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Teachers' Perceptions of Transition to Emergency Remote and Hybrid Instruction

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This is to certify that the doctoral study by

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Walden University
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Abstract

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MS, Walden University, 2010

BA, Seattle Pacific University, 2002

Dissertation Submitted in Partial Fulfillment

of the Requirements for the Degree of

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Abstract

There is a gap in understanding challenges rural high school teachers faced when adapting to remote and hybrid instruction during the COVID-19 pandemic. The purpose of this qualitative case study was to investigate challenges that teachers faced when implementing strategies, curriculum, and technology during the transition to remote and hybrid learning because of the pandemic. The conceptual framework of self-efficacy guided this qualitative case study. The research question addressed challenges that professional teachers at a rural public 9-12 grade high school faced regarding strategies, technologies, and curriculum as they transitioned to remote and hybrid instruction in the 2020-2021 school year during the COVID-19 pandemic. Seven educators who taught at a rural high school during the 2020-2021 school year were interviewed. Data was analyzed through inductive coding, sorted into categories, and revealed five themes related to challenges including continuously changing expectations, lack of student engagement at home, discrepancies between structured curriculum and freedom to choose curriculum, and mixed feelings involving technology self-efficacy. The fifth theme was that teachers felt pride and demonstrated resilience as they struggled through the pandemic. Results indicate that clearer expectations, technology training, and colleague collaboration might help educators with remote and hybrid teaching in the pandemic. Knowledge and understanding related to teaching in the pandemic can lead to positive social change in that high school and district leadership can better help teachers to guide students through remote and hybrid instruction, therefore molding learners into citizens of the future.

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Dedication

I dedicate this dissertation to my dad, Victor Wayne Whitehead, and in memory of my mom, Corlie Ann Whitehead, who both taught me the value of hard work, following my dreams, and never giving up. I love them both very much.

Acknowledgments

I would like first to acknowledge my committee chair, Dr. Evelyn H. Ogden, who has been very thorough and realistic throughout the writing process. I could not have gotten this far without her positive encouragement and thoughtful conversations. I would also like to thank Dr. Ashraf M. Esmail, my second committee member, for his thought-provoking feedback.

I would like to thank my friend Toni Beckett, who encourages me to continue my studies. I also recognize Kim Kearns, who allows me to bounce ideas off her almost daily. I would also like to acknowledge my friends Maria Cofrancesco and Charlotte Jardine, who have been through the process and been encouragers of my own process.

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Chapter 1: Introduction to the Study

The emergency school shutdown due to the COVID-19 pandemic has affected the way U.S. educators instruct students. After the initial school shutdown in March 2020, schools went through various transitions between remote instruction, hybrid instruction, and no instruction. For example, Lieberman (2020) states "increases in COVID-19 spread have forced some schools in hybrid mode to revert to full-time remote learning, while others started fully remote and are now slowly transitioning more students to some in-person instruction" (p. 1). The transition to hybrid and remote learning with technology was relatively abrupt, whereas traditional in-person instruction has been around for over a century (Lieberman, 2020).

Because the transition to remote and hybrid instruction happened rapidly, not much is understood about challenges teachers faced when asked to change their instructional strategies or curriculum suddenly. Teachers accustomed to traditional face-to-face learning needed to teach in entirely new ways that incorporated fully online or hybrid models. Lieberman (2020) noted that some teachers felt overwhelmed by the recent technology demands in instruction due to the pandemic, while others adapted well to the pedagogy shift. The transition to remote and hybrid teaching allowed educators to review their current teaching practices and philosophies to reimagine their teaching (Flynn & Noonan, 2020). The concern for professional educators is not only how they are teaching but also what they are teaching.

Emergency remote instruction requires teachers to provide a cohesive and streamlined curriculum that can transition easily between remote and hybrid instruction (Aguilar, 2020). During the 2020-2021 school year, teachers faced a gap in student knowledge due to school closures in March 2020, along with students' inability to learn through online platforms. Social-emotional learning and coping strategies were integrated into curricula to help students transition to and deal with crises involving emergency learning (Burde et al., 2017; Lieberman, 2020; Schwartz, 2020). This mode of hybrid instruction may continue as schools must prepare to switch between traditional and hybrid learning modalities immediately if a future emergency occurs (Schwartz, 2020).

Because of changes made to teaching strategies and curricula due to the COVID-19 pandemic, this study will be useful for leaders to understand challenges educators have faced during the first full school year of the pandemic. Knowledge of educator self-efficacy during the pandemic can help districts better prepare for rapid shifts when future emergencies arise. Also, because hybrid and remote instruction may continue in the long term, school leaders need to know what challenges educators must overcome to persevere in the technology-rich 21st century school landscape.

Chapter 1 includes information about emergency remote and hybrid instruction. After a brief review of background literature, the problem, purpose, and research question are addressed. I address the conceptual framework of the study as well as its nature and relevant key terms. Assumptions, scope and delimitations, and limitations are also

addressed. Finally, I explain how the study will impact social change in the field of education and the rural site in which the study is conducted.

Background

Emergency remote teaching (ERT), also referred to as teaching during emergencies and emergency distance learning, affects curricula and instructional methods employed by teachers (Aguilar, 2020; Burde et al., 2017; Trust & Whalen, 2020). Emergencies can mean natural disasters, such as floods and epidemics, or conflict situations such as wars and terrorist attacks. A study by Burde et al. (2017) explored the idea of ERT as a humanitarian effort packaged as peace to war-torn states, however the emergencies described covered temporary disasters whereas the pandemic has continued for more than a year. The COVID-19 pandemic has also been the first global health crisis to occur in the digital age (Bozkurt & Sharma, 2020).

U.S. teachers are behind other countries, such as Canada, Finland, and Japan, in their acquisition of technology skills (Cai & Gut, 2020). Aguilar (2020) stated that educators often lack confidence in their technical abilities. When teaching in remote or hybrid environments, technology is a vital tool to help educators stay connected to students. Aguilar (2020) stated a gap in knowledge of teachers' ability to effectively incorporate technology through online and hybrid models during the pandemic. As a result of teaching remotely, students in emergency situations are challenged to become more self-driven and autonomous learners. If teachers feel more confident in their ability to teach through technology platforms, students may, in turn, feel more comfortable

learning through technology applications (Rasheed et al., 2020). Hybrid models introduce the addition of teaching both remote and in-person students in synchronicity; thus, educators are challenged with using technology and managing online classrooms while simultaneously teaching in-person students. In the hybrid model, students, both in-person and remote, participate in these synchronous learning environments, as well as self-directed learning through asynchronous applications.

Pulham and Graham (2018) note that though literature addresses online and hybrid instructional models as supplements to traditional pedagogies, there is a gap in literature involving the study of teacher perceptions of rapid transitions to and between these models because of an emergency. Understanding challenges K-12 teachers face during rapid transitions to remote instruction can better prepare them for future educational transitions due to emergency situations. According to Rasheed et al. (2020), teacher perceptions of their instructional efficacy and challenges faced during emergency remote learning situations are not well researched or understood. Bidwell et al., (2020) notes, “the transition to ERT was difficult and disrupted student learning, but ultimately was manageable and more desirable than canceling classes altogether” (p. 67).

Problem Statement

The problem is that rural U.S. high school teachers faced challenges when adapting to teaching during the COVID-19 pandemic. Researchers need to identify and understand those challenges that rural high school teachers faced in implementing new strategies, technologies, and curriculum as they transitioned to remote and hybrid

instruction. Chaturvedi et al. (2021) recommended that school researchers "should carefully analyze the issues experienced during sudden transition to online learning" (p. 6). König et al. (2020) suggests further research in challenges adapting to online teaching during the COVID-19 pandemic is needed for a deeper understanding of the topic. Trust and Whalen (2020) suggest further research is needed in how educators use technology in ERT and what differentiates blended teaching, online teaching, and ERT.

In the U.S., teachers fall behind countries such as Canada and Finland in terms of digital literacy skills (Cai & Gut, 2020). Twenty-first century skills, including use of technology, put teachers out of their comfort zone pedagogically (Martinovic et al., 2019). The COVID-19 pandemic has required teachers to tap into their digital pedagogy knowledge. Yet Kaden (2020) and Martinez and Broemmel (2021) noted that only a few qualitative empirical studies have been published on the topic. Therefore, researchers must further study the challenges teachers, such as those in rural high schools, encounter during emergency remote instruction.

In the West State School District (pseudonym), a small rural public school district in a western state, the COVID-19 pandemic required teachers to rapidly transition between remote online and hybrid instructional models during the 2020-2021 school year. These teachers were unprepared to teach remotely, as they had planned only for teaching students in person. The local school board then adopted a preloaded fully online curriculum and learning management system for remote and hybrid instruction for the 2020-2021 school year, requiring teachers to learn new online curriculum and computer

applications. The district adopted the new online curriculum to teach both remote and in-person hybrid models simultaneously. The district reasoned that the online curriculum would allow teachers to transition to and from hybrid and online models if needed.

West High School teachers, however, have expressed negativity towards the task of teaching remotely. The West State School District Superintendent relayed a memo to staff ensuring that both students and teachers were experiencing challenging issues with the new online curriculum platforms. Without specific research delineating the challenges teachers face, modifications to the program are unlikely to be made, additional professional development may not be provided to teachers, and alternative curricula may not be explored. Teachers at West High School, who taught during the pandemic, faced some challenges in preparing students for learning through remote and hybrid teaching as it was different from the face-to-face pedagogy to which they were accustomed. Changes to past and current teaching strategies, curriculum, and technology use may be needed to ensure a smooth transition between remote and hybrid models for both teachers and students.

Purpose of the Study

The purpose of the qualitative case study was to investigate challenges that certified high school teachers in a rural western public school district face as they implemented strategies, technologies, and curricula when they transitioned to remote and hybrid instruction during the 2020-2021 school year. The phenomenon of ERT via strategies related to curriculum and technology self-efficacy of teachers at West High

School during the pandemic was explored in this study. Data were collected via interviews and were related to research to gain a deeper understanding of teachers' self-efficacy in ERT.

Research Question

The research question that I addressed is:

What challenges do professional teachers at a rural public 9-12 grade high school face regarding strategies, technologies, and curriculum as they transition to remote and hybrid instruction in the 2020-2021 school year during the COVID-19 pandemic?

Conceptual Framework

Bandura's theory of self-efficacy was used to support this study of ERT. Bandura (1993) noted the more a teacher has belief in their abilities, the better they can help students achieve learning progress. Therefore, the more teachers know about remote and hybrid teaching during emergency remote and hybrid instruction, the greater the chance for student success through online and hybrid learning. Through overcoming challenges faced during ERT, teachers can build upon and strengthen existing self-efficacy (Bandura, 1977; Trust & Whalen, 2020). Teachers can also hinder beliefs in their own ability when mastery is not achieved or observed in others. Identifying challenges is a step toward facing and overcoming them to build mastery and strengthen self-efficacy.

To study teachers' efficacy related to the transition to remote and hybrid instruction, the *ERT Survey Protocol* created by Trust and Whalen (2020) and the *K-12 Blended Teaching Readiness Survey* by Graham et al. (2019) were adapted for the *ERT*

Interview Protocol (see Appendix A) used in this study. Permission from Whalen to adapt the *ERT Survey Protocol* was received via email correspondence (see Appendix B). Graham has approved use and adaptation of the *K-12 Blended Teaching Readiness Survey* via email correspondence (see Appendix C). Kuusinen (2016) noted that self-efficacy is difficult to measure; however, studying teachers' perceptions of their ability and willingness to complete certain instructional tasks can help provide a measure of self-efficacy. These surveys were adapted for this study to ask West High School teachers to explain their perceived ability to complete tasks required of hybrid learning during the 2020-2021 school year. ERT was examined as it relates to the COVID-19 pandemic emergency.

The *K-12 Blended Teaching Readiness Survey* was previously used by Anoba and Cahapay (2020) to determine teacher readiness for hybrid learning during the COVID-19 pandemic. The *ERT Survey Protocol* was used by Trust and Whalen (2020) to address the concept of self-efficacy through successes and challenges teacher face during ERT in the pandemic. Use of the *ERT Interview Protocol* may help to provide information about teacher self-efficacy in relation to instructional strategies, curriculum, and technology during the pandemic through an examination of perceived challenges and successes of teachers at West High School.

