resumes after COVID-19. (Mr. Da'miels)

Self-Motivation

When teachers described how they kept themselves motivated, most talked about their faith, well-being, and positive thoughts. For instance, Mrs. Wettell asserted that she made an affirmation list and hung it on her refrigerator to read daily. Her list included the following:

1. COVID-19 is an opportunity to grow and learn new things.
2. I create my own happiness.
3. I believe in my kiddos.
4. I believe that COVID-19 will end soon.
5. I can do all things through Christ who strengthens me.
6. I start each day with a plan and remember that COVID-19 will pass.

Mrs. Wettell noted that her young children helped motivate her. She did not want to seem worried or afraid so that her children would not worry. She said it helped to have young children because they looked at things differently than adults.

Mr. Norkan kept himself motivated by keeping faith and trusting in God. He also rode his bike for daily exercise. He practiced staying positive by thinking positive thoughts. He said:

> When I didn't hear negative things, it was a lot easier to focus on positive things. I kept reminding myself that I was blessed to have a job. I was thankful too, that I never got COVID-19. That was motivating in itself. I checked on co-workers and students to make sure they were okay. (Mr. Norkan)

Mr. Penny noted that he had grandchildren and made them the center of his focus as much as possible. He said, "My toddler-age grandchildren were too young to know what was going on and were mostly happy." It was motivational to play with his grandchildren and know they were healthy and that he and his family were well. He also reported seeing several of his students and their parents when he helped to distribute lunch bags on the bus routes. He noted that seeing his students' happy faces helped him to feel motivated.

Motivating and Reaching Students

Teachers had varied explanations when asked how they motivated and reached students during COVID-19. Teachers explained that when they saw students at the grocery store, playing street ball, or anywhere, most students were receptive and responded positively. Teachers said:

1. One thing I was confident about and my kids knew is that if they did not pick up the phone when I called them, I had no problem showing up at their front door. Some parents liked that. It helped kids to get their work done (Mr. Timire);

2. If you went into the neighborhood where they lived, you would find them playing street- ball. I had no shame in getting out there and playing with them. I sensed that it motivated them just knowing that I cared enough to check on them (Mr. Carpenter);

3. I had to call everyone they may have been living with. The kids moved around a lot. Making all those phone calls kind of helped build confidence because, at that time, you had spoken to many of the student's parents or relatives, who asked many questions. When I reached students, I told them to treat school like a job; they had to be interested. They had to graduate, and they had to be eligible. All of those things had a negative tone to them, but at some point and time, there will have to be some hard decisions made. I told them if you are not motivated, I am going to motivate you today. I don't want to have to motivate you anymore. I thought this helped motivate the parents also when teachers checked up on kids (Mrs. Sha'ban);

4. I almost bugged them. I felt like the only thing I could do was bug them (Mr. Penny);
5. If I had not heard from them all week, I would message them, email parents, and call parents and leave messages (Mrs. Da'miels);

6. I never figured it out. I honestly can tell you, I never figured it out. I started offering bonus points (Mr. Norkan);
7. There was no way to motivate them because if they were not interested, they were not going to show up on Zoom, they were not going to answer the Google Classroom, they were not going to answer emails, they were not going to do anything. The one thing I could do was get in touch with parents. I got in touch with about 80% of the parents (Mr. Demar); and
8. Most of the students kept up with their due dates fairly well because most of the assignments were on Google Classroom (Mrs. Wettell).

Participants Data

The Teacher Sense of Efficacy Scale (TSE) developed by Tschannen-Moran and Hoy (2001) was emailed to twenty-two FMS teachers to determine efficacy in areas of student engagement, instructional practices, and classroom management. Ten of the twenty-two teachers agreed to participate in the study. Of the remaining twelve teachers, four scored below 5 on the TSE representing low self-efficacy. The remaining eight scored above 5 representing high self-efficacy. Various subject area teachers were chosen from the eight remaining teachers. The analyzed TSE scores indicated there was not a great distinction between low and high scores because all scores fell between 4 and 8.

Overall, the teachers in this study demonstrated sincere concern for their student's learning. The teachers vocalized that there were challenges related to their profession

during the COVID-19 pandemic, such as internet connections and low student motivation. However, they all put forth effort in doing what was necessary for students learning needs.

Summary

Teachers in this study made it well known they transitioned to asynchronous online teaching without training and very little preparation time. Teachers' anxiety and stress levels were overwhelming during the initial transition from face-to-face to online teaching. Major themes focused on online teacher preparations and teacher perspectives of self-efficacy. An assortment of information was provided by participants regarding their lack of training and online preparation. For instance, FMS teachers experienced physiological arousal, difficulty, and emotional exhaustion while facing multiple challenges in adapting to asynchronous online teaching and supporting students' learning. Participants often mentioned the need for technology training for teachers before transitioning to online teaching. It is significant to point out that teachers were learning to teach online while teaching students online. Without prior training, teachers and students learned how to interact online for course instruction and learning. Therefore, teachers self-taught, researched the internet, collaborated, and relied on their limited prior knowledge to transition and adapt their courses to online methods.

Participants also provided insight regarding their perspectives on self-efficacy. Such as, before the COVID-19 pandemic, teachers demonstrated confidence in their

capabilities in student achievement to teach in face-to-face classrooms. Although, after the pandemic, teachers demonstrated less confidence concerning student achievement when teaching courses online. Some reasons mentioned were the difficulty transferring courses online and less student attendance and motivation. It is significant to point out that because of low student attendance, teachers adjusted their hours of accessibility to accommodate students' sleep patterns. Many students were staying up late at night, then sleeping late the next morning. Therefore, teachers divided their accessibility hours into mornings and afternoons. It is also noteworthy that teachers with high levels of self-efficacy are inclined to be more flexible, open to new ideas, and more likely to use new techniques. Self-efficacy deals with how well individuals can accomplish courses of action required to deal with various situations when unanticipated circumstances arise. It enables effective teachers to facilitate student learning by adapting to diverse teaching methods. All teachers in this study demonstrated low and high self-efficacy levels when transitioning to asynchronous online teaching.

Chapter IV described the setting and conditions of the case. The chapter discussed FMS's profile and the context of COVID-19's impact on the middle school and school district. It also provided a description of the eight participants in the study. Chapter V analyzes the data through the lens of Bandura's (1997, 1986, 1997) SET. The research study explores how teachers with high or low self-efficacy adapted to changing teaching demands for online learning during the COVID-19 pandemic.

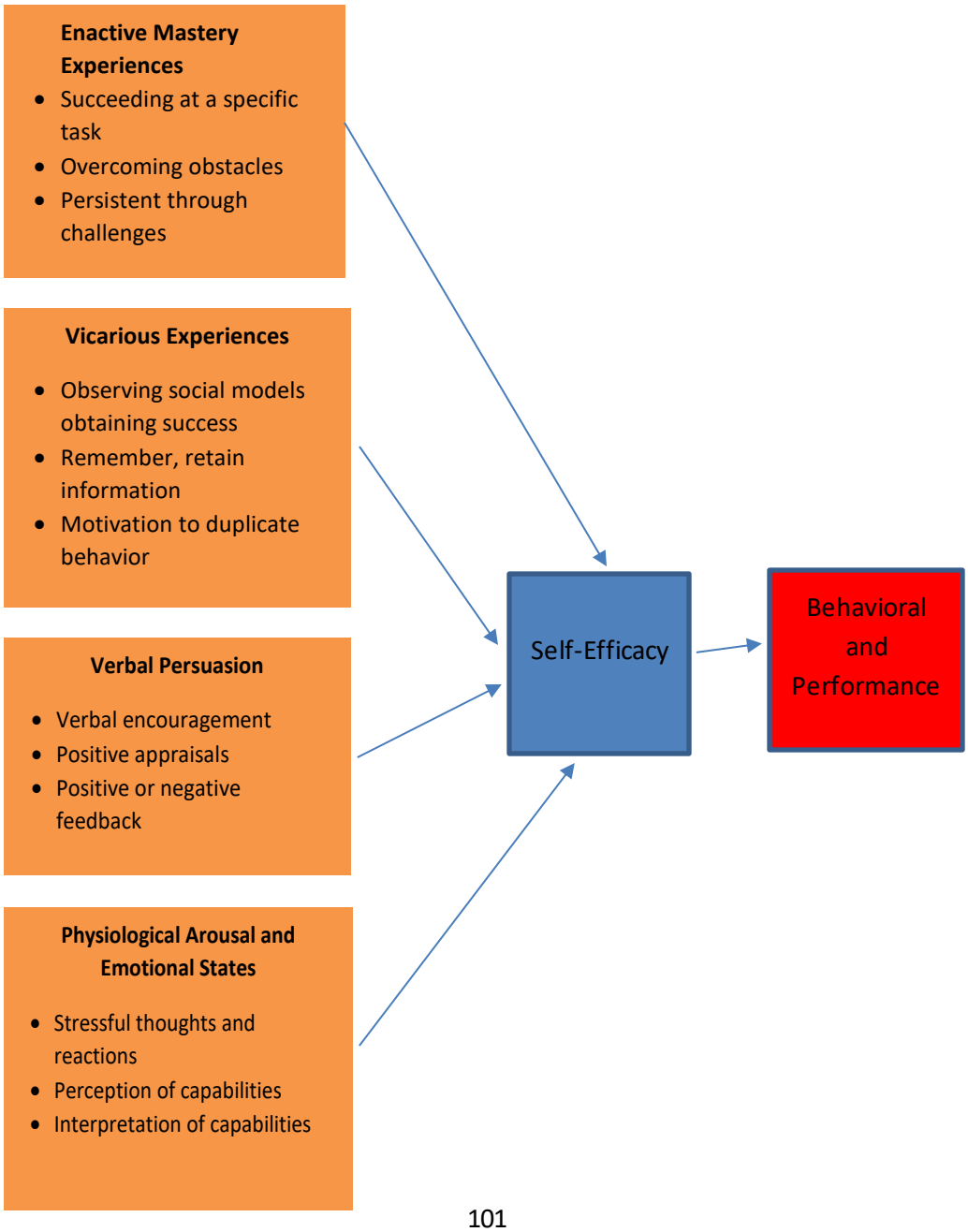
CHAPTER V

VIEWING DATA THROUGH THEORETICAL LENS

For this study, data were collected from various sources, including class observations, instructor interviews, newspaper articles, teachers' lesson plans, student assignments, emails, photographs, course documents, and website information. Chapter IV presented a narrative description of the data, and Chapter V provides an explanation of the data through a theoretical lens. The purpose of this study was to explain through the lens of Bandura's SET how teachers with high or low self-efficacy adapted to changing teaching demands for online learning during the COVID-19 pandemic. Albert Bandura's (1977) theory of self-efficacy espoused that individuals' beliefs concerning their self-efficacy could be developed by four methods of influence: effective mastery experiences, vicarious experiences, verbal persuasion, and psychological arousal. Bandura (1995) explained that "information relevant for judging personal efficacy, whether conveyed by mastery skills, vicariously, persuasively, or affectively, is not inherently interactive. Rather it gains its significance through cognitive processing" (p.5). Figure 8 illustrates these interactions portraying the four tenets of self-efficacy.

Figure 8

Self-Efficacy: Components, Definitions, and Criteria



Note. Adapted from Bandura, A. (1977). Self-efficacy: Toward a unifying theory of behavioral change. *Psychological Review, 84*(2), 191-215 (https://doi.org.10.1037/0033-295x.84.2.191).

Sense of Efficacy Scale Survey

According to Tschannen-Moran and Hoy (2001), the Teacher Sense of Efficacy Scale was developed to determine teacher efficacy in sub-scales of efficacy in student engagement, efficacy in instructional practices, and efficacy in classroom management. The Teacher Sense of Efficacy survey was given to twenty-two FMS teachers to measure their self-efficacy while transitioning to asynchronous online teaching during the COVID-19 pandemic.

A total of eight out of the twenty-two middle school teachers were selected to participate in this study according to their self-efficacy scores. The eight participants had either a low sense of efficacy or a high sense of efficacy. Scores of 4 and below represented low efficacy, and scores of 5 and above represented high efficacy. The Teacher Sense of Efficacy Survey (short form) consisted of 12 questions that asked participants to rate their perceived self-efficacy on a Likert scale of 1-9 (1 equaling "nothing" and 9 equaling "a great deal"). The average for each sub-scale (student engagement, instructional strategies, and classroom management) was calculated and added to produce total points. The total points were divided by the total number of items in the sub-scales (12 total) to calculate a composite score. Across the entire survey, participants' composite scores ranged from 4.50–8.41. Overall, teachers surveyed believed they could do very little to some with regard to student engagement while

teaching asynchronously online. The efficacy scores for the twenty-two FMS teachers, including the eight who participated in this study are located in Appendix E.

According to Bandura (1995), teachers with a strong sense of self-efficacy tend to exhibit greater levels of planning, organization, and enthusiasm. For example, in this study, math teachers planned, organized, and collaborated to create pacing calendars for students. The purpose of the pacing calendars was to assist students in staying on task with their assignments. The pacing calendars specified grade percentages for completed work. Teachers also planned, organized, and created a database of local emergency and help numbers for families after receiving telephone calls asking for assistance. Teachers planned and organized specified days to allow students in the school building to receive help with assignments and to comply with the Americans with Disabilities Act (ADA). Lastly, teachers planned and organized a full-scale interactive in-house workshop to assist co-workers in transferring their courses online. The learners observed models transferring courses online while actively engaging in the process of transferring their courses online.

According to studies, teachers with high self-efficacy are more open to new ideas and more willing to experiment with new teaching methods to meet student learning needs (Stein & Wang, 1988; Hattie, 2012). For example, in this study, teachers planned, organized, and collaborated to provide a continuous learning plan for students. Teachers decided that until something more permanent could be implemented, paper copies were

the best option for students to continue their studies. Teachers made copies of assignments for approximately 300 students. The procedure of copying the assignments was organized and structured similarly to an assembly line. Some teachers made copies of the assignments while others helped divide the assignments by grade levels, fifth through eighth grades, and stuff packets.

Additionally, a few teachers demonstrating their willingness to experiment with new teaching methods to meet student learning needs planned and organized a "snack and chat." Teachers did this by staying late one Friday evening to connect with students and families. After receiving coupons from Taco Bell, teachers invited students and parents to the restaurant to eat tacos while staying inside their automobiles. Participants could get homework assistance from teachers or visit and talk from the comfort of their own vehicles. Social media were used to send event notifications and invitations. Lastly, teachers planned, organized, and collaborated to provide a workshop for grandparents and guardians to learn about Chromebook functions. Teachers organized the workshop after discovering that many students lived with grandparents who did not know how to assist younger students with assignments posted on Chromebooks due to the grandparents' lack of knowledge of operating Chromebooks.

Teachers' Adaptations to Online Learning

Enactive Mastery Experiences

According to Bandura (1977), enactive mastery experience is the self-belief in one's capability of successfully succeeding at a task with a favorable outcome. Developing mastery experiences includes such criteria as succeeding at a specific task, overcoming obstacles, and persisting through challenges.

Succeeding at Specific Tasks

Bandura (2001) explained that exhibiting self-efficacy behavior characteristics for succeeding at specific tasks are obtained through cognitive, behavioral, and self-regulatory processes. Self-regulatory processes govern adaptations and human development (Bandura, 1995). The teachers in this study demonstrated cognitive, behavioral, and self-regulatory processes when adapting to online courses. Through these processes, teachers were successful at completing various specific tasks.

For example, Mr. Carpenter and Mr. Timire initiated research on how to use the Spark Education learning system. Mrs. Demar, Mr. Penny, Mrs. Sha'ban, and Mrs. Wettell collaborated to learn how to use Spark Education and Google Classroom. Mr. Penny and Mr. Timire demonstrated motivation to monitor, observe, and assess students' low participation in online engagement. To succeed in difficult teaching circumstances, they adapted their lesson plans by involving students to participate in assignment choices.

Teachers reported more student engagement after students were allowed to choose. Mrs. Demar, Mr. Penny, Mr. Timire, Mr. Da'miels, and Mr. Norkan successfully created various learning games for student engagement. Teachers were confident they

would succeed at combining new subject matter with students' previous knowledge through academic games. According to teachers, the games were well received by students. Mrs. Demar, Mr. Penny, and Mr. Timire also successfully adapted their math lessons online using document cameras and interactive Smartboards for presentations. They made lessons a priority by combining and adding to prior lesson content. According to Bandura (1995), teachers with high levels of self-efficacy are typically adept planners and organizers who are open to experimenting with new methods to serve their students better. The teachers demonstrated self-belief in their capabilities to succeed with favorable outcomes while performing various tasks. Hattie (2012) stated that teachers need to be adaptive and flexible, allowing them to innovate when routines are not enough.

Overcoming Obstacles and Persistent Through Challenges

Bandura (1995) explained, "If people experience only easy successes, they come to expect quick results and are easily discouraged by failure. A resilient sense of efficacy requires experience in overcoming obstacles through perseverant effort" (p. 3). Individuals who have been persistent at overcoming obstacles in the past will more likely believe they will be successful at overcoming other obstacles. Success can create belief in an individual's personal efficacy Stajkovic & Luthans, 1998; Lassiter, 2020). Bandura (1986) stated that self-efficacy is a cognitive mediator in an individual's ability to persist through challenges and overcome obstacles. Possessing cognitive, personal control of

one's thoughts, behaviors, and feelings to reach goals is also self-regulation. In other words, our thoughts and beliefs help control our actions.

Bandura (1995) wrote, "People's self-regulatory levels of motivation, affective states, and actions are based more on what they believe than on what is objectively the case" (p. 2). In other words, people motivate themselves by what they believe they can or cannot do. For example, FMS teachers did not receive instructions about how to proceed with asynchronous online teaching, although each teacher persisted in overcoming the obstacles related to uncertainty. Mr. Da'miels stated, "I was not prepared to teach online, but I practiced until I taught myself how to use Google Classroom." Mrs. Sha'ban said, "I had problems trying to figure out how to work the Spark Education learning system. I didn't know anything about teaching online, but I knew I would learn if I stuck with it." Mr. Carpenter said, "Most of our students didn't have internet at home, and my main concern was getting internet connectivity to students." Mr. Timire stated, "We went to an empty classroom every day to set up Zoom meetings."

All teachers in this study demonstrated perseverant motivation and optimism through challenges to overcome obstacles for the sake of student learning. Teachers regulated their thoughts, behaviors, and feelings to reach the goals they believed they could reach. Bandura defined self-efficacy as the "belief in one's capabilities to organize and execute the courses of action required to produce given attainments" (Bandura, 1977,

p. 3). In other words, it is not a person's capabilities but what they believe their capabilities are. All FMS teachers exhibited different levels of self-efficacy.

Vicarious Experiences

In Bandura's (1977) SET, vicarious experiences imply learning from the experiences of another person's successes or the consequences of their behaviors. Bandura (2001) stated, "Human behavior is transmitted, whether deliberately or inadvertently, largely through exposure to social models" (p. 4). Social models provide vicarious experiences or observations. The observations raise the observer's belief that they also possess the capabilities to master comparable activities (Bandura, 1986; Schunk, 1987). Vicarious experience is a conscious, cognitive process that involves remembering a person's behavior to duplicate it. Bandura (1997) posited that a person's environment, cognition, and behavior are directly responsible for human functions, and "people are either conditioned through reward and punishment to adopt the desired patterns, or emotional responsiveness is established by close association of neutral and evocative stimuli" (p. 4). Theoretically, people strive to exercise control over events that affect their lives, such as acquiring vicarious experiences, which includes observing social models, obtaining success at specific tasks, cognitively remembering the observed behavior, and demonstrating motivation to duplicate the observed behavior.

Observing Social Models Obtaining Success

According to Bandura (1995), individuals can develop their self-efficacy belief through vicarious experiences or observational learning. Perceived likeness to the performer affects an individual's perception of their own self-efficacy. The greater the perceived similarities, the more persuasive the successes and failures (Bandura, 1995).

The teachers in this study all had professional similarities to one another. All teachers recognized the essential aspects of social model observations. Many of them collaborated as observers of social models. For example, Mr. Penny collaborated with Mr. Carpenter to model the basics of online course transitions. Mr. Penny modeled how to create class rolls and place assignment due dates in the asynchronous online format. In like manner, Mrs. Demar collaborated with Mr. Norkan so that he could observe the basics of creating and transferring ELA assignments to an asynchronous online format. Both teachers emphasized that the vicarious experience helped them get through the mental stresses of not knowing the basics of online transfer.

Additionally, Mr. Da'miels and Mr. Norkan sought out co-workers with whom they could engage in observational learning to assist them with putting student grades in the LMS system. Mr. Timire was motivated to create a pacing calendar for students after observing Mr. Penny create one for his classes. The teachers in this study were empowered through observational learning, which enhanced their knowledge and abilities due to information gained from modeling influences (Bandura, 1986).

Remember/Retain Information

Bandura's (1995) SET proposed that learning which occurred vicariously was determined by the attention of observing the model's behavior. Retention is remembering what was observed; reproduction is the ability to duplicate the modeled behavior and motivation to reproduce the modeled behavior. For example, to remember modeled behavior, many teachers participated in participant modeling, which helps observational learners improve behavior patterns without learning from their own mistakes. When an individual being successful is observed, it helps boost the observers' inner confidence (Schunk & Rice, 1987; Bandura, 1995). Such observations were demonstrated in online classrooms at FMS among teachers who learned new teaching methods. For example, Mr. Timire directed his attention to Mr. Penny to remember the procedure of extending assignment due dates. In like manner, Mr. Carpenter, Mr. Da'miels, and Mr. Norkan focused their attention on social models who modeled how to upload videos from a cell phone to SPARK.

During the COVID-19 school closures, teachers who were more adept at using computers, Smartboards, or other technology were observed as models by those less knowledgeable about technology. Gillin (2020) emphasized that teachers unfamiliar with online teaching should collaborate with co-workers with experience. Although, if the model being observed fails a task, the observers' efficacy may be negatively affected (Bandura, 1995). The observed models were considered knowledge structures that represented effective action, serving as mental guides to help build behavioral patterns.

Knowledge structures were formed by modeled behaviors, activities' outcomes, verbal instruction, and cognitive syntheses of acquired knowledge (Bandura, 1995). The teachers remembered the behavior that was modeled through the use of motivation and self-reward.