Nature of the Study

Because the study's purpose was to explore emergency transitions to remote and hybrid instruction, the chosen methodology was a qualitative case study. Case study

research involves understanding a real-world context or case at a specific time and under certain conditions (Yin, 2018). The West State School District was studied, and certificated classroom teachers at West High School who taught in emergency remote and hybrid settings due to the COVID-19 pandemic were solicited for interviews. Permission from the superintendent of the West State School District was granted via email (see Appendix D) to study the phenomenon of the transition to remote and hybrid instruction via West High School teachers' perceptions.

Case studies allow researchers to explore multiple data points, including interviews, to build a more thorough and robust understanding of cases under study (Ravitch & Carl, 2021; Yin, 2018). I used online interviews with state certificated West High School teachers as the main data source. A case study is the most appropriate qualitative method for an exploratory research study (Ravitch & Carl, 2021). I analyzed trends in data for the purpose of understanding and not forming a theory or evaluating as in other types of qualitative research methods. Since this study is bounded by the COVID-19 pandemic and the research question is specific to job conditions involving remote and hybrid instruction, a case study research methodology is most appropriate. I studied curricula, strategies, and technology aspects of data from the cases. In-depth justification of the case study method and exclusion of other qualitative methodologies is described in detail in Chapter 3.

Conducting interviews and thematically analyzing transcript data is a method that can be used to deepen understanding of peoples' perceptions of a phenomenon (Rubin &

Rubin, 2012). Quantitative researchers generally use multiple choice responses, whereas qualitative researchers use open-ended responses to deepen understanding of participants' perceptions. After explaining the project to teachers at West High School and soliciting volunteers, I set up and conducted one-on-one virtual interviews with certificated high school teachers using the *ERT Interview Protocol* (see Appendix A). Because social distancing was still a requirement, I conducted interviews using Zoom online. Interviews were audio recorded for fidelity purposes and transcribed verbatim for coding and thematic analysis.

Interviewees were also asked to complete questionnaires regarding the transition to emergency remote and hybrid instruction during the pandemic, but this data source yielded insufficient data to be used in the study. Using methods described by Saldaña (2016) collected data were inductively coded to identify categories and then overarching themes. Chapter 3 includes more detail on the methodology, data collection, and data analysis of this study.

Definitions

Asynchronous learning: Online learning that occurs on the student's own time. Activities have due dates but not specific times that the student must be online to do them. Teachers can leave feedback but do not interact simultaneously with students (Archibald et al., 2021).

Curriculum: The subject that is taught, including standards, objectives, skills, and content knowledge (Constantinou, 2019).

Emergency instruction: Any change from traditional face-to-face instruction due to a catastrophic event such as a tornado, earthquake, wildfire, or pandemic. These changes can be remote (online), or hybrid (blend of in-person and online) learning (Trust & Whalen, 2020).

Emergency remote teaching (ERT): The act of instructing from a distance via mobile device or computer when a tragedy such as a pandemic occurs and the teacher is required to perform instructional duties atypical of traditional in-person classrooms (Trust & Whalen, 2020; Whittle et al., 2020).

Hybrid instruction: A combination of face-to-face learning enhanced with technology. Includes students both remote and in-person learning synchronously as well as remote learning asynchronously. Also called blended learning (Graham et al., 2019; Rasheed et al., 2020).

Hybrid teaching: Instructing both in-person and remote students synchronously and asynchronously during the course of study (Lieberman, 2020; Pulham & Graham, 2018).

Instructional strategies: Ways in which educators deliver curriculum to students through learning experiences, whether through traditional or technological means (Haverback, 2020).

Instructional technology: Any electronic device, such as computers and tablets, or applications that are used to deliver content or learning experiences to students (Openo, 2020).

Remote learning: Type of learning which occurs over a distance and is supported by technology via synchronous or asynchronous applications or paper instructional resources (Rasmitadila et al., 2020; Santi et al., 2020). It can also be called distance or online learning.

Rural: Towns or areas that have a lower population density, usually less than 1000 people per square mile and fewer than 500 people per square mile in areas nearby, according to the U.S. Census Bureau (Ratcliffe et al., 2016).

Self-efficacy: Belief in capability of achieving success in an activity, which ultimately determines the outcome of the activity (Bandura, 1977; Santi et al., 2020). Perceived self-efficacy is a person's belief in their own capacity, which affects their behavior choices and level of motivation toward activities (Bandura, 1977; Santi et al., 2020).

Synchronous learning: Type of learning which occurs online or in person at a specific time so that teachers can interact with students in real time (Archibald et al., 2021).

Assumptions

I assumed that all 9-12 grade certificated educators who agreed to participate in the study were teaching in an emergency remote or hybrid learning environment due to the COVID-19 pandemic. I also assumed collected data provided a depth of understanding that was thick and rich considering the case study site. Lastly, I assumed that teacher volunteer participants responded truthfully to all questions. In a case study,

the researcher assumes all participants are part of the case and case site, have experienced the phenomenon under study, and provide rich data for a thorough thematic analysis of cases in the study (Yin, 2018).

Scope and Delimitations

The study covers the topics of instructional strategies, technology, and curriculum related to the ERT caused by the COVID-19 pandemic. The study was restricted to state certificated high school teachers in the rural West State School District at West High School who were teaching both face-to-face instruction before the March 2020 school closures and during the COVID-19 pandemic 2020-2021 school year in emergency remote and hybrid model instruction. Participation in the study included voluntary completion of a researcher-led online synchronous interview. The participants were be asked to include questionnaire data to support and triangulate the thematic analysis of interview data, but it yielded insufficient data to be of use in this study.

Limitations

One limitation is that the West State School District and West High School are in rural areas. Because of the district's size, there was a limited sample of participants willing to commit to interviews and questionnaires. Another limitation was that participants may not have responded to the interview protocol and questionnaire honestly and truthfully; each participant differed in terms of degree of cognitive appraisal of their perceptions of the phenomenon. Due to the parameters of a bounded case study and the

rural sample population from which to pool participants, data analysis and results may not be transferable to other school sites and settings.

I worked in the West State School District. I have professionally interacted with some of the participants at professional district in-service workshops. Throughout the data collection process, I used the concept of reflexivity to continually assess my own biases and worked to separate them from collected data and participants' perceptions.

Significance

This study may be useful to administrators and district officials at the West State School District. Deeper understanding of how teachers transition to emergency remote and hybrid instruction might help district officials provide needed services for their staff. Results of research may also affect administrative decisions concerning form and content of emergency remote instruction. Information on teacher challenges related to emergency remote and hybrid learning will increase teachers' knowledge, which increases self-efficacy, which ultimately leads to improved student learning (Bandura, 1993). Studying barriers and challenges teachers have faced during the COVID-19 pandemic may also increase teachers' knowledge of instruction in future emergency educational events. Increased knowledge and understanding of ERT could lead to social change in that students, who are future citizens, can benefit more when teachers have a higher self-efficacy in terms of their ability to teach during remote and hybrid instruction. Administrators' knowledge and understanding of teacher perceptions may help them to aid educators in increasing teacher self-efficacy through mastery experiences. Bandura

(1977) stressed the importance of changing self-efficacy through experience. Social change begins with knowledge, which leads to understanding, which ultimately leads to positive change (Fullan, 2011); therefore, research knowledge may lead to teacher understanding which may lead to positive student outcomes.

Positive teacher efficacy is associated with increased learning outcomes (Bandura, 1993), which is fundamental to student education. Researchers, including Santi et al. (2020) and Rasmitadila et al. (2020), suggest that further study of teacher perceptions during ERT should be conducted by researchers. Bond (2020) noted that few studies have researched public U.S. K-12 teacher instructional challenges involving emergency remote and hybrid teaching due to the COVID-19 pandemic, as most studies were from international sources. During the course of conducting this study, more research has been published on the topic. In this study, I examined teachers' perceptions concerning curricula, technology, and instructional strategies used in ERT at West High School during the COVID-19 pandemic.

Summary

ERT has become a reality for many educators in the U.S. due to the COVID-19 pandemic. The purpose of this study was to understand challenges associated with emergency remote instruction in a rural public school setting at West High School via the concept of Bandura's theory of self-efficacy. Curricula, instructional strategies, and technology were explored in this qualitative research case study. Data collection and thematic analysis were used to summarize ERT in West High School. Insight into the

challenges and efficacies of West High School teachers during the COVID-19 pandemic may inform the field of education for future emergencies. In Chapter 2, conceptual and literature-based support for the study is provided in terms of the problem, purpose, and research question.

Chapter 2: Literature Review

The purpose of the case study was to explore challenges that West High School teachers faced as they implemented strategies, curricula, and technologies when they transitioned to remote and hybrid instruction. To better understand how strategies, technologies, and curricula are implemented into emergency remote and hybrid instruction, concepts of online and hybrid learning, emergency remote instruction, and 21st century technology use were explored. The literature on these concepts was explored and summarized using Bandura's theory of self-efficacy.

In Chapter 2, the process for researching relevant literature is explained. Then, historical literature related to the concept of Bandura's self-efficacy is addressed. Next, literature on the concepts of self-efficacy, instructional strategies, curriculum, and technology is explored, followed by a summary of the research problem, purpose, and question.

Literature Search Strategy

Walden University Library databases were searched for articles directly related to emergency remote and hybrid teaching and learning. Databases included ERIC, Education Source, SAGE Journals, Academic Source Complete, and Google Scholar. Included are full-text peer-reviewed articles published in the English language between 2017 and 2021. All non-English language articles, articles dating before 2017, and articles that were not accessible in full-text versions through the library were excluded.

Articles dating before 2017 were used only for the conceptual framework portion of the literature review.

The following keywords were used both individually and in various combinations to search for relevant literature: *emergency remote learning, ERT, emergency remote teaching, blended learning, online learning, online teaching, high school,* and *COVID-19*. Since several relevant articles met search criteria, I made reviews of abstracts to determine which articles met inclusion criteria and made contributions to literature addressing my research question. I also used reference sections of articles to locate other relevant sources.

Overall, 50 articles were used for the study as they met both inclusion and content criteria and provided relevant information. Of the 50 articles cited in the literature review, nine are qualitative, 15 are quantitative, nine are mixed methods with descriptive quantitative statistics, six are literature reviews, six are theoretical, and five are other types of articles. Concepts are grouped into four categories: self-efficacy, instructional strategies, curricula, and technology.

Conceptual Framework

ERT is a relatively new concept for study. Though teachers in past emergencies have adapted to suit altered educational environments, those transitions have not been sufficiently studied in an empirical manner. To understand the ability of teachers to adapt to emergency teaching situations, it is important to look through the lens of Bandura's self-efficacy theory. The more that is understood about how teachers perceive their

ability to approach challenges amid adversity, the better school leaders can understand the realities educators faced during ERT. Bandura (1977) noted that building skills will increase mastery experiences that, in turn, increase self-efficacy. Therefore, I used Bandura's self-efficacy theory to help support and frame the study of ERT.

Bandura's Self-Efficacy Theory

Perceived self-efficacy, or the belief in one's own capacity, is a factor in teacher self-motivation to persevere during emergency teaching situations. Bandura (1977) describes efficacy-altering experiences including vicarious modeling, gradual release, and personal mastery. The concept of self-efficacy stems from social research about self-arousing or cognitive events that differ from events from environmental stimuli. It is the inner self that is formed by social interactions and experiences (Bandura, 1977) regardless of environmental factors created by emergencies, such as the pandemic.

Traditionally, self-efficacy develops over time. Seeing others perform a task and succeed can allow a person to feel that they too can perform the task successfully (Bandura, 1977). Such vicarious experiences involving repeated positive modeling can raise internal self-efficacy in both ability belief and actionable behavior (Bandura, 1977). In the idea of gradual release, a person first observes and then participates in increasingly more complex tasks, building their cognitive ability to deal with stressful situations successfully (Bandura, 1977). However, in emergencies, there is no model of how to perform successfully or behave appropriately. Thus, people, including educators, must tap into existing self-efficacy to adapt to new situations (Bandura, 1993).