Motivation to Duplicate Behavior

SET affirmed all learning could transpire by observing others and the penalties of their actions (Stajkovic & Luthans, 1998; Chen & Tutwiler, 2017). Although, Bandura (1995) asserted that an individual's level of motivation to duplicate learned behavior is influenced more by what they believe than what is reality. For example, Mrs. Wettell watched a webinar demonstrating how to transfer courses online. She was motivated by watching the successful transition on the webinar and believed that she could also successfully duplicate the procedures. Bandura (2001) affirmed a person could model new ideas and practices to "vast numbers of people in widely dispersed locales" through modern technology" (p. 25). In like manner, Mrs. Sha'ban, Mr. Da'miels, Mr. Norkan, and Mrs. Demar attended a Zoom meeting to learn how to adjust grade points in the LMS system for students' completed assignments. They were motivated to duplicate the process and believed they would be successful.

Verbal Persuasion

Verbal persuasion is vocally reinforcing success beliefs to an individual to motivate them to try harder to master activities (Litt, 1998; Bandura, 1995; Schunk &

Rice, 1987). Verbal persuasion may be positive or negative and "is most useful in helping an individual create greater effort and persistence in performing a task" (Owens & Valesky, 2015, p. 140). Verbal persuasion includes such criteria as verbal encouragement, positive appraisals, and positive or negative feedback.

Verbal Encouragement

Verbal encouragement is an external motivation to boost cognitive and emotional self-efficacy capabilities. It is vocally reinforcing success beliefs in an individual to motivate them to try harder to master activities (Litt, 1998; Bandura, 1995; Schunk & Rice, 1987). When the encouragement is positive, and the speaker has more experience when offering encouragement, it is more effective (Owens & Valesky, 2015), such as Mrs. Sha'ban's weekly announcements encouraged all teachers, reminding them, "We are all in this together." Also, teachers verbally encouraged each other daily to perform their best to adapt online courses to meet student learning needs. Encouraging others verbally helps to positively boost their thought processes positively. For example, Mrs. Sha'ban said, "One thing about it is that we had a sound support system here. All of us were in the same boat, sink or swim." However, verbal feedback can also be depressing. For instance, Mr. Carpenter overheard negative talk among a few teachers about the lack of time to prepare for the online transition, lack of training, and the prospect of succumbing to COVID-19. Overhearing the negative comments was a daunting experience for Mr. Carpenter. These examples support Bandura's (1986) idea that self-

efficacy is a cognitive mediator in an individual's ability to persist through challenges and overcome obstacles.

Positive Appraisals

According to Bandura (1995), "successful efficacy builders do more than convey positive appraisals. In addition to raising people's beliefs in their capabilities, they structure situations for them in ways that bring success and avoid placing people in situations prematurely when they are likely to fail" (p. 4). An example of this was Mrs. Sha'ban invited teachers into her classroom each day after work hours to encourage each person verbally and to process the situation of the pandemic as a team. The sessions in Mrs. Sha'ban's classroom, according to Mr. Carpenter, instilled tenacity and determination in everyone and helped to maintain the emphasis on students' academic progress. Mr. Demar noted that the conversations in the groups with Mrs. Sha'ban also provided success tactics and guidance on assisting students in adjusting to asynchronous online learning.

Additionally, by scheduling weekly live reading sessions, Mrs. Wettell demonstrated her dedication to and belief in the achievement of her students with special needs. She read aloud to the class during Zoom calls from a selection of five novels. The reading sessions were designed to aid pupils in understanding the reading lessons they had been assigned. A student-selected short narrative was read aloud by Mrs. Wettell. Students were asked to respond to five questions about the narrative after it was read to

gauge their understanding. Mrs. Wettell affirmed that positive appraisals were a part of each reading session. The live reading sessions with Mrs. Wettell and the group conversations with Mrs. Sha'ban were designed to establish conditions that encouraged success.

Finally, self-praise also acts as a positive appraisal. For instance, Mr. Penny claimed that he would quickly learn to adapt his courses online due to his positive assessment of self-efficacy and technological skills. Mr. Penny's approach supports Bandura's (1995) belief that a person with a high sense of efficacy exerts boldness. In this instance, Mr. Penny exerted boldness when he expressed high self-praise. Mr. Timire concurred that Mr. Penny exhibited extensive technical expertise and noted that Mr. Penny frequently crafted scenarios designed to aid others in their achievement. He indicated that Mr. Penny volunteered to walk everyone through the process of transferring their coursework online.

Positive or Negative Feedback

Verbal feedback can inspire and encourage people in their capabilities of mastering difficult situations when facing difficulties or obstacles (Bandura, 1977; 1995). According to Hattie (2012), the positive environment of a school can increase teachers' efficacy beliefs. To illustrate, Mrs. Sha'ban wanted teachers to be encouraged when she suggested, "Let's keep assignments moderately paced since students are already adjusting to separation from teachers and friends, plus learning to work online. This will help to

keep students' academic lives as uncomplicated and worry-free as possible." The suggestion was also to minimize the teacher's workload. In like manner, other positive feedback was from Mr. Timire, who said, "I was thankful for my co-teacher because we were able to bounce ideas off each other to try to figure out what was best for our kids." Also, in an uplifting tone, Mr. Da'miel said, "I encouraged teachers of the same core subjects to work together on lesson plans so they could share the same or comparable lessons because some children had siblings who were taking the same core subjects." Each teacher in this study shared that verbal feedback to students and each other was rewarding. Mrs. Wettell said, "The positive feedback seemed to persuade students and teachers to work better together since no one had experienced anything like the pandemic before."

In contrast to the positive feedback, there was also negative feedback, such as Mr. Norkan's comment, "I never figured out how to motivate the students to do the assignments. If anyone else figured it out, let me know how you did it." In addition, Mrs. Demar made a remark about how the number of students in the eighth grade exhibited a lower level of interest in their assignments in comparison to those in the fifth, sixth, and seventh grades. Teachers mentioned that many students had lost interest in participating in school assignments. Researchers have confirmed this idea because studies revealed that children displaced from school for long periods of time might lose interest and have higher dropout rates (Day, 2015; Kuhfeld et al., 2020; Tobin, 2019).

Physiological Arousal and Emotional States

Psychological and affective states refer to the stress-activated in the process of acquiring coping efficacy (Bandura, 1997, p.27). It is also the response to biological reactions to performing a task (Owens & Valesky, 2015). The SET states, "Psychological procedures, whatever their form, alter the level and strength of self-efficacy" (Bandura, 1977, p. 191). When facing obstacles, the amount of coping behavior and effort a person puts forth is determined by their expectations of personal efficacy. Psychological and affective states of efficacy include such criteria as stressful thoughts and reactions to capabilities, perception of capabilities, and interpretation of capabilities.

Stressful Thoughts and Reactions

Individuals regulate their behavior according to how they process, weigh, and integrate sources of information regarding their self-efficacy capability (Bandura, 1977). For example, Mr. Timire stated, "It was difficult and strenuous learning to teach online so quickly without preparation. I felt terrible because none of us had prepared for this." Mr. Norkan expressed his stressful thoughts when he said, "I was thankful that I never got COVID-19."

Bandura (1995) noted that a person with a low sense of efficacy might experience anxiety. All eight teachers in this study shared that they initially experienced a low sense of self-efficacy because they felt anxious when they returned to the school campus to start teaching asynchronously. Although according to Bandura (1995), self-efficacy is

situation specific. For instance, teachers may demonstrate low efficacy in classroom discipline when teaching fifth graders and high efficacy when teaching PE to eighth graders. All teachers in this study demonstrated different levels of stressful thoughts and reactions.

Perception of Capabilities

Self-efficacy is the perception an individual has about his or her capabilities. A person's perception determines their motivation to act. It includes attaining cognitive, behavioral, and self-regulatory tools for performing actions to manage life circumstances (Bandura, 2001). Mastery experiences, vicarious experiences, verbal persuasion, and psychological arousal interact with each other, allowing individuals to take action to control a situation rather than just respond (Bandura, 2001). Additionally, Bandura (1989) stated:

People's perception of their efficacy influences the types of anticipatory scenarios they construct and reiterate. Those who have a high sense of efficacy visualize success scenarios that provide positive guides for performance. Those who judge themselves as inefficacious are more inclined to visualize failure scenarios that undermine performance by dwelling on how things will go wrong (p. 1176).

For example, each teacher explained that for the first few weeks of school during COVID-19 school closings, assignments for students were paper copies placed in packets to pick up at the school building. During the initial school closings, Chromebooks and

mobile hot spots were unavailable to students. Mrs. Sha'ban said she visualized student success with the paper copies of assignments because it would keep the students focused on school until Chromebooks became available to students. Mr. Penny concurred that giving student's homework to complete on paper was an excellent method to assist pupils in concentrating on their academic work until Chromebooks could be delivered. He shared his immediate concern was keeping students involved and on task with their schoolwork. Rather than dwelling on ways things might go wrong, Mrs. Sha'bon and Mr. Penny demonstrated high self-efficacy by visualizing successful outcomes.

The teachers in this study demonstrated various levels of self-efficacy to successfully cope with tasks, challenges, and courses of action related to their professional roles (Bandura, 1997). They also demonstrated supportive relationships with students and each other to manage difficult situations by demonstrating the value of perseverance and providing positive incentives and resources for efficacious coping (Bandura, 1995). To demonstrate, Mr. Penny regularly stayed on Zoom calls for additional few minutes, which allowed students to ask questions privately. The teacher's perceptions of their capabilities exhibited high and low levels of efficacy.

Interpretation of Capabilities

Teachers' interpretations of their capabilities are directly related to their self-belief. All eight teachers offered generalized comments regarding their capabilities of being successful with asynchronous online learning. According to Bandura (1995),

people act on their interpretation of what they believe. Their possible performance outcomes, and their motivating influences of the expected outcomes are partially directed by their efficacy beliefs (Bandura, 1995). Each teacher explained that their first day at school after the initial closures were used to analyze possible actions to teach students. Teachers decided that copying paper assignments would be the best temporary option. Bandura (1995) made known that people have to be able to work together to realize a shared desirable outcome.

Additionally, Bandura (1997) posited that a person's confidence in their capabilities helps to regulate their functioning and behavior. For example, Mr. Da'miels said he can always “share knowledge with students whether online or with paper copies." Further, all teachers in this study shared their beliefs of being successful with online teaching. For instance, Mr. Carpenter used Spark Education and relied on the internet for various ideas for lesson assignments. Additionally, Mr. Da’miels and Mr. Norkan used Google Classroom, and Mrs. Wettell and Mrs. Sha’ban used PowerPoint presentations to adapt assignments. The teachers also used other tools, such as Zoom and Google Meets. For example, Mrs. Demar, Mr. Penny, and Mr. Timire collaborated using a document camera and Smartboard to adapt their assignments, giving students a visual display of coursework. The teacher’s interpretation of their capabilities revealed different levels of self-efficacy.

Variations of Self-Efficacy Levels

An individual can exhibit high self-efficacy when performing one task, such as teaching in a traditional face-to-face classroom. The same individual may exhibit low self-efficacy when performing another task, such as teaching an online course. Therefore, an individual may experience low and high self-efficacy because self-efficacy is situation-specific (Ein-Gar & Steinhart, 2017; Bandura, 1995; Lassiter, 2020). All eight teachers demonstrated various levels of self-efficacy. For instance, each teacher shared that their efficacy levels were affected when they experienced physiological arousal returning to the school campus because of fear of COVID-19 contamination, lack of training, and no preparation time for online teaching.