Self-efficacy can be measured by the percent of change in level of motivation toward a task as perceived by the enactor of the task (Bandura, 1993). The most powerful means of raising the percentage of perceived self-efficacy is through personal mastery experiences. The gradual release modeling experience provides scaffolds in that tasks are given in order that each successive task is more complex, thus building one's own confidence in ability to perform such tasks. However, it is when a person can attempt a task independently, and receive a successful outcome, that percentage growth in perceived self-efficacy is strongest (Bandura, 1977). In emergency teaching situations, teachers are tasked to attempt novel pedagogies and use new curricula independently; if successful, self-efficacy can be enhanced through these situations. However, if success is not achieved in novel situations, self-efficacy may be diminished with each perceived failure (Bandura, 1977, 1993).

Success can be achieved through effort, persistence, and skill. Motivation is also a factor in achieving personal success. Skills and incentives, however, are outcome-based, whereas self-efficacy is more effort- and persistence-based as internal beliefs determine the amount of each that is put into a task (Bandura, 1977). Self-efficacy is built through successful interactions with stimuli. If one believes they can succeed, they are more likely to put in the time and effort needed to achieve success. It is important, however, to note that a person must first be motivated to take on a task and have the skill to complete it successfully. Bandura (1977) said:

> Given appropriate skills and adequate incentives, however, efficacy expectations are a major determinant of people's choice of activities, how much effort they will expend, and of how long they will sustain effort in dealing with stressful situations. (p. 194)

Emergencies, however, require abrupt adaptations to new situations using only existing efficacies.

How Self-Efficacy Relates to The Study

Santi et al. (2020) noted that self-efficacy in teaching exhibits a kind of duality between teachers with high perceived self-efficacy and those with low perceived self-efficacy. If teachers have high percentage of motivation as their perceived self-efficacy, they persevere, recognize challenges, and make efforts to ensure the success of their teaching on student outcomes. Teachers with lower percentage of perceived self-efficacy tend to see barriers rather than challenges, give up instead of persevering, and give little effort to improving pedagogical practices (Santi et al., 2020). Some teachers during the pandemic, however, have increased their self-efficacy by persevering through challenges to attend to student needs (Martinez & Broemmel, 2021).

Emergencies also increase three elements of influence over the motivation for teachers, including the concepts of spirit, enthusiasm, and obligations to the task of teaching remotely or altering in-person methods (Rasmitadila et al., 2020). As teachers navigate the complexities of work during an emergency, they are also required to quickly face virtual challenges or dramatic changes to in-person instruction (Rasmitadila et al.,

2020). These efficacy-altering experiences can help to understand a teacher's perceptions of their own abilities, as well as build an understanding of how these perceptions affect their work, either positively or negatively, and ultimately how their work affects student behaviors and achievement.

Literature Review

Self-Efficacy in Emergency Teaching

There is emerging research on teachers' self-efficacy under ERT situations, such as due to the pandemic. Archibald et al. (2021) recommended future study comparing perceived self-efficacy to measured ability in terms of blended teaching. Emergency hybrid instruction is akin to blended teaching in that both require the teacher to incorporate synchronous lessons to in-person and remote students as well as providing asynchronous activities to each student; thus self-efficacy of emergency remote teachers may need to be studied (Archibald et al., 2021; Moser et al., 2021).

Self-efficacy stems from a variety of input sources, such as vicarious experiences, mastery experiences, verbal persuasion, and physiological state (Bandura, 1993). Haverback (2020) noted that mastery teaching experiences grow the teacher's perceived self-efficacy when they provide a lesson deemed as successful. Teachers in emergency remote instruction do not have previous mastery experiences upon which to access efficacy; however, as time passes and teachers adapt to the new teaching models, they will again experience efficacy-building mastery experiences. Observing fellow teachers and seeing online lessons during professional development can greatly increase teachers'

self-efficacy through vicarious experience. Verbal persuasion often happens through mentors or superiors in the education setting; thus, when positive encouragement and suggestions come from another source, the teacher can build self-efficacy. Thus, Haverback (2020) concluded that the emotional strain on a teacher due to pandemic-related factors, such as nervousness, fear, and feelings of inadequacy, can negatively affect their self-efficacy. The important notion is that efficacy can be grown with a positive mindset and positive experiences (Bandura, 1993).

ERT has made it difficult to achieve efficacy in that the transition to online and hybrid learning is difficult for teachers (Haverback, 2020; Santi et al., 2020). For example, a teacher may feel positive about their ability to teach a literature course in the classroom but have a low belief in their ability to teach the same course in a virtual or hybrid setting (Haverback, 2020). Moser et al. (2021) notes prior online teaching experience did not provide adequate preparation for ERT. Even though teachers with prior experience felt more confident, they did not feel that students would meet outcomes in this emergency format (Moser et al., 2021). Yet self-efficacy, which grows with more time in the classroom, halts, or re-sets in emergency remote contexts (Haverback, 2020). Teachers re-started their quest for high self-efficacy during the transition to online and hybrid teaching environments in the pandemic. A theme emergent in teachers' self-efficacy during the pandemic is their ability to adapt to the constant changes in instruction, curriculum, and technology (Martinez & Broemmel, 2021).

Instructional Strategies

Emergency Remote Teaching

The lasting effects of emergency situations can and will lead to changes in the ways that students learn. Whether fully remote or in a hybrid model, emergency situations cause teachers to reinvent their methods of pedagogy and change the way they approach the art of teaching (Kaden, 2020; Naamati Schneider et al., 2020; Santi et al., 2020). There is a noted difference between planned and existing online courses and those being taught as a result of the global health emergency (Bozkurt & Sharma, 2020; Moser et al., 2021). ERT is not a long-term fix but rather a short-term solution, while long-term planning for the future and more permanent online and hybrid models of education are considered (Bidwell et al., 2020; Bozkurt & Sharma, 2020). The short-term act of ERT can be pedagogical triage in that it is meant to salvage existing courses (Bidwell et al., 2020). However, more than a year into the pandemic teachers must move from a short-term fix toward a new type of long-term pedagogy (Kaden, 2020).

Cai and Gut (2020) related that 21st century learners must be digitally literate and adept at solving problems and should be taught differently in the future than they have been taught in the past. The COVID-19 pandemic has allowed some students to adapt to new teaching methods with resiliency and flexibility (Patston et al., 2021). Teachers need support and self-motivation if they are to deviate from the teaching methods by which they were taught (Kaden, 2020; Martinovic et al., 2019). Still, emergency remote instruction due to the COVID-19 pandemic closures can be viewed as a catalyst for the

creation of new models of teaching (Kaden, 2020; Openo, 2020). Continually experimenting and learning from trial and error can set educators up for online teaching success if they view this new style of teaching as a growth experience (Carlson, 2020). Alvarez (2020) notes the era of ERT has created "the need to invest in different modes of instructional designs… to ensure proactive movement in instructional innovations and teachers' training and development" (p. 150).

Online Teaching

An apparent challenge is that many teachers lack the knowledge of computers needed to implement instructional technology programs (Ferri et al., 2020; Li et al., 2019; Mailizar et al., 2020). U.S. teachers are far behind some countries in digital problem-solving ability (Cai & Gut, 2020). Students, like teachers, need to gain skills not just in content knowledge but also in their ability to navigate technology-rich environments (Cai & Gut, 2020). Rasmitadila et al. (2020) found that flexible curriculum, teacher-to-parent collaboration, ready access to technology, and knowledge of technology applications, are key factors in ensuring online learning is successful.

The challenge of teaching online is further frustrated by the need to utilize technology through professional development delivered in an online format (Martinovic et al., 2019). Teachers who learn to teach through online professional development can be at an advantage if they can navigate easily or a disadvantage if their skill set is too basic to navigate a learning platform. Teachers find it difficult to fully utilize online technologies for maximum pedagogical impact when they are not comfortable using the

technology (Martin et al., 2019; Martinovic et al., 2019). Because of low technological self-efficacy, teachers are often uninvolved and unmotivated to fully embrace the possibilities of remote learning (Santi et al., 2020). There is a further digital divide between younger teachers, who grew up with technology in education, and older teachers (Martin et al., 2019; Martinez & Broemmel, 2021).

The ability of online teaching to provide content to students using a variety of instructional strategies promotes possibility (Archibald et al., 2021; Flynn & Noonan, 2020). Beyond synchronous lecturing are the possibilities of asynchronous instructional videos, discussion board forums, personalized feedback via learning management systems, and small group or one-on-one video conferencing (Archibald et al., 2021). Online learning allows teachers to "re-imagine their teaching practices and to explore new ways of supporting the learners" (Flynn & Noonan, 2020, p. 10). However, the many modes of instruction in online and hybrid formats require considerable time commitments from teachers beyond their usual planning time (Kaden, 2020). If teachers feel efficacious about the possibilities that online learning possesses, then perhaps they will be more motivated to fully embrace hybrid learning (Archibald et al., 2021; Santi et al., 2020).

Another concern with online learning involves the level of engagement of students. Teachers in online settings find it difficult to gauge the physical and emotional presence of their students (Flynn & Noonan, 2020). Real-time interactions and personalized feedback seem more difficult in online settings, especially when many synchronous lessons are recorded (Flynn & Noonan, 2020).

Hybrid or Blended Teaching

According to Rasheed et al. (2020) teachers' perceptions regarding challenges and outcomes related to blended and hybrid learning have not been widely researched. Teachers may face challenges when transitioning to hybrid instruction. For example, teachers often need support from peers and leaders to navigate classroom technologies and may need the additional impetus to consider adopting technology tools in their method of teaching (Martinovic et al., 2019; Raes et al., 2020; Santi et al., 2020). Even teachers with high technology efficacy can find it difficult to incorporate collaboration and formative evaluation into their hybrid classrooms (Ferri et al., 2020; Herro et al., 2018). Rasheed et al. (2020) noted that teachers often have a negative belief in both their ability to use and value technology in the classroom. With emergency hybrid instruction, however, teachers do not have the opportunity to choose whether to incorporate technology; rather, they are mandated to use technology to service students in the remote and hybrid models (Trust & Whalen, 2020).

Technology and connectivity deficiencies among students create a divide in the equity of online and hybrid instruction (Bond, 2020; Ferri et al., 2020; Kaden, 2020; Yang et al., 2020). Another inherent challenge is the lack of motivation and participation of students during remote and hybrid instructional models (Chaturvedi et al., 2021; Ferri et al., 2020; Korkmaz & Toraman, 2020; Raes et al., 2020). Yang et al. (2020) posit that blended learning models, along with personalized learning philosophies, can greatly improve the equity afforded to American students through the ESSA act. However, once

students have access to technology and reliable internet connectivity, the possibilities of hybrid models of instruction increase the likelihood of equitable learning and efficacious teaching (Anoba & Cahapay, 2020; Graham et al., 2019; Raes et al., 2020).

Pulham and Graham (2018) outlined a four-quadrant matrix to describe the concept of blended learning. The first and second quadrants involve technology and fully online learning. The third and fourth quadrants focus on traditional face-to-face models of teaching. The first and third quadrants focus on human interaction, whereas the second and fourth involve students interacting with content. Though online teaching encompasses quadrants, one and two, and traditional teaching encompasses quadrants three and four, hybrid or blended learning environments require interactions in all four quadrants (Graham et al., 2019; Pulham & Graham, 2018). In emergencies, however, teachers may not be prepared to incorporate instructional strategies from all four quadrants, and thus, there is a need to study further the efficacies of teachers as they engage with instructional strategies for hybrid instruction (Archibald et al., 2021; Pulham & Graham, 2018).

First quadrant learning can involve synchronous interactions, such as virtual live classes, video calls, and small video groups, or asynchronous interactions, such as discussion boards, email, and teacher feedback (Graham et al., 2019; Pulham & Graham, 2018). Quadrant two can involve static content, such as practice apps, informational websites, educational videos, or data-rich and dynamic content such as adaptive software and online simulations. Quadrant three involves face-to-face teaching strategies that cater

to individuals, small groups, or whole-class instruction. Quadrant four includes content sources such as textbooks, primary sources, and hands-on activities with manipulatives where students interact in-person with the content. Hybrid or blended learning requires that teachers and students interact in all four quadrants during the instructional process (Graham et al., 2019; Pulham & Graham, 2018).