Additionally, Mr. Carpenter explained that with the anxiety, his self-confidence also jolted from hearing negative talk among a few teachers about the lack of training, preparation time, transitioning, and possibly being infected with COVID-19. Bandura (1995) noted that a person with a low sense of efficacy might experience anxiety. All eight teachers in this study revealed they had experienced anxiety, indicating that efficacy is situation specific. Teachers exhibiting high self-efficacy, such as Mr. Penny, did not hesitate to claim he had prior knowledge of technology and that it would take little time to figure out how to adapt his lessons online. Bandura (1995) emphasized that a person with a high sense of efficacy exerts boldness. Additionally, Hattie (2012) confirmed that teachers with high self-efficacy do not practice avoiding complex tasks or challenges. None of the eight teachers avoided the tasks, although some were initially apprehensive

and unsure how to accomplish them. However, all the teachers eventually adapted their lessons to online methods using various instructional methods and strategies, exemplifying cognitive, behavioral, and self-regulatory skills to meet student learning needs.

Teachers adapted their lessons using Zoom, Google Classroom, Google Class Meets, and Spark Education to create relevant learning for students. For example, Mr. Penny, Mrs. Demar, and Mr. Timire collaborated in teaching their math lessons and instructed students on how to use the built-in calculator in Google Classroom. They also aimed to encourage students and wore school uniforms to simulate a regular pre-pandemic school day. Other teachers used a combination of learning software for assignments to create relevant learning for students, such as modifying assignments according to ADA standards to accommodate student's learning capabilities. Mrs. Wettell scheduled weekly live reading sessions for her students on Zoom calls. Classroom observations were used to verify adaptations and methods implemented by teachers.

Summary

This chapter presented and analyzed information from various sources, including instructor interviews, class observations, newspaper articles, teachers' lesson plans, student assignments, emails, photographs, course documents, and website information. The information was analyzed through the lens of SET posited by Albert Bandura.

SET posits that four methods can develop individuals' beliefs concerning their self-efficacy: effective mastery experiences, vicarious experiences, verbal persuasion, and psychological arousal (Bandura, 1995). SE theory also posits that self-regulatory processes govern adaptations, and that people must develop abilities to regulate the motivational, cognitive, affective, and optimistic factors of their intellectual functioning, which will potentially help to develop mastery experiences, vicarious experiences, verbal persuasion, and psychological arousal (Bandura, 1995).

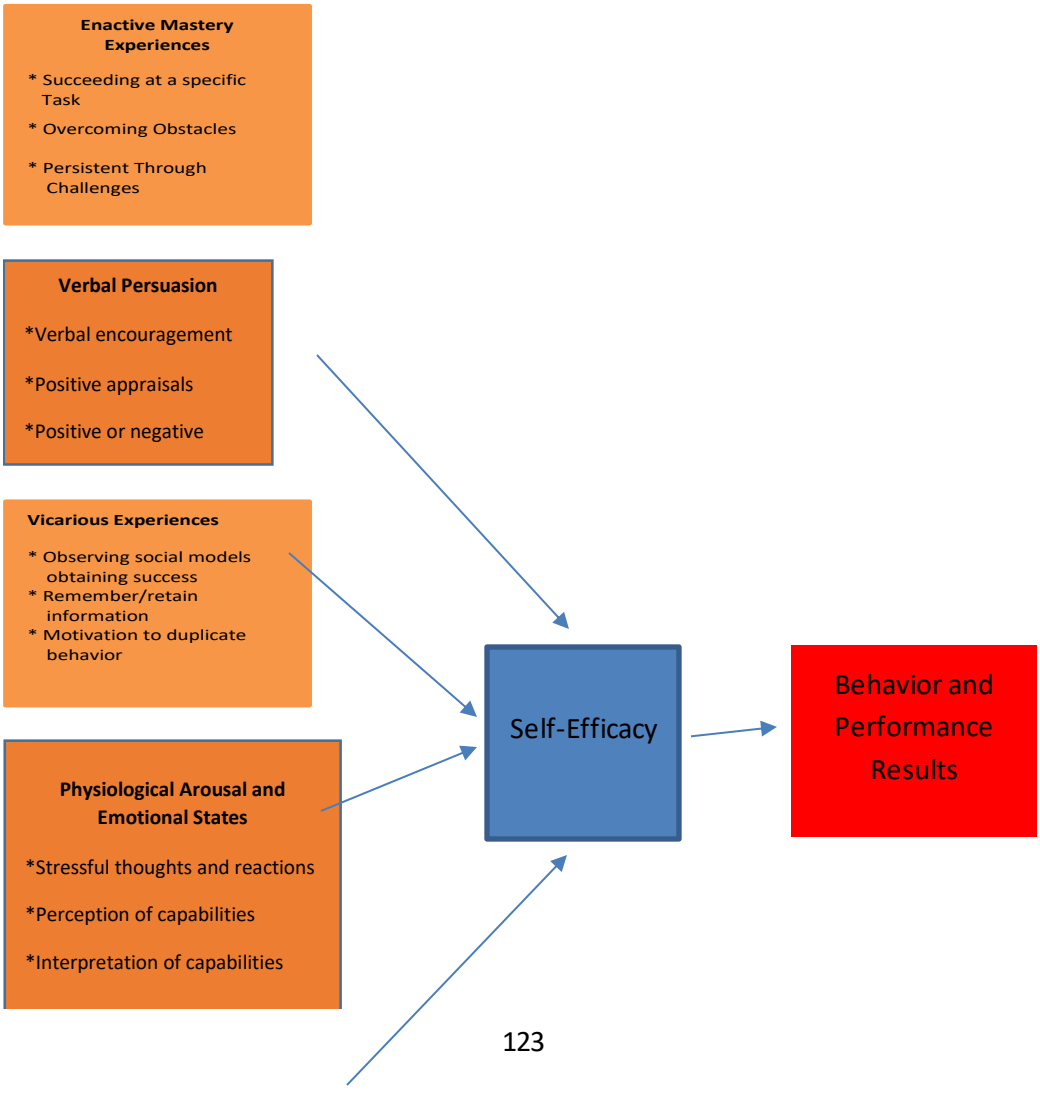
Through an analysis of high and low self-efficacy of participants, some overarching similarities and differences were identified and will be expounded on in Chapter VI. Although one significant similarity was the physiological arousal that all study participants experienced about transferring their classes online, except for one participant, who shared that transferring his classes online did not cause him any anxiety. On the other hand, a difference identified was that participants who had high SE spontaneously bonded together to form a vicarious learning group to adapt courses online. In contrast, participants with low SE intentionally sought peers asking for vicarious models to demonstrate how to adapt to online classes. According to Bandura (1995), people process, weigh, and integrate different sources of information concerning their capability and then regulate their behavior accordingly. Figure 9 illustrates mastery skills, vicarious experiences, verbal persuasions, and physiological arousal that teachers with high or low self-efficacy experienced while adapting their teaching to asynchronous

online learning during the pandemic. Chapter VI offers findings, conclusions, implications, and recommendations.

Orange=SE tenets; Blue=Self-Efficacy; Red=Results

Figure 9

Analysis of Data Collected Through the Lens of Self-Efficacy Theory of Teachers Adapting to Online Teaching During COVID-19 Pandemic



Note. Adapted from Bandura, A. (1977). Self-efficacy: Toward a unifying theory of behavioral change. Psychological Review, 84(2), 191-215 (https://doi.org.10.1037/0033-295x.84.2.191).

CHAPTER VI

FINDINGS, CONCLUSIONS, IMPLICATIONS, AND RECOMMENDATIONS

The purpose of this case study was to explain how middle school teachers with high or low self-efficacy adapted to changing teaching demands for online learning during the COVID-19 pandemic. In this context, teachers taught English Language Arts, Science, Math, and STEM subjects in online formats. Data sources included teacher interviews, observations, teachers' lesson plans, newspaper articles, student assignments, emails, photographs, course documents, and website information. The case was explained through the lens of Bandura's SET (Bandura, 1977; 1995), which includes four tenets: mastery experiences, vicarious experiences, verbal persuasion, and physiological arousal and emotional states surrounding the teaching efficacy of teachers. Bandura (1995) explained that an individual can demonstrate any or all four tenets of self-efficacy on any given day. This chapter explains the findings of the study through answering the research questions. Conclusions are drawn from the findings, and implications for research, theory, and practice are addressed. Recommendations for future research are offered, followed by a summary of the study.

Findings

Research Question One: How did teachers with high self-efficacy adapt their teaching to meet student learning needs during the pandemic?

While teachers at FMS lacked knowledge of techniques for delivering online teaching, they demonstrated that they believed in their abilities to succeed and were open to learning new teaching techniques by continuing the task and banding together. Mrs. Demar, Mr. Penny, Mr. Timire, and Mrs. Wettell demonstrated courses of actions that aligned with tenets of high self-efficacy. Examples are given below in the areas of enactive mastery experiences, vicarious experiences, verbal persuasion, and physiological and emotional states.

Enactive Mastery Experiences

Bandura (1997) explained enactive mastery experiences are a person's perception of their success of prior experiences. Because the source of efficacy knowledge is based on personal mastery experiences, it is exceptionally persuasive (Bandura, 1977). Teachers with high self-efficacy gain confidence from their prior successful experiences.

Succeed At Specific Tasks

According to Bandura (1997), teachers with high self-efficacy make greater attempts to achieve success and are confident in their capacity to succeed at specific tasks. When FMS teachers realized their students needed to be more engaged in their online coursework, they focused on the specific task of increasing student engagement. As a result, teachers gave students more agency over their education by presenting

students with a menu of project options from which to choose. Mrs. Wettell remembered her previous success in offering student's options and how well they responded to task specific options. She decided to try it again, demonstrating confidence it would work again. In this instance, students opted for the "All About Me" assignment. Students could submit a written piece or a video demonstrating how they adjusted to time away from school. In a similar illustration, math teachers remembered their previous success when they developed math games for students. They recalled the great response they had previously received from students and decided to try math games again, in hopes games would work again. Mr. Timire, Mr. Penny, and Mrs. Demar collaborated and focused on the specific task of developing a game that would teach math concepts and motivate students to do their assignments. One such game was a teacher's version of "Price is Right," which included students calculating prices and taxes of products that teachers presented. Teachers also required students to tally their scores for each assignment, giving students instant feedback on grades.

Overcoming Obstacles

Bandura (1997) affirmed teachers with high self-efficacy are equipped with the skills and capabilities necessary to triumph over obstacles and challenges. Teachers with high self-efficacy have more confidence in their own abilities and ability to achieve their goals because of their track record of success. The goal of FMS teachers was to help students succeed even when faced with obstacles. For example, to compensate for

students' unfamiliarity with Chromebooks, teachers asked Mrs. Demar to create a slide show outlining the procedures students needed to access their accounts, download necessary apps, and begin working on assignments. Mrs. Demar initially experienced an obstacle of low self-confidence, believing she was unqualified to teach middle school students. However, the mental obstacle dissipated when she remembered that she had successfully created a similar slide presentation at the primary school. After recalling her prior success, her confidence was boosted, causing her to believe she could be successful. As another illustration, Mrs. Demar needed guidance to create math assessments for middle school students. She recalled when she worked at the primary school, she was grouped with other teachers in a "pod," which removed the communication obstacle and made it easier to obtain assistance for challenges, such as developing assessments. She believed that similar communication with colleagues at middle school could help her be successful again. As a result, she established communication with her colleagues, which aided in her students' success.

Persistent Through Challenges

According to Bandura (1995), teachers with high self-efficacy are ambitious, set challenging tasks, and persist through those challenges. When schools closed due to the COVID-19 pandemic, FMS teachers persisted in finding ways to teach students. For instance, they made hard copies of academic assignments for almost 300 students to put in student packets for a continuous learning plan. While Mr. Da'miels, Mr. Norkan, and

Mr. Timire created copies of the assignments, Mr. Carpenter, Mrs. Demar, Mr. Penny, Mrs. Sha'ban, and Mrs. Wettell helped split the assignments by grade levels, fifth through eighth, and stuff the packets. The task was huge and more challenging than anticipated; however, it was one way teachers honored their professional commitments. As another example, Mrs. Demar said, "During the school closing, it was a little tough because it was difficult to assess the effectiveness of my instruction." She said it challenged her to look into multiple teaching methods, including online teaching. However, she persisted through the challenges to find a solution and remained committed to teaching student's math. She said, "I used COVID and school closings as a teaching moment for my students and me."

Vicarious Experiences

Learning from observing the actions of another person as they carry out a task is vicarious experience. Bandura (1977) suggested rather than imitating another person's actions, a person can gain knowledge by observing their actions. Attention, retention, ability to reproduce one's learning and motivation are the four criteria for vicarious learning.

Observing Social Models Obtaining Success

Bandura (2017) asserted vicarious experiences are the second method for enhancing self-efficacy. High-efficacy teachers learn from others and confidently approach vicarious settings (Bandura, 1997). For example, Mr. Penny created a pacing

calendar for students to track assignments, grades, and progress. Mr. Timire focused his attention on the creative components of the calendar to learn the process. As a result, Mr. Timire successfully created a similar pacing calendar to help his students track grades, assignments, and progress. As another example, individuals may experience emotional responses when they observe how others respond emotionally (Bandura, 2017; 1995). Mrs. Sha'ban collected, packaged, and delivered COVID-19 supplies to students and families during the pandemic's school closures to help struggling families. After observing Mrs. Sha'ban's acts, FMS teachers were inspired to do the same. Therefore, teachers also gathered, wrapped, and distributed COVID-19 items to families. It is essential to highlight that teachers actively sought opportunities to help and retain communication with families.

Remember, Retain Information

Bandura (1995) suggested closely monitoring a model's behavior increases the observer's remembrance of it. Models are also mental guides that help to build behavior patterns. Bandura (1995; 1997) affirmed high self-efficacy teachers are confident in their ability to remember modeled behavior. For example, a few FMS teachers modeled how to transfer courses to online formats. Mr. Timire, Mrs. Demar, and Mrs. Wettell monitored the model teachers until a mental image was established of the procedures. Remembering the procedures was relevant because teachers believed that by transferring classes online, they could facilitate more effective learning for students. Additionally,

Mrs. Demar scheduled a Google Class meet to assess her students' knowledge and attentiveness. She maintained that students paid closer attention and remembered more of what she taught when they could observe her on the computer monitor.

Motivation to Duplicate Behavior

Bandura (1978) emphasized high self-efficacy teachers motivate themselves by developing beliefs about what they are capable of doing and anticipating the likely outcomes of those actions. For instance, Mrs. Wettell observed a colleague teach a math lesson that was recorded using a cell phone and uploaded to Spark Education. While facilitating the math class, the coworker explained the basics of asynchronous online learning because students struggled with this type of learning. Mrs. Wettell was motivated after observing her coworker successfully teach the video-recorded lesson and believed that she could successfully duplicate the action of her coworker. 3As another illustration, Mr. Timire reported, "During COVID-19, I taught to a computer screen, and it was difficult to teach kids that way." Despite this, he continued to observe how his coworkers used computers, Smart Boards, and other forms of technology to facilitate their classes until he was inspired and motivated to believe that he had the ability to transfer his classes and teach online successfully.

Verbal Persuasion

Verbal persuasion is the third method for reinforcing an individual's success beliefs (Bandura, 1995). People can be motivated to work harder by being persuaded

verbally. A person can be convinced to believe they will be successful through verbal persuasion (Litt, 1998; Schunk & Rice, 1987).

Verbal Encouragement

Bandura (1995) maintained verbal encouragement helps to eliminate stress because it supports effective modes of behavior. Teachers with high self-efficacy know how to verbally encourage others during threatening situations like the pandemic. For example, each Monday of the work week, Mrs. Sha'ban announced on the school's intercom system, "We are all in this together." The verbal encouragement motivated teachers to work harder, persist longer in their daily activities, be there for one another, and be assessable to students to meet their learning needs. Another illustration was the willingness of teachers to commit to shared goals with "parents as teachers." FMS teachers verbally encouraged and acknowledged parents, grandparents, and other caretakers in their roles of "parents as teachers." The encouragement aimed to lower parents' stress levels and encourage greater participation in their children's education.

Positive Appraisals

Bandura (1995) found that people with high levels of self-efficacy tend to be more self-confident. They are bold with self-appraisals because they believe in their own abilities. For instance, Mr. Timire frequently commended his math skills and accomplishments. His colleagues also lauded his math students' standardized exam scores. Additionally, Bandura (1995) asserted teachers with high self-efficacy implement

successful teaching strategies, adapt to various teaching tactics, and motivate student learning by using positive appraisal. Mr. Timire, Mr. Penny, and Mrs. Demar requested each student to submit one question from their weekly assignments to include on exams. Teachers praised students for their effort before the project was assigned to motivate student engagement.

Positive or Negative Feedback

Bandura (1995) suggested providing people with positive feedback could motivate them in their capacities to handle challenging situations. Teachers with high self-efficacy provide positive feedback to inspire and encourage others (Bandura, 1995). Mrs. Sha'ban was concerned about teachers' stress and burnout. She made an effort to alleviate tension by praising teachers for their consistency and productivity amid the school closures caused by the pandemic. Moreover, teachers with high self-efficacy also encourage students to believe in themselves by providing positive feedback, increasing their chances of success (Bandura, 1995). For example, when responding to emails from parents, FMS teachers typically provided positive feedback while highlighting information regarding students' grades.

Physiological Arousal and Emotional States

The fourth tenet of self-efficacy concerns physiological arousal and emotional states. Bandura (1997) surmised when evaluating their abilities, people often base their evaluations in part on their physiological and emotional states. In other words, they may

believe their responses to emotions and tension levels indicate their susceptibility to poor performance.

Stressful Thoughts and Reactions

Teachers with high self-efficacy may experience physiological arousal but quickly extinguish the aroused thoughts. Bandura (1977) maintained that a person's environment and interpersonal interactions with others help them develop a sense of self-efficacy. For example, FMS teachers in this study valued their shared interactions, personal contacts, collaborated work, mentoring, ideas regarding the pandemic situation, and ideas to transfer lessons online. The interactions boosted their coping skills. Also, an equally important example was Mrs. Sha'ban, Mrs. Demar, Mrs. Wettell, and other teachers who provided a split school day to reduce student stress. The split schedule accommodated students who needed assignment help but were still asleep during the teacher's work hours. The teachers believed that changing their working hours would help students succeed.

Perception of Capabilities

Bandura (1995) argued that a person's self-perception impacts their stress responses and performance motivation. More significant than the actual intensity of stressful thoughts and emotions is perception. FMS teachers initially perceived they could only transfer classes online with training and that asynchronous online teaching required additional training. Although, before receiving training, teachers educated themselves,

searched the internet, relied on their minimal prior knowledge, and collaborated to adapt their courses online.

Interpretation of Capabilities

Bandura (1995) posited that self-belief determines how people interpret their abilities. He also asserted that people act based on their performance abilities. Further, teachers with high self-efficacy interpret challenges as opportunities to learn. For instance, FMS teachers were anxious on their first day back to school following the pandemic closure. The teachers were still determining the method of instruction they would utilize with students. Although, following a discussion of available options, the teacher's interpretation was that the difficulty posed by the school closing should be viewed as an opportunity to reach out to students to help ease their worries. As a result, the fifth through eighth-grade teachers compiled a list of student names and phone numbers and called or emailed each student.

Research Question Two: **How did teachers with low self-efficacy adapt their teaching to meet student learning needs during the pandemic?**

Hattie (2012) found that teachers with low self-efficacy avoid challenging tasks they perceive as personal risks. They are likely to have a weak or low commitment to their goals. Mr. Carpenter, Mr. Da'miels, Mr. Norkan, and Mrs. Sha'ban demonstrated more low than high self-efficacy characteristics, and they admitted when faced with

obstacles, they focused on their shortcomings, challenges, and lack of control over situations.

Enactive Mastery Experiences

Bandura (1995) implied enactive mastery experiences are the perceived successes or failures of an individual's previous experiences. Previous successes or failures significantly impact an individual's sense of self-efficacy. These experiences are the most authentic evidence of whether one can muster whatever it takes to succeed (Bandura, 1982).

Succeeding at a Specific Task

Bandura et al. (1975) surmised teachers with low self-efficacy demonstrate little confidence when they perceive they cannot handle challenges. They may perceive online teaching as a task that is too difficult and assign simple and easy lessons (Jung et al., 2011). For example, Mr. Norkan designed easy lessons for students, including PowerPoint projects with picture-type answer responses. He admitted he never had much success in the past when giving students lessons they considered challenging. As another example, Mr. Da'miels preferred paper copies of student work over electronic submissions. He said, "I always succeeded with paper copies because I can't use computers well." He claimed he did not like Smart boards or computers, but as long as students were doing schoolwork, it should not matter. He assigned students to evaluate two careers: education, pay, and job prospects.

Overcoming Obstacles

The ability to persevere through difficulties to accomplish goals is overcoming obstacles, although teachers with low self-efficacy rarely persevere and often feel incapable and unsupported by others (Bandura, 1995). Mr. Norkan perceived a lack of support from coworkers as an obstacle to transferring his courses online. He also believed he lacked the skills to teach online classes. As a result, he assigned outdoor projects that did not require transferring classes online. One project assigned students to explore their home yards for STEM-related materials. Students wrote paragraphs regarding the item's size, color, shape, or whatever intrigued them. As a different example, Mr. Carpenter said his science lesson plans changed significantly during COVID-19 school closings. He perceived the lack of opportunities to apply scientific knowledge through hands-on projects as an obstacle to students' education. He said students did not have resources at home. Alternatively, he assigned science vocabulary words on Spark and had students define and upload them.

Persistent Through Challenges

Bandura (1977) emphasized perceived self-efficacy affects a person's decisions, behavior, effort, and persistence in the face of challenges and adverse experiences. Teachers with low self-efficacy frequently do not persevere but rather procrastinate when faced with challenges due to low ambitions (Bandura, 1997). Mr. Norkan, for example, procrastinated teaching online classes and persisted in using paper assignments long after

Chromebooks were distributed to students. Bandura (1995) affirmed teachers with low self-efficacy do not believe in their ability to endure through problems effectively. Mr. Da'miel shared that parents fretfully called him, worried that their children were "learning to learn" autonomously. He reassured parents that everyone struggled to adjust to the new teaching and learning methods. To ease parental anxiety, he promised parents and students that none of his assignments would receive a grade below 50%

Vicarious Experiences

Vicarious experiences are experiences one gain from watching or visualizing others perform tasks (Owens & Valesky, 2015). The learning is accomplished through observation or modeling the actions of others. The four components of observational learning are attention, retention, production, and motivation.