The possibilities of hybrid instruction include playing on the strengths of both online and traditional teaching modalities and allowing the teacher to serve a large number of students through asynchronous methods (Archibald et al., 2021). Many students can also be served in synchronous hybrid environments, with both face-to-face learners and distance learners engaging in a simultaneous lesson (Raes et al., 2020). Distinct skills specific to a hybrid style of learning are needed for teachers to fully embrace a mastery-style teaching approach. Graham et al. (2019) and Archibald et al. (2021) created and refined an instrument to help teachers score their self-readiness for the unique teaching style. I adapted the *K-12 Blended Teaching Readiness Survey* (Graham et al., 2019) into both the *ERT Interview Protocol* (see Appendix A) and a questionnaire to determine teachers' perceived efficacy during emergency remote and hybrid teaching situations. The questionnaire was later eliminated as a data source.

Curriculum

Online Curriculum Challenges

Teaching subject content in a remote and hybrid platform is vastly different than traditional face-to-face instruction (Archibald et al., 2021). Teachers may be provided a

pre-written online curriculum and learning management system (Rodriguez-Segura et al., 2020). Other teachers may need to create their curriculum as they teach, making it up as they go (König et al., 2020; Korkmaz & Toraman, 2020; Martinez & Broemmel, 2021). Regardless of the type of curriculum utilized, teachers find that it takes a large amount of time to create lesson videos and other content to supplement asynchronous student learning (Bond, 2020; Rasheed et al., 2020).

There is also a marked difference in type of online curriculum offered. Low-end curriculum relies on relaying of knowledge through video lectures and informational websites, whereas high-end online curriculum involves more interactivity and problem-based learning (Martin et al., 2019; Openo, 2020). The emergency transition to remote instruction did not allow sufficient time for teachers to engage with students in high-end learning at the onset (Korkmaz & Toraman, 2020; Openo, 2020). However, as teachers continue to engage with students in the online format, they will grow in their ability to find, create, and use interactive and adaptive online learning opportunities for their students (Flynn & Noonan, 2020).

Converting curriculum to online environments provides an opportunity for teachers to modify content to cater to 21st century learners' needs (Naamati Schneider et al., 2020). The choice of online resources from learning management systems and websites to interactive and adaptive applications provides educators with the ability to greatly modify their existing curriculum to an online environment without loss of learning goals (Bidwell et al., 2020; König et al., 2020). Whether a challenge or an

opportunity, converting curriculum to be delivered electronically is necessary for ERT (Rodriguez-Segura et al., 2020).

Pacing and Continuity

Besides altering pedagogical methods, teachers must also alter the curriculum during ERT to cater to the needs of the new realities set forth by the emergency (Aguilar, 2020; Korkmaz & Toraman, 2020). Without traditional textbooks and paper-and-pencil methods, educators have a wealth of new technological tools and applications that they can utilize to enhance their asynchronous teaching (Pulham & Graham, 2018). The curriculum can be enhanced with technology by using what is already available, finding free applications, patchworking elements to create cohesion, using open-resource tools, and purchasing a commercial learning management system and curriculum (Aguilar, 2020; Pulham & Graham, 2018). Furthermore, an emergency remote curriculum must provide continuity in that students can shift from online to in-person to a hybrid in any direction as the emergency dictates (Lieberman, 2020). Teachers must embrace the idea of providing quality technology-assisted instruction to 21st century students (Trust & Whalen, 2020).

Because of the likelihood of future emergency educational shutdowns (Whittle et al., 2020), teachers must be prepared to shift between fully online, hybrid, and face-to-face instruction by ensuring a sequence of curriculum and resources that will allow students to maneuver through the content in various instructional environments (Lieberman, 2020; Pulham & Graham, 2018). Instructors must attempt to keep curricular

content rigor while also teaching a set of soft skills such as application, analysis, knowledge transfer, and critical thinking (Co, 2019). Hybrid teaching is an opportunity for teachers to engage in innovation and experimentation as they find a balance between content knowledge and student interaction through synchronous and asynchronous strategies (Kaden, 2020; Pulham & Graham, 2018).

Whittle et al. (2020) said themes of ERT environments include a hidden curriculum that requires the teaching of technology usage skills along with content, a loss of ability to create socialized learning opportunities for students, and the instability of expectations as goals, government and district mandates, emergency conditions, and teaching environments may change rapidly and frequently. K-12 learners who are not accustomed to online learning or learning that requires a sense of autonomy may fall behind on content and assessments as they struggle to navigate the hybrid learning environment (Kaden, 2020; Whittle et al., 2020). It is also important to assess the teacher's familiarity with hybrid learning environments so they can better assist these struggling students (Archibald et al., 2021; Whittle et al., 2020). Teachers must consider the needs of students and their curriculum when determining which content to deliver synchronously and which to deliver asynchronously (Bidwell et al., 2020).

Prevalent in the curriculum of ERT is the perceived hierarchy of subjects taught. Math and reading are placed significantly higher in time taught and resource availability, whereas arts, career-based, and technology courses are either perceived as unimportant or eliminated from the online curriculum (Constantinou, 2019). However, students feel less

motivated and more anxious to learn math and reading topics in the online format (Patston et al., 2021). Also, teachers in emergency situations may be required to teach multiple classes and out-of-field courses through remote and hybrid models with little or no prior training (Kaden, 2020; Korkmaz & Toraman, 2020). Electives, in many online models, are eliminated from the offered courses (Constantinou, 2019; Korkmaz & Toraman, 2020). Even mathematics teachers find that there are many barriers to teaching their content online (Mailizar et al., 2020). In a world where technology is now the main means of education, Constantinou (2019) notes that design and technology courses should be given more emphasis, not less.

Social-Emotional Learning

There must also be a social-emotional or well-being component to an emergency remote curriculum in that students often experience trauma or loss because of the emergency (Aguilar, 2020; Bozkurt & Sharma, 2020; Burde et al., 2017; Chaturvedi et al., 2021; Moser et al., 2021). Positives of the social-emotional curriculum can include peacebuilding, child protection, student well-being, and community-based economic development (Burde et al., 2017). The rapidly changing reality in the global world of 21st century students requires them to learn a set of skills separate from content knowledge (Naamati Schneider et al., 2020). These soft skills are needed to navigate social-emotional learning, including flexibility and resilience, which teach students to cope with the changes in their world both in the 21st century global community and in any emergency situation (Naamati Schneider et al., 2020).

Active learning and peer learning also need to be considered when designing a responsive curriculum for students in emergency learning times (Co, 2019; Whittle et al., 2020). Student to student and student to teacher interactions are part of the social development of students who need such interactions to develop age-specific behaviors (Asvial et al., 2021; König et al., 2020). However, emergency remote instruction is a challenge in building collaborative relationships between teachers-to-students and student-to-student because of limited in-person contact and social distancing (Asvial et al., 2021; Ferri et al., 2020). Teachers in emergencies must modify the existing curriculum to include support for empathy, caring, and sharing of feelings, not just the study of content (Bozkurt & Sharma, 2020). There is a "strong correlation between school culture and student achievement" (Mailizar et al., 2020, p. 7).

Moser et al. (2021) said teachers in emergency remote instruction are more concerned with their students' emotional well-being than with content learning outcomes. Martinez and Broemmel (2021) noted that equity and access to necessities were more important to the 19 teachers and seven administrators they interviewed than academic outcomes or success. Exacerbating the need for food and reliable technology access is the lack of students' internal motivation and participation in classroom activities during the pandemic (Asvial et al., 2021; Carlson, 2020; Martinez & Broemmel, 2021). Students were required to shift to remote instruction by the government without choice, just as teachers were (Asvial et al., 2021). During the pandemic, student welfare is a definite concern of teachers (Aguilar, 2020; Burde et al., 2017; Martinez & Broemmel, 2021;

Moser et al., 2021). Empathy and equity are key concepts in helping both students and teachers with the transition to online learning (Bond, 2020; Carlson, 2020).

Technology

Technology Efficacy

Teacher technology efficacy influences their decisions as to how much, which, and in which manner technology is utilized in the classroom (Li et al., 2019). Lynch et al. (2019) posit teachers cannot change their pedagogy without changing their beliefs and knowledge about classroom activities, such as the utilization of technology. Increased teacher confidence leads to a shift toward positive pedagogy that increases instructional productivity and ultimately positively impacts student learning (Margot & Kettler, 2019; Moser et al., 2021). Twenty-first-century skills are intertwined in that collaboration, communication, and self-regulation work together to build background knowledge and enhance problem-solving ability in both students and teachers (Stehle & Peters-Burton, 2019). Today's students, like teachers, must be digitally literate and be able to solve problems utilizing existing technologies (Cai & Gut, 2020).

Many educators see the values and possibilities of mobile teaching; however, many barriers can also restrict teachers' ability to maximize and extend the process of learning for their students (Kaden, 2020; Korkmaz & Toraman, 2020; Openo, 2020; Santi et al., 2020). Self-efficacy, though difficult to measure, can be studied under the guise of teacher readiness, challenges, and successes toward performing teaching tasks (Kuusinen, 2016; Martin et al., 2019). Anoba and Cahapay (2020) said "many studies have suggested

that determining the readiness of teachers is necessary for the success of the different modalities of technology integration" (p. 297). The intended study aims to find themes in both the challenges and efficacies of educators who are amidst ERT protocols.

Technology Usage and Equity

Even teachers with high technology efficacy find it difficult to incorporate collaboration and formative evaluation into their hybrid classrooms (Ferri et al., 2020; Herro et al., 2018). Students should utilize technology to create and collaborate, rather than just as a method of consuming information (Herro et al., 2018; Openo, 2020). ICT or information and communication technology can be used in the classroom for a variety of purposes: to design, represent, evaluate, and create (Stehle & Peters-Burton, 2019). Teachers often have low efficacy in their ability to incorporate higher levels of informational technology into their classrooms, missing out on student self-regulating elements such as peer feedback, collaboration, and product iterations (Stehle & Peters-Burton, 2019). With the integration of advanced manufacturing technologies, such as 3D printers and CAD software, teachers need to be well versed in technology to utilize such technology to enhance learning for 21st century students (Gale et al., 2020).

If an emergency arises where technology is required, teachers with low technology efficacy may not utilize optimal pedagogies and may exhibit passive teaching strategies (Li et al., 2019). Over time, teacher motivation and enthusiasm for teaching may decrease due to the lack of face-to-face interaction in remote learning (Rasmitadila et al., 2020). It is also important to remember that students are to learn with technology as

a tool and not learn from technology without teacher interaction; teacher-to-student interaction is a key element to maintaining a safe and equitable education environment (Bozkurt & Sharma, 2020).

These challenges can be further exacerbated by inequities that exist involving remote connectivity and device availability (Alvarez, 2020; Ferri et al., 2020; Kaden, 2020; Korkmaz & Toraman, 2020; Mailizar et al., 2020). Students without technology access and who are not accustomed to autonomous learning need additional support and constant communication to ensure equitable learning (Asvial et al., 2021; Shim & Lee, 2020). Educators need to learn from the challenges and mistakes made during the pandemic's ERT experiences so that they can be better prepared to "re-engineer distance education through online and offline modes to respond to any interruptions to education" (Bozkurt & Sharma, 2020, p. iii). Asynchronous opportunities for learning are necessary to bridge the digital divide so students with connectivity issues can work when they are able to be connected (Alvarez, 2020).

Summary and Conclusions

Chapter 2 includes a summary of the conceptual lens through which the study was based. Using Bandura's theory of self-efficacy, literature was viewed through instructional strategies, curricula, and technology. Teachers face many barriers and opportunities as they navigate emergency remote instruction through online and hybrid/blended teaching models. Teachers must adjust curricula to include soft skills, technology competencies, and social-emotional learning along with required content.

Whether teachers are comfortable with technology usage or not, ERT requires both teachers and students to have physical access to technology and knowledge of how to use technology for optimum learning. In Chapter 3, the process through which I gathered data to further add to emerging literature on ERT is explained.

Chapter 3: Research Method

The purpose of this qualitative case study is to explore challenges teachers may face as they implement strategies, technology, and curricula when they transition to remote and hybrid instruction. Teachers at a rural high school who implemented emergency remote and hybrid instruction during the 2020-2021 school year amid COVID-19 pandemic provided data for the study. Data revealed perceived self-efficacy related to teachers' strategies, curricula, and technology in an emergency instructional setting.

Chapter 3 includes a discussion of the rationale for the qualitative case study and 'my role using the methodological design. The methodology for selecting and recruiting participants, choosing instrumentation, and collecting and analyzing data within the partner organization is described. I examined credibility, transferability, dependability, confirmability, and reliability through the topic of trustworthiness. Finally, ethical procedures are addressed, including treatment of data and anomalies during the data collection process.

Research Design and Rationale

The research question that I addressed is:

What challenges do professional teachers at a rural public 9-12 grade high school face regarding strategies, technologies, and curriculum as they transition to remote and hybrid instruction in the 2020-2021 school year during the COVID-19 pandemic?

The purpose of this qualitative case study was to investigate the phenomenon of the transition to emergency remote and hybrid learning during the 2020-2021 school year amid the COVID-19 pandemic. I sought to understand how teachers at West High School faced the challenge of implementing instructional strategies, curriculum, and technology as they transitioned to remote and hybrid learning during the pandemic. Data gathered through semi-structured interviews were based on the concept of Bandura's self-efficacy theory to provide context for the study. Thematic analysis was utilized to summarize data through a cyclical process. Optional questionnaires were provided to interview participants for triangulation; however, responses were not complete and therefore were excluded from analysis and conclusions. Similar international studies have utilized qualitative methods to explore the effects of the COVID-19 shutdown on classroom teaching in other countries (Alvarez, 2020; Bond, 2020; Ferri et al., 2020; Flynn & Noonan, 2020; Rasmitadila et al., 2020; Shim & Lee, 2020). However, I found only a few qualitative studies done in the U.S. on the topic; most of which claimed mixed methods rather than purely qualitative measures (Kaden, 2020; Martinez & Broemmel, 2021). Qualitative case study research through interviews is a way to effectively examine a topic for relevant themes (Rubin & Rubin, 2012).

Qualitative Versus Quantitative Methods

My first consideration for a research methodology was to determine if I should collect qualitative, quantitative, or both kinds of data to answer the research question. Though quantitative data would have given me an exact list of challenges that teachers

face, I was more focused on the process of how teachers navigate the transition to emergency remote and hybrid instruction. Because each teacher is unique in their perceptions of remote and hybrid instruction and approaches the transition in diverse ways, I surmised that qualitative data would be necessary for detailed descriptions needed to answer the research question. I used open-ended interview data, so it was not the intent to perform statistical analysis of the data; therefore, quantitative and mixed methods approaches were not appropriate for the study. By eliminating quantitative and mixed methods designs, I posited that a qualitative paradigm with thick and rich descriptions was most appropriate for the study.

The concepts of instructional and technological self-efficacy were chosen for this research through a qualitative case study. However, existing research regarding technology self-efficacy and digital literacy is heavily weighted toward quantitative methods (Cai & Gut, 2020; Li et al., 2019; Santi et al., 2020). Research on the use of technology, especially in crises, can also be theoretical (Martinovic et al., 2019; Naamati Schneider et al., 2020). Research on integrating 21st century technology skills into the classroom can incorporate mixed methods (Stehle & Peters-Burton, 2019). For technology integration through STEM, research takes the form of meta-analysis (Lynch et al., 2019) and literature review (Margot & Kettler, 2019). However, qualitative research is useful in examining instructional technology integration (Gale et al., 2020) and perceptions of remote learning (Herro et al., 2018; Rasmitadila et al., 2020). After

choosing a qualitative research paradigm, I selected a qualitative method to encase the study.

Qualitative Study Method

Action research, ethnography, evaluation research, grounded theory, narrative inquiry, phenomenology, and case study design were all methods considered for the study. Through the process of examining the purpose and procedures of this study against the purpose of each type of qualitative study, research methods were eliminated as possibilities until only one remained. In the end, I chose the qualitative case study method to address the research question.

The purpose of action research is to solve problems (Ravitch & Carl, 2021). Action research involves solving real-world problems through data collection, application, observation, and cycling through these steps until reaching a solution (Burkholder et al., 2016). Action research was not chosen for the study since my research question asked about the process of how teachers transitioned to remote and hybrid instruction rather than what they could do to address the transition. Also, action research usually involves collaborations between stakeholders and researchers, where both affect each other throughout the process (Burkholder et al., 2016). Because I independently sought information from the school district rather than worked with the school district to promote immediate change, I did not use the action research methodology.

Ethnography involves immersion into a field of study to gather in-depth field notes on the culture of a group and form relationships with participants for a prolonged

period (Ravitch & Carl, 2021). Ethnographic studies involve describing a social group through their belief systems, feelings, cultural values, and behavioral attitudes via observation and immersion (Hancock & Algozzine, 2017). Ethnography is anthropological in nature and involves seeking to dig deeper into a culture or societal group. Burkholder et al. (2016) state "Although both case study and ethnography investigate a bounded unit, ethnography differs from a case study in that it requires long-term immersion in a cultural group in order to collect data" (p. 69). As I conducted interviews at a given point in time for participants to relay perception data, rather than immersing in a setting to collect cultural data, an ethnographic study design was eliminated from the list of possible qualitative methodologies.

I investigated self-efficacy to seek understanding of a phenomenon; therefore, evaluation research was not a good fit for the study. Evaluation research involves judging an existing program based on a set of criteria via rubrics (Ravitch & Carl, 2021). Evaluation involves placing value on the success or lack of success of a program. Since I intended to study teachers' perceptions about transitioning between modes of instruction, I did not seek to judge or assign value to those perceptions. Data analysis involving thematic coding did not align with an evaluation research methodology. Though teacher perceptions of instructional programs and learning management systems are included in my analysis, the programs themselves are not under review. Therefore, evaluation research was eliminated from the list of possible qualitative methodologies for the study.

The purpose of grounded theory research is to develop a generalizable theory from collected data (Ravitch & Carl, 2021). Though both grounded theory and case study develop concepts and ideas through inductive analysis, the former tends to generalize the findings into a universal theme or theory. In contrast, the latter tends to find specific themes to describe a specific case (Hancock & Algozzine, 2017). I did not choose a grounded theory method for the study because I sought an understanding of a specific set of participants at a specific time for concrete themes that apply to the exact and similar settings. The generalizability of findings may be limited by the parameters of the case; therefore, a theory that encompasses a wide range of educators was not the result of the study and thus eliminated grounded theory as the research method.

Narrative research describes participants' lived experiences focusing on a few individuals and how they navigate all aspects of life (Ravitch & Carl, 2021). In a narrative analysis, oral stories are the data, and themes emanating from the stories are analyzed (Hancock & Algozzine, 2017). The three dimensions of a narrative are place, time, and personal story (Connelly & Clandinin, 2019). Though some teachers described their transition to remote and hybrid instruction through anecdotal stories, and the study's primary purpose was bound by place and time, the personal and social element was not the focus of thematic analysis in this study, in that the non-personal elements of curriculum, strategies, and technology were analyzed. Narrative research seeks an understanding of individual differences (Burkholder et al., 2016; Connelly & Clandinin, 2019), whereas the study sought an understanding of collective commonalities among the

study participants' perceptions. Because the study phenomenon was limited to remote and hybrid instruction and not open to teachers' other life narratives, narrative inquiry was not the research method chosen.

Though emergency remote and hybrid learning is described as the phenomenon of study, phenomenology was not chosen as the research method. Although phenomenology identifies lived experiences through participants' perceptions, phenomenology is not bound by time, space, and a specific pool of participants. Also, phenomenology seeks to find the essence of how participants experience and feel in each phenomenon (Ravitch & Carl, 2021). In phenomenology, the aim is to find a meaning central to all who experience the phenomenon (Hancock & Algozzine, 2017). As I intended to find collective ideas and perceptions related to three concrete elements of curriculum, technology, and strategies through thematic analysis, rather than meanings through feelings and essence, I eliminated phenomenology from the list of possible qualitative research methods.

Thus, case study research was the preferred method of qualitative inquiry to answer the research question. Case studies are usually descriptions of a specific entity bounded by space and time that collectively experience a common attribute, searching for an in-depth understanding of the phenomenon of interest through the entity's perceptions (Hancock & Algozzine, 2017; Ravitch & Carl, 2021; Yin, 2018). The specific entity of the case was teachers in the West State School District. The specific place that bounded the case was West High School. The study was bound by the time during the COVID-19

pandemic. The 2020-2021 school year also framed the phenomenon of study, which was how teachers make the transition to remote and hybrid teaching during an emergency. The interviews and recent research work together to form a more cohesive view of the case being studied (Yin, 2018). Through thematic analysis of a specific case, the researcher can make statements that can apply to or support similar case situations and provide a detailed description of the case from the participants' perceptions (Ravitch & Carl, 2021; Saldaña, 2016). Thus, the case study methodology was chosen.

Role of the Researcher

At the time of the study, I was a primary teacher in the West State School District, in which the research was conducted; therefore, the West High School encompassing 9th-12th grades was chosen for the site in which to conduct the research. Though not directly working with participants, I have attended district professional development with some of the West High School teachers. I do not know any of the participants personally. I do not exert any power, influence, or have a mentor relationship over any of the participants. I used the practice of reflexivity through memos to identify personal biases I may have had as a result of the professional relationship with the teacher participants (Ravitch & Carl, 2021). As the researcher, I examined my own beliefs and ideas about the topic, wrote them down, and used them to critically examine my analysis. I used my own biases to test whether the thematic analysis was genuine to the participants and not swayed by my own thoughts.

I took the role of a participant observer in that I selected the data site, participants, data collection instruments, collection methods, and procedures for data analysis process. As the lone researcher in the study, I had no control over participants' perceptions of curriculum, strategies, and technology. I led the interviews through the semi-structured *ERT Interview Protocol* (see Appendix A) via the Zoom online platform and transcribed data verbatim for use in the coding process. The process of inductive coding generated codes, categories, and themes from the interviews utilizing the Quirkos application. Recent research data was deductively used to support the categories, and themes generated from the interviews (Ravitch & Carl, 2021).

Methodology

Transcripts of seven semi-structured, open-response interviews of state certificated teachers at West High School provided the qualitative data used in the thematic analysis of this study. Interviews were conducted during the late spring and early fall 2021 with seven teachers who had to abruptly change their teaching methods during the 2020-2021 school year due to educational requirements of the pandemic. I used an interview protocol from Trust and Whalen (2020) and Graham et al. (2019), which was adapted to fit the needs of the research purpose (see Appendix A). With the interview transcripts, I analyzed the challenges educators faced in using instructional strategies, technology, and curriculum skills during emergency remote and hybrid learning. I achieved thematic analysis through a multi-step process moving from codes to concepts to themes (Saldaña, 2016). Another data source, a questionnaire, was excluded

from the analysis due to inadequate participation. Recent research supporting the themes is cited in the implications section of this study. Case studies often use multiple data sources to triangulate results (Ravitch & Carl, 2021).

Participant Selection

Participants from the study were chosen using specific selection criteria. The elements of participant selection and sampling helped to ensure I had a good representative of teachers from the case site to provide an accurate thematic picture of their perceptions at the time of data collection. The participant population consisted of seven state certificated West High School teachers in the rural West State School District.

Participant Sampling

I used purposive convenience sampling to solicit interviews from teachers at West High School who met the selection criteria. Data from all seven of the interview participants were included in the analysis. West High School is small and rural, so the number of teachers meeting the criteria was only 17. Therefore, all seven teachers who participated in interviews had the opportunity to contribute to the purpose of the study. Participants were not selected or excluded based on age, race, tribe, rank, or educational background.

Participant Sample Size

West High School had only 17 full-time, state certificated teachers during the 2020-2021 school year that met selection criteria, so I aimed for a range of 5-15 participants as that represented 30% or above of the qualified sample population. I

received approval from the Superintendent of the West State School district which allowed me to solicit interviews from educators at West High School who met the participant selection criteria (see Appendix D). The seven participants received further communication beyond the interviews for the purpose of member checking of transcripts and reporting of thematic coding.