Observing Social Models Obtaining Success

Bandura (1971) posits “human behavior is transmitted, whether deliberately or inadvertently, largely through exposure to social models” (p.4). However, teachers with low self-efficacy believe they lack ability to model behaviors. Mr. Da'miels and Mr. Norkan observed coworkers as social models successfully entered student grades into the online LMS system so that they could learn the procedure. Although, after carefully observing the procedures, they doubted their ability to correctly model the behaviors. Bandura (1971) surmised teachers with low self-efficacy might also choose to conduct the modeled behavior incorrectly. After observing an online video of athletic coaches

visiting students' neighborhoods to help with homework, Mr. Da'miels was inspired. The video showed some coaches playing basketball with students and others tutoring students. Mr. Da'miels tried the technique, although he did not model the identical behaviors of the coaches in the video, such as collaborating with colleagues. Mr. Da'miels traveled alone, but when he arrived, he realized he needed help because the number of students overwhelmed his ability to help them.

Remember/Retain Information

Bandura (1971) suggested a significant function of observational learning is the long-term retention of behaviors. Studies also show that collaboration is a form of modeling that helps to enhance teacher self-efficacy (Rosenthal & Zimerman, 1978). Mr. Carpenter, Mr. Norkan, Mr. Da'miels, and Mrs. Sha'ban collaborated and observed coworkers develop a Likert scale to evaluate student learning and assignment quality. The collaboration helped teachers remember the procedures. However, teachers were hesitant about their abilities to replicate the Likert scale successfully. Likewise, another study found even if a person observes, registers, and accurately retains modeled behavior, teachers with low self-efficacy may doubt their ability to apply that information (Rosenthal & Zimmerman, 1978; Bandura, 1994). Mrs. Sha'ban observed a coworker videotaping herself, teaching a math lesson. She took notes, sought clarification from the model teacher, and stated that she remembered the process. However, she claimed to be "old school" and insisted she could not "teach to a camera."

Motivation to Duplicate Behavior

Bandura (1971) confirmed what motivates people is belief in their own abilities. Yet, teachers with low self-efficacy may be unmotivated, believing they will fail to meet their goals. They may also believe they have no control over the events affecting their lives. Mr. Carpenter, Mr. Da'miels, Mr. Norkan, and Mrs. Sha'ban observed a coworker demonstrate an online course transfer that ultimately failed due to poor training. The failed demonstration hindered the motivation of the untrained observers, leading them to believe they may fail also. As another illustration, when the district implemented asynchronous online classes, many class rosters merged, resulting in huge class rosters. Mr. Da'miels reported he observed an IT employee "pluck names from one of my class rosters to decrease the class size." Nevertheless, after observing the procedures, Mr. Da'miles said he was motivated to try but hesitant because "computers just don't work for me."

Verbal Persuasion

Verbal persuasion is the third strategy for boosting a person's confidence in their own abilities and increasing the likelihood that they will achieve their goals (Bandura, 1975). Negative and positive verbal persuasion, as well as self-encouragement or self-praise, are all possibilities.

Verbal Encouragement

Bandura (1975) found that teachers with low self-efficacy focus on their shortcomings. They put up significantly less effort in performing tasks. Mrs. Sha'ban said, “When I was assigned to teach in a classroom, I focused solely on my inability to teach online because ‘I am old school.” She emphasized her lack of online teaching preparation and her years away from the classroom as an obstacle. She admitted talking to herself to calm her anxieties, saying, "We are here for the kids." She said the self-encouragement helped to boost her confidence. Lastly, an example of negative verbal persuasion was when Mr. Carpenter overheard coworkers voicing worry about the lack of time to prepare for online transition and the possibility of COVID-19 spreading. The negative talk stressed and demotivated Mr. Carpenter. He said he had to avoid the negative talk to help him focus on the learning needs of students.

Positive Appraisals

Bandura (1995; 1971) indicated positive appraisals could affect a person's behavior in many ways, such as willingness to keep going when things get hard. To illustrate, FMS teachers reported the district superintendent visited FMS to thank them for weathering the pandemic to meet student learning needs. Teachers reported the visit helped boost their efficacy levels and motivation to persist in their professional duties.

Positive or Negative Feedback

According to Hattie (2012), feedback is an essential component of effective learning. However, feedback has varied effects because it could be favorable or negative

(Hattie, 2012). Teachers with low self-efficacy often dwell on the potential of negative feedback and ways things might go wrong (Bandura et al., 1975). For instance, an evaluation form created by Mr. Carpenter and Mr. Norkan asked students to discuss what was and was not working about online assignments. Teachers expected negative feedback but believed that giving students a voice in their assignments would motivate them to participate. Teachers' beliefs were correct in that they received negative feedback from students, which caused them to doubt their abilities to teach successfully online. Nevertheless, they also received more participation from students. In another illustration, when students turned in late projects, Mrs. Sha'ban emailed them individually to explain their failing grades and invited them to a Google Class Meet to discuss how she might help them with assignments. Mrs. Sha'ban considered the failing grades as negative feedback stemming from her lack of ability to teach online classes. Although, she continued teaching despite the criticism.

Physiological Arousal and Emotional States

According to Bandura (1977), physiological arousal and emotional states are stress levels that affect physical reactions, emotions, and moods due to personal feelings about one's abilities. Teachers who demonstrate low self-efficacy believe their circumstances are unmanageable and view many aspects of their work environment as fraught with risks. They also dwell on their coping deficiencies (Bandura, 1995).

Stressful Thoughts and Reactions

When students did not complete assignments, Mr. Carpenter stressed and worried that his PowerPoint presentations were not engaging. He was often heard saying, “This is stressing me out.” Therefore, Mr. Carpenter, with the help of coworkers, added a voice-over feature to his PowerPoint lessons to add a personal touch and make the lessons more engaging. Nevertheless, he believed the voice-over feature had little effect on increasing student participation. In an additional illustration, Mr. Da'miel admitted he stressed about the disengagement of his most ambitious students. He constantly obsessed that he would be held responsible if one student failed. While many students completed their assignments, others did not. He said even though students have significantly slowed down in turning in their homework, he will continue to assign homework.

Perception of Capabilities

Perception is the process by which people absorb information after taking it in and giving it meaning. The degree to which a person believes they possess the abilities necessary for success is known as perceived capabilities (Kremer et al., 2012). Teachers with low self-efficacy may experience feelings of defeat; nevertheless, to avoid the feelings linked with low self-efficacy, teachers could engage in activities in which they have a high-level of self-efficacy (Owens & Valesky, 2015). Mrs. Sha'ban and coworkers participated in “drive-by Mondays,” which included teachers driving slowly behind school buses, honking their vehicle horns, and waving at students while buses delivered breakfast and lunch bags to students. They aimed to encourage students during the

uncertain time of COVID-19. Teachers believed in their abilities to succeed in this specific task. As another example, Mr. Norkan was confident in his ability to ensure that each student had a fully functional Chromebook. Students went to Mr. Norkan if they needed help with their Chromebook. If it could not be fixed right away, students would receive a replacement.

Interpretation of Capabilities

Interpretations of capabilities can be boosted when individuals make assertions to themselves about the successes, they are capable of achieving (Galanis et al., 2016). Although teachers with low self-efficacy may not realize their potential for achievement and lack resilience in the face of difficult circumstances. For instance, Mrs. Shaban perceived she could persuade her students to regularly record positive statements about themselves in a notebook to help them deal with social and emotional issues. Although her interpretation was if students disregarded the assignment, she at least tried to encourage them. As a second illustration, Pajares (2012) asserted when a teacher participates in a lower self-efficacy task in which he knows that he can perform well, it can boost their self-efficacy. Mr. Da'miels, for example, explained he is not skillful with computers, but he is excellent with sports. His coaching ability influenced the self-interpretation of his ability. He said that he was successful in encouraging students to engage in self-talk through the use of a technique he frequently employs during athletic competitions. He tells his students, “You got this.” He claims that it worked every time.

Research Question Three: How did adaptations to teaching differ across teachers with high self-efficacy and low self-efficacy?

Adaptations High Self-Efficacy

Bandura (1995) noted teachers with high self-efficacy exert boldness. A prime example is Mr. Timire boasting that he can teach math online or in a classroom because math is math everywhere. Effective teachers with high self-efficacy can facilitate student learning by adapting to various teaching methods. Mr. Penny claimed he knew technology and did not require training to adapt to online teaching. Hattie (2012) confirmed that teachers with high self-efficacy do not practice avoiding challenges. All participants agreed that the transition to online was challenging and demanding but advantageous. A person with high self-efficacy views challenges as things to master rather than threats to avoid (Bandura, 1995). They approach challenging situations believing they can control them (Bandura, 1995). According to the participants, adapting to online teaching during the challenging situations of the pandemic allowed them to consider the best teaching strategy in the event of future emergency situations. Bandura (2001) argued self-efficacy belief system is the underpinning of human inspiration and personal accomplishments. To put it more simply, humans are complex beings that are capable of thinking for themselves and determining the course of their own actions (Bandura, 1971).

Adaptations Low Self-Efficacy

Hattie (2012) confirmed that teachers with low self-efficacy might avoid complex tasks or challenges. Bandura (1995) also noted that teachers with low self-efficacy might experience uneasiness. Teachers with a low sense of efficacy when adapting to online teaching were associated with work avoidance and ability avoidance (Rad et al., 2021). Also, teachers with low self-efficacy were more likely to present students with easy online tasks (Hattie, 2012). For example, Mr. Da'miels created many videos and work pages because he said they were easier for his students to understand. A low sense of self-efficacy increases anxiety. Teachers may demonstrate a lack of commitment to teaching, devote less time to subject matters in their area of perceived inefficacy, and devote less time overall to academic subjects. For example, Mr. Norkan gave students more STEM assignments than ELA assignments. He perceived he had more capabilities in STEM class than in ELA. Bandura (1995) explained people with low self-efficacy dwell on difficulties when faced with challenging tasks. For example, Mr. Carpenter frequently made negative comments, such as, "I don't see how anyone had time for preparation to go online because everyone was thrown into it."

Research Question Four: How does Bandura's self-efficacy theory explain these adaptations?

Bandura's (1971; 1995) self-efficacy theory reinforces the idea that self-efficacy is situation specific. For example, just because a teacher has high self-efficacy in one task does not suggest they are equally capable in all tasks. There is relevance in both levels of

self-efficacy, and individuals might shift between high and low on any given day, depending on their specific circumstances (Bandura, 1995). Both high and low levels of self-efficacy have far-reaching effects on every element of human life (Bandura, 1995). The teachers interviewed for this research demonstrated both high and low self-efficacy. For example, Mr. Norkan exhibited high self-efficacy in organizational abilities to assign Chromebooks to students but low self-efficacy with online teaching skills. Mr. Norkan also demonstrated high self-efficacy when teaching STEM classes but low self-efficacy when teaching ELA classes. In addition, Mrs. Sha'ban demonstrated high self-efficacy when she previously assisted in creating a curriculum for gifted students. She also demonstrated high self-efficacy as a leader and assistant principal but low self-efficacy in transferring classes online. It is essential to note that people would deplete their mental capacity if they tried to master everything (Bandura, 1995). There is no such thing as a person who is an expert in every discipline.