Participant Selection Criteria

Before receiving an email and paper invitation for an online interview, I ensured that participants met the following criteria: (a) be a teacher at West High School during the 2020-2021 school year, (b) was a teacher at West High School before the March 2020 COVID-19 state school shutdown, (c) have taught both remote students and hybrid students during the 2020-2021 school year, and (d) have been asked by administration to utilize new curriculum and technologies during the 2020-2021 school year. This data was publicly available through the district's website and school-board minutes. I also confirmed selection criteria through demographic questioning during the interviews, directly after each participant verbally gave informed consent.

Participants were recruited via email and paper invitations with attached informed consent form in June 2021 and an additional email invitation in August 2021. They were provided a link to an online interview upon answering the invitation and providing typed informed consent via email. There were nine teachers who initially volunteered to participate, however a school tragedy in early September 2021 caused two prospective participants to cancel their interviews. For the limited case site population, all seven

participants (41% of the applicable population) were analyzed to provide rich and in-depth themes related to the research questions. Not one of the seven participant teachers dropped out of the study or requested his or her interview data be removed from analysis.

After demographic questioning, I determined that all seven interview participants did qualify for the study. The purposive sample of seven completed interview transcripts was utilized for the analysis. Recent research was used as a secondary source to support the thematic analysis from the seven participants' interviews, which was the primary source of data for this research study.

Instrumentation

The *ERT Interview Protocol* (see Appendix A) questions were adapted from Trust and Whalen's (2020) *ERT Survey Protocol* and the *K-12 Blended Teaching Readiness Survey* instrument designed and validated by Graham et al. (2019) to answer the research question. I received permission to use and adapt the interview protocol via email from Whalen (see Appendix B). The adaptation to Trust and Whalen's protocol includes the addition of various demographic data and a change in the dates encompassing the study. I received permission to use and adapt the Graham et al. instrument via email from Graham (see Appendix C). The adaptation to the *K-12 Blended Teaching Readiness Survey* instrument was to change the Likert-scale quantitative survey into an open-ended qualitative instrument. Broad questions relating to the categories on the Graham et al. instrument, are included in my *ERT Interview Protocol*.

Trust and Whalen (2020) collected data from 325 K-12 teachers in April and May 2020 using an online questionnaire of their *ERT Survey Protocol*. I adapted the survey into an interview protocol to include dates of 2020-2021 and eliminated some multiple-choice answers to make sure the interview protocol was entirely open-ended. Trust and Whalen distributed the online survey to Massachusetts school district teachers and other teachers via social media solicitation. The population sampled in their original study included 80% in public school settings, 15% in rural school settings, and 27% in a high school setting. In the Trust and Whalen study, only half of the questions asked were included in the cited paper's analysis, and the researchers analyzed both quantitative and qualitative data. In this study, only open-ended qualitative data was collected and included in the data set for thematic analysis.

Graham et al. (2019) validated the Likert-style *K-12 Blended Teaching Readiness Survey*. The instrument applies to the research study as emergency hybrid teaching is akin to blended teaching and utilizes similar teaching competencies. The Graham et al. instrument went through two validation phases: first with 218 educators and second with expert reviewers and curriculum specialists. The Graham et al. study then collected data in two rounds. The first round of 258 participants included teachers from three high schools. The second round of 2,022 participants included teachers from all high schools in the participating district. To validate their survey, they used confirmatory factor analysis and correlations. Though the Graham et al. survey is Likert-style and results in quantitative data, I found that the questions statements could also be open-ended. The

original Graham et al. survey included 13 categories of five questions each. I chose six categories to include, thus shortening the interview protocol for the benefit of participants. The eliminated categories are assessment, personalized learning, student-to-student interaction, and digital citizenship. Included categories are technical literacy, planning, teacher-to-student, student-to-content interactions, and managing environments and routines. The interview protocol summarized these elements (see Appendix A). A total of five questions for each of the six categories was created into a 30-question questionnaire, which was eliminated as part of the data set due to poor participation.

The *K-12 Blended Teaching Readiness Survey* by Graham et al. (2019) was utilized by Anoba and Cahapay (2020) to determine the readiness of teachers during the transition to blended teaching during the COVID-19 pandemic. The Anoba and Cahapay study collected data from 18 elementary teacher participants in both an online questionnaire and follow-up interview protocol sent electronically. Anoba and Cahapay found that teachers were slightly not ready to facilitate student-to-content interactions and only slightly ready to teach the remaining five categories I have included in the *ERT Interview Protocol*.

In the adapted *ERT Interview Protocol* (see Appendix A) I included which questions answer the instruction, technology, and curriculum portions of the research question. The original instruments were given strictly via online survey tools, whereas I gathered more in-depth answers to the question through synchronous personal interviews with the seven participants. The protocol was semi-structured to give the participants the

opportunity to provide open-ended data while limiting the amount of time a participant had to spend in the interview. Interviews ranged from 24-49 minutes and, though a semi-structured protocol was used, I allowed the participants to take tangents and to provide additional insight into the phenomenon. All protocol questions were answered by all seven participants, providing a thorough and complete data set.

Procedures for Recruitment, Participation, and Data Collection

The following sections explain how I recruited participants, what was involved in their participation, and how I collected data for the project. A section also outlines the reasoning behind exclusion of the questionnaire as a secondary data source.

Interview Procedures

Recruitment. Teachers at West High School were presented with the opportunity to participate in the study via both paper flyers in their faculty mailboxes and an email invitation in June 2021 after University IRB approval (06-11-21-0089532) was obtained. Three participants responded to the first set of invitations and were interviewed in Spring 2021. At that time, I had a family emergency that prohibited further collection of data for the months of July & August. Also, many teachers were on vacation for the summer. A second email was therefore sent to prospective participants in late August 2021. Six teachers responded to the second invitation and four were interviewed in September 2021. A tragedy involving former students resulted in two teachers rescinding their participation in the interview process. The email invitations included a digital copy of the informed consent form and instructions for volunteering to participate. Once participants

agreed to be interviewed, email correspondence was conducted between myself and the participant to set up a convenient time for the interview to take place and a link to the digital questionnaire (via SurveyMonkey platform). Each participant was then set a link for the Zoom platform on which the synchronous interview took place.

Participation. The interviews were conducted outside of the contracted school workday, but some interviewees utilized in-district campus devices or were in their classrooms during the synchronous interviews. The interviews were conducted via the Zoom online video conferencing platform. Teachers were instructed to turn off cameras and change their names to teacher during the recorded portion of the interview. Zoom allows for audio-only recording, which was utilized for fidelity and transcribing purposes. Camera and name masking were utilized as a back-up in the event of accidental video recording, which did not occur.

On the audio recordings, teachers also included verbal consent to the informed consent form that was sent in the initial email prior to the interview data collection questions being asked. The interview times ranged from 24 minutes to 49 minutes. Participants were informed that they could stop the interview at any time they felt the interview was too long, however all participants completed and answered all interview protocol questions. One interview participant was absent for about four minutes as the Zoom platform booted them out of the system. After logging back in, their interview continued and was completed.

After the interviews, participants received a transcript of their individual interviews for member checking purposes. Three participants responded that their transcripts were accurate. Four participants did not respond to the member check email. A summary of findings was made available to participants and district administration after thematic analysis and conclusions were made. This process of member checking and provision of a summary was used as a debriefing method for the participants.

Data Collection. During the synchronous interview, I took field notes and, after the interview audio was recorded, and transcribed the material verbatim utilizing the Microsoft 365 online Word program's transcribe function. I then listened to each audio recording to verify and correct the transcription made by the Word program. The transcripts were then used in coding, categorizing, and thematic analysis process using the Quirkos program. A copy of the Word transcript was sent to each participant via email to which three responded verifying accuracy.

I kept all paper data, including field notes, in a locked file cabinet until the end of the data analysis process, where they were then transferred to a locked safe. The audio recordings, transcript data, and analysis charts will be stored on a password-protected thumb drive and a password-protected hard-drive computer until the research project reached completion. After project publication, the data will then be erased from the hard drive, and the thumb drive alone will hold the data in a locked safe until sufficient time has passed, no less than five years, and the data will then be destroyed.

Questionnaire Provision and Exclusion

Teachers at West High School were asked to participate in the study via email. Volunteers who agree to participate in the synchronous interviews were provided a link to an asynchronous online questionnaire via Survey Monkey, which they could fill out at their convenience. A reminder email and questionnaire link was sent after participation in the interviews. However, only two teachers opened the survey and each responded intermittently to only a few of the 30 questions. Not enough data was collected from these surveys to warrant inclusion in, triangulation of, or verification for the findings of this study. The questionnaire and results are housed on a password protected file in the Survey Monkey database. These files were transferred to the thumb drive, which will be destroyed after the required years of storage.

Data Analysis Plan

The interviews using the protocol (see Appendix A) was the primary data source for this research project. The interview protocol addressed the instructional strategies component of the research question through items 3.3.1-5 and 3.4.1-5 on blended or hybrid strategies. The protocol addressed the technology component of the research question in sections 1.1.1-5. The interview protocol addressed the curriculum aspect of the research question through items 2.1.1-5. Items 5.1.1-5 and 5.2.1-5 of the interview protocol addressed the transition aspect of teaching in the hybrid instructional model. The interview protocol addressed the transition element of all three research question components of strategies, curriculum, and technology, through questions N, O, S, and T. The efficacy elements were covered by questions R and Q, which encompassed any of

the three components of strategies, technologies, and curriculum. Because these protocol items were open-ended and asked for examples from personal experience, many parts of the interview protocol were used to answer several aspects or components of the research question.

Interview transcripts were entered into the Quirkos coding application through which the first round of coding was performed. I used inductive coding that comes directly from the text of the interview transcript data (Ravitch & Carl, 2021). First-level open coding looked for similar phrases, words, and ideas among the different interviews (Saldaña, 2016). In the Quirkos program, when a text piece is referenced to a code, the bubble grows bigger. The larger bubbles indicated common codes that were then categorized in second cycle of coding. The second level of coding focused on phrases and ideas that directly answered the research question components. After the first two rounds of coding, a list of codes or code sets was created. Further readings of the transcripts revealed participant quotes to back up the codes in the list. These codes were grouped into categories through axial coding and then grouped into overarching themes that answered the research question components of curriculum, strategies, and technology (Ravitch & Carl, 2021; Saldaña, 2016).

A list of codes and categories are included in the final study in Chapter 4 along with diagrams showing how they were grouped into themes. I provide themes to answer each part of the research question, including strategies, technologies, curriculum, and

efficacies. Any outliers in the data are noted in the results and discussion sections of this research dissertation.

Trustworthiness

Lincoln and Guba's (1986/2007) framework for trustworthiness include the aspects of credibility, transferability, dependability, and confirmability to inform the reader that I have accurately interpreted the data. Credibility is the qualitative counterpart to internal validity in quantitative research. Qualitative transferability is akin to external validity in quantitative research. Dependability, like reliability, depends on the accuracy of the researcher's data interpretation. The fourth element, confirmability, is the qualitative relative of objectivity in a research study. I used these four elements in the following sub-sections to address trustworthiness of the research study.

Credibility

Strategies I used to address credibility include triangulation of data, prolonged (2 month) contact with data during analysis, member checks of transcripts, and reflexive journaling (Ravitch & Carl, 2021). The interview transcripts went through multiple rounds of reading and coding to ensure authentic thematic analysis of the data. I also sent transcripts to interview participants for member checking, of which three participants responded that transcripts were accurate to the best of their knowledge. Throughout the data collection and analysis process, I kept a reflexive journal, which was analyzed when thematic conclusions were reached to lessen the possibility of personal beliefs and biases playing a part in the induced themes.

Transferability

To address transferability, I provided thorough descriptions of the research site, research setting, and research participants (Shenton, 2004). I explained under what circumstances the data was collected to address transferability related to similar contexts and situations. The setting was the public West High School located in the rural West State School District. As a result, any themes garnered from the data might only be transferable to public, rural high schools that also taught in a hybrid setting during the 2020-2021 school year due to the emergency caused by the COVID-19 pandemic.