Conclusions

The findings from this study indicated there were some similarities and differences between teachers with high and low self-efficacy regarding how they transitioned and adapted their teaching to asynchronous online methods. Findings also revealed various levels of mastery, vicarious experiences, verbal persuasion, and physiological factors were present in all research participants. Since this is a qualitative study, one cannot conclude from this research that there is a cause-and-effect relationship

between self-efficacy and the methods teachers chose to adapt their online teaching. Effective online teachers must be able to adapt to a variety of teaching styles in order to facilitate their students' educational experiences.

The study's findings demonstrated that every participant had a greater amount of the physiological arousal tenet than any other self-efficacy tenet. This was especially demonstrated when teachers initially returned to the physical school campus to teach asynchronously online. Although, there was an exception with one participant, Mr. Penny, who shared he did not experience any anxiety when transferring his classes online because he had previous experience with technology. Nevertheless, all participants revealed that transitioning from traditional to online teaching was challenging. The participants said returning to the school campus while COVID-19 was still prominent aroused feelings of anxiety. On many occasions, teachers expressed how the encouragement they received from one another helped them stay motivated to continue the process of teaching to meet the educational needs of their students.

Another conclusion that can be derived from this study is the requirement for both teachers and students to first complete either professional training or in-service training before switching to online education. Despite this, teachers who had high levels of self-efficacy and reported having prior mastery experiences gained the cognitive and behavioral self-regulation skills necessary for online teaching more quickly.

The research findings revealed teachers with high self-efficacy applied their mastery skills persistently through enactive mastery, vicarious experiences, and verbal persuasions to adapt student assignments online. Teachers with low self-efficacy often created assignments they termed "easy." Teachers frequently mentioned they established support groups to help each other learn new online strategies and to cope with daily mental stress. In conclusion, the research demonstrated in order to generate a strong sense of self-efficacy, teachers must cultivate the abilities to control the motivational, cognitive, affective, and optimistic components of their intellectual functioning (Bandura, 1995).

Implications

Findings in this study are not generalizable to all contexts, and the following implications are meant primarily for the specific context under study. However, qualitative research does lend to the possible transferability of certain findings from one context to others based on the similarity of receiving contexts (Erlandson, et al., 1993). Decisions of transferability should be based on details provided in the narrative presentation of the data in Chapter IV. Implications for research, theory and practice are delineated below.

Implications for Research

Teacher self-efficacy has been a topic of research for many years. However, there is limited research regarding teacher self-efficacy when enduring crises such as the COVID-19 pandemic and transitioning to online teaching. This study confirmed what

previous studies indicated, for teachers to be effective and confident when teaching online classes, technology training is needed because training is connected to teachers' self-efficacy (Daniel, 2020; Eyster & Martin, 2010; O'Neil (2009). Additionally, this study confirmed that the COVID-19 pandemic demonstrated the importance of building resilience in our educational systems to face threats from violence, disease, technological changes, and the skills and adaptability effective teachers need (Tam & El-Azar, 2020).

This study highlights the need for additional research to explore teacher self-efficacy, beliefs, and attitudes for transitions to various modes of instruction from traditional face-to-face instruction. In ensuring quality online teaching and learning, teachers need supportive technology instruction to ensure the learning needs of their students. The eight teachers in this study demonstrated a willingness to provide the necessary academic courses to meet student learning needs. The teachers referenced a boost in their self-efficacy after they organized and transitioned to an asynchronous style of education without any prior preparation or training.

Additionally, it would be important to understand how teachers with no prior online training could develop their cognitive and behavioral self-regulatory skills to adapt their courses to online teaching. Highlighting the results of this additional research would add to the small quantity of research focused on teacher self-efficacy during pandemics and disasters.

Implications for Theory

Bandura's (1995) theoretical framework was appropriate for this case study. Exploring the four tenets of self-efficacy provided a strategic process for organizing and understanding phenomena in online courses during a pandemic at FMS. The theory has been used in the past to describe teacher self-efficacy, beliefs, and attitudes. This study contributes to self-efficacy, focusing on the self-regulatory aspects of teachers' abilities during a pandemic. It could augment the existing body of knowledge and research by adding a new perspective on how teachers' self-efficacy and crisis preparations are perceived and handled at the middle school level. For example, inviting teachers to present at local school board meetings to share their lived experiences of transferring to online teaching strategies during the pandemic could make a great impact on how future crises could be handled better.

Implications For Practice

The findings of this study could provide insights for support of teachers' professional development in online teaching and technology experience to increase teachers' self-efficacy. The findings could also provide essential information to administrators to increase the success of teachers transitioning effectively to various modes of instruction. An example of this would be providing professional development in online teaching and technology to increase teachers' online self-efficacy abilities. Another implication is collective teacher efficacy. Principals can team low self-efficacy teachers with high self-efficacy teachers at the beginning of the school year to build

collective efficacy throughout the school district which could help increase self-efficacy of all teachers. Finally, this study may provide teachers with strategies and techniques to help build their self-efficacy regarding technology use for teaching and learning by giving teachers common plan times.

Recommendations for Future Research

The research provided an in-depth study of teachers' self-efficacy in transitioning to online methods amidst a pandemic. The following recommendations for further research are provided. Future research might include Vygotsky's theories of reciprocal teaching, a social form of interactive learning (Jörg, T., 2004; McLeod, S. A., 2014). Other research could include administrators to determine their aspect of the school closures and the challenges they faced in providing internet connection and technology to students and teachers. Administrators generally look at situations from different perspectives than teachers. Further studies could use a mixed methods approach to study teacher adaptability and burnout. A mixed-method design would allow researchers to observe the tenets of self-efficacy and quantify factors of adaptability and teacher burnout. For example, researchers could observe specific self-efficacy tenets and, with a measuring tool, gauge the extent to which teachers demonstrated burnout during the COVID-19 transition to online teaching. Research consistent with teacher burnout, Daley (2021) reported that more than 40% of teachers completing a survey said they considered leaving or retiring, and over half of those said it was because of the pandemic (p.2).

Summary

Teachers play a significant role in the overarching fundamentals of student success and learning. Challenges are potentially added to a teacher's practice when there is a mandate to transition quickly to different modes of instruction during a pandemic crisis. The absence of physical presence may be one such challenge. The preparation of teachers is crucial to help guarantee they are equipped with the skills and knowledge for success. Self-efficacy is a crucial factor to be considered in this process, as it is the personal belief that an individual can be successful. Self-efficacy is significant when considering having ability and using the ability in stressful situations. Another critical piece to consider is a person's competence to quickly adapt to new teaching modes and strategies without warning and training.

Chapter II reviews the literature on teacher self-efficacy and online learning regarding teachers transitioning to the online teaching method during the COVID-19 outbreak. When the pandemic hit, nearly every school district switched drastically to finding optional ways to educate their students. The most noted option was online remote teaching. Therefore, the beginning of Chapter II discussed the COVID-19 outbreak when the virus was declared a pandemic by the World Health Organization (WHO) (2020). Information was provided about the following topics: The move to online education, students' online learning, effective teachers, facilitating student learning, the impact of student learning, benefits of online learning, and challenges of online learning. Then the

chapter provided information regarding types of instruction, asynchronous learning, synchronous learning, blended learning, hy-flex learning, project-based learning, and Google Classroom.

Finally, the chapter provided information regarding teacher confidence, confidence levels, facilitating student learning, adapting from traditional school, the pandemic, and the necessity for teacher self-efficacy, mastery experiences, vicarious experiences, verbal persuasion, and physiological and affective states. These four tenets are the overarching umbrella of self-efficacy.

Chapter III provided an outline of the research methodology I used to answer the research questions. The chapter discussed the procedures, study participants, data collection, my role as a researcher, and bias I may have. It also discussed the research design, data collection methods, data analysis, strategies for verification, and a list of questions I used to interview participants. Bandura's theory of self-efficacy was used to develop a theory on teachers' self-efficacy in transitioning from traditional instruction to online learning modes during a pandemic.

Chapter IV offered a narrative description of the setting and participants. Chapter V analyzed the data from interviews, observations, and artifacts through the lens of Bandura's (1995) SET. The analysis included how teachers with high and low self-efficacy adapted to changing teaching demands for online learning during the pandemic.

The findings in the study revealed all participant teachers coordinated, collaborated, and researched to adapt their courses to online methods to meet student learning needs. All teachers in this study demonstrated high and low efficacy at various levels during the study. They modeled effective instructional practices and made decisions through forethought, learning to boost their self-efficacy. The findings indicated there are some similarities and differences in adaptations across teachers with higher and lower self-efficacy. The similarities revealed all teachers expressed feeling physiological and affective states of anxiety about the transition to online teaching. Other similarities revealed teachers banded together with a willingness to try a new approach of strategizing together to determine the best methods of meeting the learning needs of students. The teachers demonstrated commitment to transitioning courses to online methods through the study.

Chapter VI answered each research question and illustrated how Bandura's (1995) theory could explain how higher and lower self-efficacy teachers adapted their courses to online methods during the pandemic to meet student learning needs.

Researcher's Reflection

I chose FMS as the site for this study because of its size, location, demographics, and availability of outstanding middle school teachers. I was interested in the site because I felt that it offered unique factors necessary to produce a remarkable illustration of teachers' experiences with self-efficacy at a middle school campus during the pandemic.

Although confidence is similar to self-efficacy, I discovered the term self-efficacy is unfamiliar to the participant teachers. I also discovered the teachers at FMS have great concern and care for their students. These teachers were the front line of support for students and families. It was interesting to see teachers riding the daily routes on the school buses to pass out food packets to students. I widened my understanding of online teaching and the technical joys or defeats of having internet that works or not.

It is difficult to relate until a person has experience in certain matters. I now fully understand the saying, "walk a mile in my shoes." My perspective of teachers' support for their students has shifted dramatically to more understanding and empathy.

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APPENDICES

APPENDIX A

Table 1

Alignment of Data Collection Strategies

Research Questions	Teacher Participant Questions	Observations	Documents	Artifacts
How did teachers with high self-efficacy adapt their teaching to meet student learning needs during the pandemic?	2, 3, 6, 9	School Environment Teacher Interactions With co-workers	Student assignments Teacher Google docs lesson plans	E-mail Correspondence Observation Notes
How did teachers with low self-efficacy adapt their teaching to meet student learning needs during the pandemic?	2, 3, 6, 9	Technology resources School Environment	Student assignments	Observation notes
How did adaptations to teaching differ across teachers with **high self-efficacy** and	3, 4, 5, 9	Student Interactions with Courses Teacher Interactions with Courses	Teacher generated documents Student Assignments	E-mail Correspondence Observation Notes

low self-efficacy?		School Environment		
How did Bandura's SET explain these adaptations?	5, 8, 9	Technology Resources	Student Assignments	Observation Notes E-mail Correspondence

APPENDIX B

Interview Questions for Participants

1) Tell me about the academic subject(s) you teach?
2) Describe your preparation to transition to Asynchronous online teaching during the pandemic school closures in March 2021 – May 2021.
3) Describe how COVID-19 affected your teaching methods/strategies (if any).
4) What challenges or successes did you encounter when transitioning to online teaching and while teaching online (if any)?
5) In what way(s) did teaching online effect your confidence to teach (if any)? And Describe what online teaching looked like for you.
6) Describe how you adapted your teaching to meet student learning needs during the pandemic?
7) What effect did the school closures have on reaching and teaching students?
8) How did you keep motivated during the pandemic?
9) Describe the way you adjusted your lessons to the proper level for individual students during the pandemic school closings.
10) How did you motivate students who showed little or no interest in online learning?