Dependability

Dependability is the stability of data over time and conditions. I include triangulation of data, member checks, and repeated exposure to data (at least 20 readings of the transcripts over a 2-month period) to address the dependability of findings (Korstjens & Moser, 2018; Schwandt, 2007). Codes, categories, and themes were collected and organized through inductive reasoning in that pre-written or pre-conceived ideas were not included in the data analysis. Because the data provided the themes, I reviewed the interview transcripts, codes, categories, and themes multiple times over a 2-month-long period to have prolonged exposure to the data. Data was analyzed according to the framework concepts of strategies, technologies, and curriculum through the lens of self-efficacy experiences.

Confirmability

I addressed confirmability through reflexive journaling. I examined personal bias and assumptions and explained, in Chapters 4 & 5, how the lens through which data was viewed may have affected the data's analysis and interpretation (Ravitch & Carl, 2021). I acknowledge that reflexivity involves understanding the actions and choices made that are both explainable and unexplainable by the person making those choices (Connelly & Clandinin, 2019). I use direct quotes from interviews to show that thematic analysis has effectively represented only the participants' perceptions as they relate to the research question (Saldaña, 2016; Lincoln & Guba, 1986/2007).

Ethical Procedures

To follow ethical procedures in the study, I completed all steps necessary to gain permission and approvals from Walden University's Institutional Review Board approval number 06-11-21-0089532, and the West State School District (see Appendix D). Before collecting data, I submitted the parameters of the study to the Walden University IRB through which supporting documentation was presented, and ethical concerns were addressed. I also gained approval to use the modified instruments from *ERT Survey Protocol* (see Appendix B) and portions of the *K-12 Blended Teaching Readiness Survey* (see Appendix C).

I was approved by the Superintendent of the West State School District to provide details of the study and to solicit interviewees (see Appendix D). I informed teachers about privacy, ethical concerns, potential risks, and possible benefits of conducting the

study through the emailed consent form. Potential risks included the expenditure of participants' own time of approximately one hour and possible emotional responses to interview questions. All participants were informed that participation was voluntary, that they could withdraw their participation at any time, and that their personal information remained confidential and anonymous beyond my own knowledge. All participants gave a verbal informed consent during the interviews and emailed "I agree" or "I consent" prior to participating in interviews.

Data were collected from teacher participants from West High School. I identified participants only for myself to set up interviews, send transcripts for member checking, and send the final study results. Once data was collected, the teachers were given pseudonyms (i.e., T3) with which all their data was stored. No personally identifiable data that connects teachers to pseudonyms is stored in writing, on paper, or electronically by me beyond data analysis. All email correspondence between myself and participants are stored in a password-protected folder. All data results are cited by pseudonym. Paper data is stored in a locked file cabinet for use only by me during the study's duration. After the study, the paper data will be placed in a sealed envelope and placed in a locked safe until it can be destroyed via shredding and waste disposal after five years.

The electronic audio recordings, transcripts, coding, and other electronic data is stored in a file on a password-protected personal computer and a password-protected thumb drive. After the study is completed, the personal computer file will be deleted, the thumb drive will be stored in a locked safe for five years, and then the data will be

destroyed via erasing and reformatting the thumb drive disk and trash compaction. I will ensure that no personally identifiable information regarding participants is ever made available in publications, audio recordings, or transcripts. All participants' identities are concealed through pseudonyms, which is the only way to distinguish participants in any written or published manuscripts.

I encountered ethical challenges during the research process. The first challenge was scheduling an adequate number of interviews with educators as the high school site employed only 17 full-time certificated teachers who met selection criteria. Also, a personal family tragedy and a student tragedy at the high school hindered the timing and amount of interview data collected. However, I had a good working relationship with district administrators, so it was easier to obtain gatekeeper approval. Because the research site was in my home district but not at the school where I currently taught, I have interacted professionally with the teachers I interviewed, which may have caused a conflict of interest, but also may have put the interviewees at ease. As an educator, my role in teaching online during the COVID-19 pandemic was analyzed reflexively to account for personal bias or preconceptions. Finally, transcribing the interviews verbatim and coding for thematic analysis took a significant amount of time and energy (2 months). I did not need to amend the IRB application as the procedure for data collection, though taking 4 months, was conducted as planned with only two email solicitations and one flyer requesting participation. The questionnaire link was sent, but due to incomplete and limited responses, it was discarded as a source of data used in the analysis.

Summary

I chose the qualitative case study research design to answer the research question. As a participant researcher, I used reflexivity to ensure that data and themes were inferred from primary and secondary data and not my own beliefs. Seven West High School participants engaged in online interviews using a semi-structured interview protocol, which were then transcribed verbatim. All participant identities remained confidential through pseudonyms both on paper and electronically. I obtained IRB approval prior to data collection and did not need to amend procedures or obtain additional IRB approval. I addressed ethical issues and followed ethical research procedures during data procurement and analysis. Data analysis and findings are reported in Chapters 4 and 5.

Chapter 4: Results

The purpose of this qualitative case study was to investigate rural high school teachers' perceptions of their efficacy as they implemented strategies, technologies, and curricula during the transition to remote and hybrid instruction because of the COVID-19 pandemic during the 2020-2021 school year. Seven teachers at the rural West High School in the West State School District were interviewed to provide data for thematic analysis to answer the research question.

The research question guiding this study was:

What challenges do professional teachers at a rural public 9-12 grade high school face regarding strategies, technologies, and curriculum as they transition to remote and hybrid instruction in the 2020-2021 school year during the COVID-19 pandemic?

In this chapter, I review the study setting and procedures, participant demographics, data collection and analysis process, and trustworthiness. This is followed by results of the study, including codes, categories, and themes emerging from interview data.

Setting

The seven participants were full-time certificated teachers at West High School during the 2020-2021 school year and had also taught at West High School during the previous school year. In March 2020, the school closed its doors to in-person learning due to the spread of the COVID-19 virus in the country and community. These teachers began teaching at home via Google Meets and Google Classroom as well as providing

paper packets that were distributed to students. The 2020-2021 school year began with continued remote learning and returned to half-day in-person learning in October 2020. West High School is in a rural city with a population of approximately 3,800 citizens. The West State School District services approximately 875 brick-and-mortar students and an additional 2,500 students through an online consortium. West High School services approximately 275 students.

When the 2020-2021 school year began, teachers at West High School were provided with a new learning management system, including a preloaded curriculum they were not previously using. Students were in small class sized cohorts with one teacher during the school day. However, in-person students were on computers and taking different classes with different teachers throughout the day. Teachers were required to manage their in-person cohorts while simultaneously teaching their online students, some of whom continued learning from home, while others were in various cohorts in other classrooms.

Demographic Information

Few demographic questions were asked of participants and were mostly a means to determine if interviewees qualified for the parameters of the study. Participants' experience in the field of education spanned between 3 and 21 years. All seven participants had been teachers at the high school for at least one year prior to the 2020-2021 school year. Participants taught a range of subjects including general education, special education, advanced placement, and enrichment. Participants taught students in

grades 9-12, most of whom taught multiple grade levels and multiple classes. All seven participants were assigned an in-person cohort for the 2020-2021 school year with 0 to 10 in-person students and 4 to 13 at-home students. Two teachers relinquished their in-person cohorts to other teacher cohorts due to various reasons but continued to teach their students remotely via the online learning management system.

All seven participants were full-time classroom teachers at the time of the March 2020 school closing and began the 2020-2021 school year teaching fully remotely in their classrooms at school in August 2020. In late October 2020, students returned to their cohort teachers' classrooms in-person for half days, 4 days a week. A fifth half-day was added in April 2021. Half-days were in the mornings. Afternoons were required for teachers to prepare video lessons, use the learning management system to differentiate instruction, and contact students in their cohorts.

Ethnicity and gender demographic information is excluded from this analysis to maintain confidentiality of participants. An alphanumeric code was randomly assigned to each participant to maintain confidentiality. Participants were given the following identifiers: T1, T2, T3, T4, T5, T6, and T7.

Data Collection

Data were collected from seven semi-structured interviews with teachers who taught at West High School during the 2020-2021 school year. I obtained IRB approval was obtained the week of high school graduation in June 2021 (IRB approval number 06-11-21-0089532), which was valid for collecting data between June 11, 2021, and June 10,

2022. A set of flyers was distributed to teacher mailboxes, and emails were sent to all teachers who met selection criteria. This information was available publicly on the school's website. Contained in the email was flyer information and a link to a digital copy of the informed consent form. Four teachers responded to initial invitations and three interviews were conducted in June 2021. The fourth interview was postponed due to personal reasons. At this point, many teachers were on summer break and not available for interviews.

A second email was sent in late August 2021. Five teachers responded by consenting via email reply. Three participants were interviewed in September 2021, and the fourth participant was interviewed during a postponed interview from June 2021. A tragedy at the school concerning recent student graduates caused the other two volunteers to rescind their participation in the study as they were emotionally preoccupied with the unexpected event. In all, I conducted seven complete interviews via Zoom within a 3-month period.

During interviews conducted via Zoom, interview questions appeared on the screen while I read them aloud. The intention was that each participant would see the question and be able to reflect on their perceptions rather than trying to remember the questions. I also used probes and clarifying questions to deepen data collected from participants. Interviews ranged from 24 to 49 minutes. All seven interviewees were able to complete interviews and answered all protocol questions. I conducted interviews on my home computer outside of school hours; however, four participants were in their

school classrooms for interviews. Three participants were in out-of-school locations on their personal devices.

Data collection occurred as described in Chapter 3. Zoom interviews were audio recorded and then transcribed using Microsoft Word's transcription feature and then verified and corrected by me. I listened to each audio recording at least twice. Transcripts were then sent to participants, of whom T2, T5, and T6 responded that their transcripts were accurate. I assumed that remaining transcripts were also accurate via multiple cross-references of recordings and typed transcripts. These transcripts were then loaded into Quirkos for coding and categorizing of data. I also unfolded themes via multiple readings of typed transcripts.

One anomaly occurred in that T3 was briefly booted out of the Zoom meeting and had to reconnect about three minutes later to finish the interview. T7 had a poor connection on their end and had to be asked multiple times to repeat their responses. The remaining five interviews had no anomalous occurrences. All seven interviews were complete and thorough enough to be included in data analysis. Though provided with a link to an optional questionnaire via SurveyMonkey, there was not enough participation to provide usable data from this source.

Data Analysis

Audio recordings were downloaded into my password-protected computer upon completion of each interview. Audio was then transcribed using the Microsoft Word 365 dictate and transcription function. Audio was then played and paused while I verified and

corrected the transcripts. Each transcript was randomly named T1, T2, T3, T4, T5, T6, and T7. These transcripts were entered into the Quirkos coding application.

As I read each transcript, inductive coding was performed in that chunks of relevant text were attached to a quirk or micro-code. Quirks were created as the transcript text reveled each micro-code. As more text is assigned to a quirk the bubble grows larger. The larger bubbles indicate similarities within the interview transcripts. A report was printed which summarized 28 quirks or initial index codes related to 396 chunks of text. A chunk of text being three or more words related to the quirk code.

The 28 quirk codes were ordered by number of references. In the second cycle of coding, text chunks relating to each quirk were read to assign quirk codes into categories. Some quirks became categories, whereas others were combined to form a category. As each category was defined, the original transcripts were read by me to identify any additional text chunks to include or pre-coded text chunks to exclude from the category. A total of 250 chunks of text were utilized in the final analysis. In all I defined 13 categories. The 13 categories were then organized into five themes that relate to the research question (see Table 1).