11) Is there anything else you would like to share?

Appendix C

Observations Code Protocol

I will observe teacher's daily activities to see the operational meaning of what teachers have said, which will provide a context for interpreting their words and activities.

Date_____/Time_____

Place_____/Location_____

Descriptive Notes	Reflective Notes
The participants: Describe who is in the scene, how many people, and their roles.	
The room setting: What is the physical environment like? What kinds of behavior does the setting promote or prevent?	
Lessons Plans: Notice the Pre/Post Pandemic plans. Are there any differences or changes?	
Subtle factors: Notice nonverbal communication, such as physical space, and	

physical clues. What does not happen, and what is said between student and teacher?	
Physical settings: Are there technologies present? What is the space allocation? Do each student have technology equipment and sufficient space to work for student assignments?	
Activities and interactions: What is going on? Are there teacher emails? Is there a definable sequence of activities? How are the people and the activities connected or interrelated?	

Appendix D

Table 2

Teachers' Sense of Efficacy Scale1 (short form)

Teacher Beliefs	**How much can you do?**								
Directions: This questionnaire is designed to help us gain a better understanding of the kinds of things that create difficulties for teachers in their school activities. Please indicate your opinion about each of the statements below. Your answers are confidential.	Nothing		Very Little		Some Influence		Quite A Bit		A Great Deal
1. How much can you do to control disruptive behavior in the classroom?	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
2. How much can you do to motivate students who show low interest in school work?	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
3. How much can you do to get students to believe they can do well in school work?	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
4. How much can you do to help your student's value learning?	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
5. To what extent can you craft good questions for your students?	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
6. How much can you do to get children to follow classroom rules?	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
7. How much can you do to calm a student who is disruptive or noisy?	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
8. How well can you establish a classroom management system with each group of students?	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
9. How much can you use a variety of assessment strategies?	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
10. To what extent can you provide an alternative explanation or example when students are confused?	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
11. How much can you assist families in helping their children do well in	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)

school?	
12. How well can you implement alternative strategies in your classroom?	(1) (2) (3) (4) (5) (6) (7) (8) (9)

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

To determine the *Efficacy in Student Engagement, Efficacy in Instructional Practices*, and *Efficacy in Classroom Management* sub-scale scores, we compute un-weighted means of the items that load on each factor. Generally these groupings are:

Short Form

Efficacy in Student Engagement:	Items 2, 3, 4, 11
Efficacy in Instructional Strategies:	Items 5, 9, 10, 12
Efficacy in Classroom Management:	Items 1, 6, 7, 8

Appendix E

Table 4

FMS Teachers Self-Efficacy Scores

Name	Student Engagement Efficacy	Instructional Strategies Efficacy	Classroom Management	Total Score	Composite Efficacy Score
Carpenter	2544	9976	3235	59	4.91
Sha'ban	5533	6975	4444	59	4.91
Sweets	5445	9876	5545	67	5.58
Bryd	5455	8877	5566	71	5.91
Grams	6647	9999	6447	80	6.66
Ashe	4456	9997	5745	74	6.16
Bells	4459	9999	8245	77	6.41
SheRa	6655	7999	7666	81	6.75
Wettell	8768	9999	9877	96	8.00
Da'miel	4445	7677	1535	58	4.83
Stark	5667	8789	5658	80	6.66
Bugsy	6658	8999	6778	88	7.33
He-Man	3445	7778	5445	60	5.00
Norkan	3346	5666	4443	54	4.50
Orko	4457	7888	5656	73	6.08
Timire	7679	9999	7999	99	8.25
Olivia	4566	8989	4776	79	6.58
Penny	6879	9999	9989	101	8.41
Benns	5647	9878	6778	82	6.83
Demar	7789	8899	8887	96	8.00
Teela	3455	8768	3665	66	5.50
Skeletor	3544	8876	4336	61	5.09

Note. Adapted from Tschannen-Moran & Hoy, A. W. (2001). Teacher efficacy: capturing an elusive construct. *Teaching and Teacher Education, 17(7*), 783–805. https://doi.org/10.1016/S0742-051X(01)00036-1

Oklahoma State University Institutional Review Board

Date:	04/22/2022
Application Number:	IRB-22-187
Proposal Title:	Teachers' Self-Efficacy in Transitioning from Traditional Instruction to Online Learning Modes During a Pandemic: A Case Study
Principal Investigator:	Dianna Humphrey
Co-Investigator(s):	
Faculty Adviser:	Ed Harris
Project Coordinator:	
Research Assistant(s):	
Processed as:	Exempt
Exempt Category:	

Status Recommended by Reviewer(s): Approved

The IRB application referenced above has been approved. It is the judgment of the reviewers that the rights and welfare of individuals who may be asked to participate in this study will be respected, and that the research will be conducted in a manner consistent with the IRB requirements as outlined in 45CFR46.

This study meets criteria in the Revised Common Rule, as well as, one or more of the circumstances for which continuing review is not required. As Principal Investigator of this research, you will be required to submit a status report to the IRB triennially.

The final versions of any recruitment, consent and assent documents bearing the IRB approval stamp are available for download from IRBManager. These are the versions that must be used during the study.

As Principal Investigator, it is your responsibility to do the following:

1. Conduct this study exactly as it has been approved. Any modifications to the research protocol must be approved by the IRB. Protocol modifications requiring approval may include changes to the title, PI, adviser, other research personnel, funding status or sponsor, subject population composition or size, recruitment, inclusion/exclusion criteria, research site, research procedures and consent/assent process or forms.
2. Submit a request for continuation if the study extends beyond the approval period. This continuation must receive IRB review and approval before the research can continue.
3. Report any unanticipated and/or adverse events to the IRB Office promptly.
4. Notify the IRB office when your research project is complete or when you are no longer affiliated with Oklahoma State University.

Please note that approved protocols are subject to monitoring by the IRB and that the IRB office has the authority to inspect research records associated with this protocol at any time. If you have questions about the IRB procedures or need any assistance from the Board, please contact the IRB Office at 405-744-3377 or irb@okstate.edu.

Sincerely,
Oklahoma State University IRB

[CONSENT FORM]

Teachers' Self-Efficacy in Transitioning from Traditional Instruction to Online Learning Modes During a Pandemic: A Case Study

Key Information

Study Purpose: The purpose of this qualitative case study is to explain through the lens of Bandura's self-efficacy theory how teachers with different strengths of self-efficacy adapted to changing teaching demands for online learning during the COVID-19 pandemic.

Major Procedures of the Study: If you agree to participate in this study, you will be asked:
To complete a 12 item Likert survey titled Teachers' Sense of Efficacy Scale (TSE).
The Teacher Sense of Efficacy Scale was formerly called the Ohio State Teacher Sense of Efficacy Scale, and was developed by Tschannen-Moran, and Hoy (2001), to determine the Efficacy in Student Engagement, Efficacy in Instructional Practices, and Efficacy in Classroom Management.

You will be asked permission for me to visit your classroom, to observe your teaching practices and methods. You will also be asked to participate in an approximately one hour interview, held during your planning period, by Zoom, or in person. Interview questions are attached. Then finally, you will be asked if I can visit your classroom, to observe your teaching practices.

Duration of Participation: The research will be done from April 2022 through September 2022.

Significant Risks: The risk of participating is minimal, and are no more than everyday life

Potential Benefits: There will be no direct benefit to you for your participation in this study.

Compensation: There is no compensation for participating in this study.

Background Information

You are invited to be in a research study of how teachers with different strengths of self-efficacy adapted to changing teaching demands for online learning during the COVID-19 pandemic.

You were selected as a possible participant because you are a teacher at the specified middle school where the study will occur. We ask that you read this form and ask any questions you may have before agreeing to be in the study. Your participation is entirely voluntary.

This study is being conducted by: Dianna Humphrey, a student at Oklahoma State University, School of Educational Foundations, Leadership and Aviation, under the direction of Dr. Ed Harris, a professor at the university.

Approved: 04/22/2022
Protocol #: IRB-22-187

Procedures

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

Allow me permission to visit your classroom, to observe your teaching practices and methods. Allow screenshots to be taken of your lesson plans. Allow the interviews to be recorded.

Participation in the study involves the following time commitment: The researcher interviews will last approximately one hour or less. Completing the Teacher Self Efficacy survey questions may take approximately 20 minutes. If there are any follow-up questions for clarification of responses to interview questions should be around 20 minutes. A total of three hours may be required of you.

Risks and Benefits of being in the Study

There are no known risks associated with this project, which are greater than those ordinarily encountered in daily life.

The benefits to participation are:

There are no direct benefits to you. More broadly, this study may help the researchers learn more about Self Efficacy during crisis, and may help future researchers design interventions to help with a continuum of education during a crises situation.

There is a potential risk of breach of confidentiality which is minimized by keeping all data in locked cabinets or on a personal computer that can only be opened by biometrics.

Compensation

You will receive no payment for participating in this study.

Confidentiality

The information that you give in the study will be handled confidentially. Your information will be assigned a code number/pseudonym. The list connecting your name to this code will be kept in a locked file. When the study is completed and the data have

been analyzed, this list will be destroyed. Your name will not be used in any report. Your identity will not be revealed in any publications, presentations, or reports resulting from this research study.

We will collect your information through interviews, and audio recordings. This data will be stored on personal computer which requires bio identifiers to unlock. Within 48 hours of transcribing interviews, verifying and analyzing data, the information will be destroyed. This informed consent form will be kept for the required minimum 3 years after the study is complete, and then it will be destroyed.

It is unlikely, but possible, that others responsible for research oversight may require us to share the information you give us from the study to ensure that the research was conducted safely and appropriately. We will only share your information if law or policy requires us to do so.

Voluntary Nature of the Study

Your participation in this research is voluntary. There is no penalty for refusal to participate, and you are free to withdraw your consent and participation in this project at any time. The alternative is to not participate. You can skip any questions that make you uncomfortable and can stop the interview/survey at any time.

Contacts and Questions

The Institutional Review Board (IRB) for the protection of human research participants at Oklahoma State University has reviewed and approved this study. If you have questions about the research study itself, please contact the Principal Investigator at 918-852-0923, hdianna@okstate.edu.

If you have questions about your rights as a research volunteer or would simply like to speak with someone other than the research team about concerns regarding this study, please contact the IRB at (405) 744-3377 or irb@okstate.edu. All reports or correspondence will be kept confidential.

You will be given a copy of this information to keep for your records.

Statement of Consent

I have read the above information. I have had the opportunity to ask questions and have my questions answered. I consent to participate in the study.

Indicate Yes or No:

I give consent to be audiotaped during this study.

___Yes ___No

I give consent to be videotaped during this study:

___Yes ___No

I give consent for my identity to be revealed in written materials resulting from this study:

___Yes ___No

I give consent for my data to be used in future research studies:

___Yes ___No

I give consent to be contacted for follow-up in this study or future similar studies:

___Yes ___No

Signature:_____ Date: _____

Signature of Investigator:_____ Date: _____

Approved: 04/22/2022

Protocol #: IRB-22-187

VITA

Dianna P. C. Humphrey

Candidate for the Degree of

Doctor of Education

Dissertation: TEACHERS' SELF-EFFICACY IN TRANSITIONING FROM TRADITIONAL INSTRUCTION TO ONLINE LEARNING MODES DURING A PANDEMIC: A CASE STUDY

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