Table 1

Codes, Categories, and Themes

Quirk Codes	Category	Text Chunks	Theme
Uninformed Teachers	Expectations of Teachers from Administrators	24	1. Changing Expectations
Student Difficulties, Challenges	Expectations of Students from Administrators	22	
Student Expectations, Live Sessions	Expectations of Students from Teachers	27	
Student Engagement, Prompting	In-School Learners vs. At-Home Learners	14	2. Lack of At-Home Engagement
Respect for Home Life, Parent Contact	Contact and Engagement of At-Home Learners	11	
Relationships with Students	Teacher-Student Relationships	10	
Modify/Differentiate, Time	Freedom to Choose Curriculum	21	3. Freedom vs. Structure of Curriculum
Vs. In-Person Learning, Curriculum Challenges	Use of Structured Curriculum	20	
Online Tech Ability, Google Classroom, Digital Tools, Learning Management System	Teacher Technology Self-Efficacy	38	4. Technology Efficacy
Internet Access, Remote Teaching, Tech Challenges	Student Use of Technology	17	
Prior Online Teaching, Professional Development, Preparation, Should they be Trained?	Preparation	15	5. From Struggle to Resilience
Blended/Hybrid Teaching, 2020-2021 Challenges	Struggles	18	
Lessons Learned, Shift in Thinking	Resilience	13	

In all, I defined five themes. Themes one and two describe the challenges associated with the strategies element of the research question. Theme three addresses the curriculum aspect of the research question. Theme four addresses the technology challenges relating to the research question. Theme five, though slightly addressing challenges related to ERT, addresses the efficacy portion of the research question and was a key finding in teachers' perceptions of the experience of teaching during the 2020-2021 school year. In the results section, each category in a theme is attached to a direct quote from a participant that best describes the theme.

Though there were no obvious discrepancies in the data, as most teachers agreed on the results of the theme, there were mixed feelings of efficacy related to technology ability and mixed opinions about the pre-loaded curriculum. These are noted in the results section under the appropriate categories. Also included in the results is a section on outliers which includes information provided by only one of the participants in the study that was not mentioned by the other six.

Results

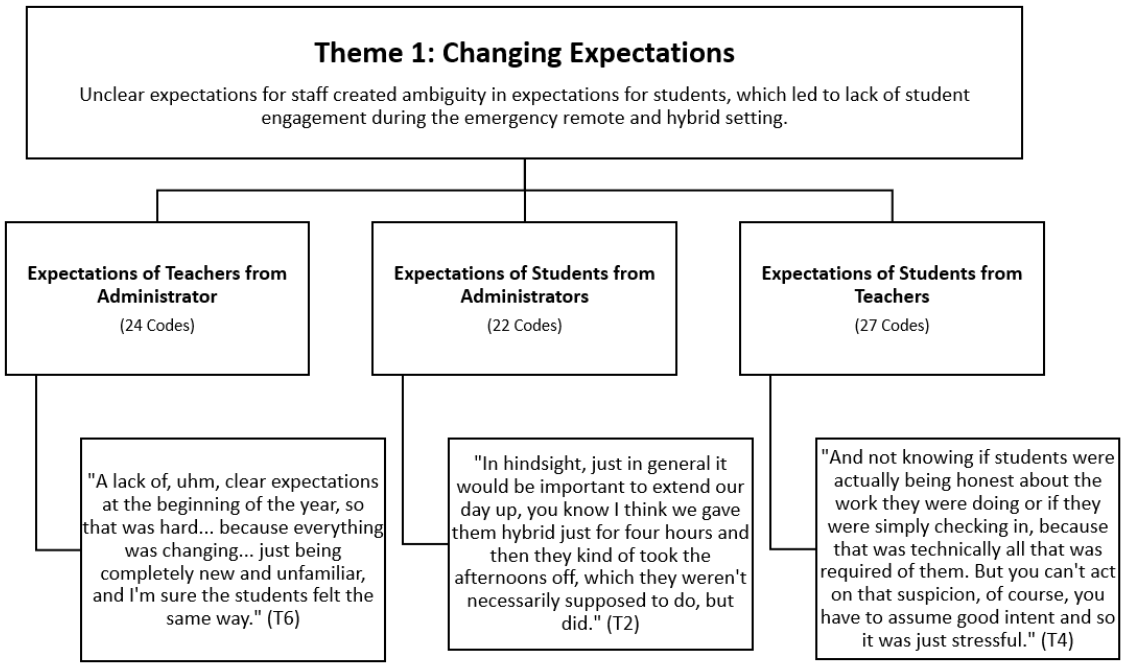
Results of the findings from analysis of seven interviews of teachers at West High School who taught in the remote and hybrid setting during the 2020-2021 school year were delineated. The results section is organized by theme. Each theme is organized by category. Included are summaries of findings by all participants along with quotes and findings of individual participants that support the theme. Discrepant cases and outliers are noted at the end of the reporting of thematic results.

Theme 1: Changing Expectations

I coded 73 pieces of text and separated the codes into three categories which make up the theme of changing expectations (see Figure 1). The theme encompassed coded references to three categories: expectations of teachers from administration, expectations of students from administration, and expectations of students from teachers.

Figure 1

Theme 1 Codes, Categories, and Quotes



The findings indicated that expectations for both teachers and students were fluid and changed during ERT, making it difficult for teachers and students to meet expectations. The resulting theme statement I created to explain the data was that unclear expectations for staff created ambiguity in expectations for students, which led to lack of student engagement during the emergency remote and hybrid setting. I noted in reflexive

journaling that this theme was surprising in that my experience in a similar setting resulted in specific and defined expectations for both teachers and students.

Expectations of Teachers from Administration

When the initial school closure due to COVID happened in March 2020, little information was conveyed to teachers about their expectations (T1, T6). West High School took an extended spring break (T7) to prepare teachers for required weekly packets (T1, T6) to be sent home with students and once-weekly online lessons via Google Meets. Participants indicated the expectations were "unclear" (T5, T6). When the 2020-2021 school year began, the school adopted a learning management system with pre-loaded curriculum and a synchronous meeting application. However, the program took time to schedule and load, so the beginning of the school year's expectations were "staggered and uncertain" (T3). T6 said:

> We didn't have any really advanced training. I didn't feel like or enough advanced training so it was hard to learn how to use it and then all the kids were kind of stressed about it and we were stressed about it. So, I just felt that kind of created a negative start to the school year and then it was kind of hard to rebound from that with a lack of clear expectations at the beginning of the year, so that was hard. Uhm, consistency was hard there and follow-through because everything was changing, and we were still learning how to use the technology and the best practices to use. And so it all kind of was everything at once. Just

> being completely new and unfamiliar, and I'm sure the students felt the exact same way.

T5 noted that, "we were told to not really engage students in any kind of conversation or discussion" referring to in-person cohorts. The leaders told many of the teachers to explicitly use the pre-loaded curriculum (T5). However, they were also told to "search for resources to engage students" (T7). Ambiguity on whether to use the pre-loaded curriculum or to utilize online resources created a challenge for teachers.

Also, technical difficulties caused the curriculum to be loaded and assigned in a scattered manner, resulting in a "lack of clear expectations" (T6) at the beginning of the 2020-2021 school year. Once the curriculum and learning management system were operational, teachers "were told to explicitly use" (T5) the program. However, teachers were not adequately trained on the program (T7). Some teachers used other resources to supplement their courses (T3, T5) but were instructed to "use a small number of apps and not overwhelm students with too many things" (T7).

Expectations of Students from Administration

Students had the option to remain remote as an online-only learner or to learn in the hybrid setting by attending in-person to a cohort and teacher, while still taking each course online. The majority of students remained at-home (T1, T2, T6) and in-person learners attended half-days in the mornings and were expected by administrators to work on schoolwork in the afternoon, though most students "kind of took the afternoons off, which they weren't necessarily supposed to, but did" (T2). Students were not required by

administration to attend synchronous video conferencing lessons (T2, T3, T4, T5) and teachers would have approximately 2-5 students in a live lesson (T1, T7). The expectation was for the students to do work asynchronously. Work was given with a due date; however, no assignments were to be marked late by teachers (T1, T4). Teachers were limited to two half-hour synchronous lessons per week (T4, T5). Some teachers employed the use of surveys to engage more students in attendance (T4, T7). Students were unclear of attendance and participation requirements which may be a contributing factor to lack of student attendance, and engagement. T2 said:

> I think scheduling could have been improved. The leaders not necessarily giving a choice as far as synchronous and asynchronous for our high school students. So have a scheduled time and make sure they're there. You know there's always giving some lenience. Everybody's situation is different, but I think if you set up the expectation that they have to be there at that time. That would be more helpful and we would have more engagement.

T2 indicated that school leaders gave students the option to not attend synchronous sessions, which led to less engagement. T1 and T4 also mentioned that graduation requirements for the seniors was ambiguous in that "they did not know what grades and classes they needed to graduate" (T1) and "it changed, you know, from higher up, what we were supposed to do to get them [the students] through" (T4).

Expectations of Students from Teachers

During synchronous lessons, the teacher had to both monitor in-school cohort students while simultaneously teaching and recording the live online lesson (T5, T6). Cohort students were expected "to be quiet while I was teaching, uh, you know class or recording a video to share with the people that were online" (T6). Teachers employed tactics to keep in-school cohort students engaged by allowing frequent breaks (T2), making a to-do list for students (T2), informing students their next step to move on through the curriculum (T1, T4), and using small group documents for collaborative work (T4). It was unclear whether students were participating in the synchronous sessions as many of the students did not turn on their cameras or microphones (T2, T4, T5). T4 noted "not knowing if students are really like, if some students would turn off their cameras after the beginning and then walk out of the room" indicating students would log-in, but not participate or be present in the synchronous sessions. T4 noted:

> Not knowing if students were actually being honest about the work they were doing or if they were simply checking in, because that was technically all that was required of them. But you can't act on that suspicion, of course, you have to assume good intent and so it was just stressful.

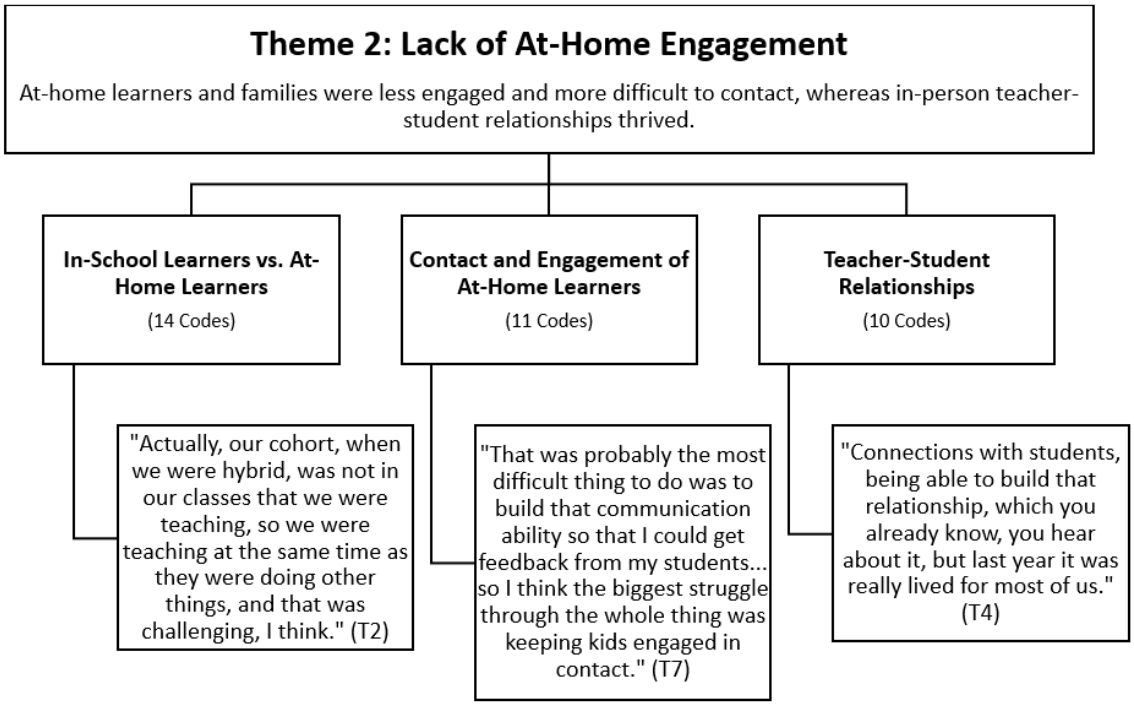
T2 suggested "for teachers to set that synchronous and make it, you know, mandatory… you know we have to consider every student, but for the majority, make it known as mandatory." T2 indicated that the expectation, set by school leaders, for synchronous sessions to be optional may have caused disengagement of students in the online environment.

Theme 2: Lack of At-Home Engagement

I coded 35 pieces of text and separated the codes into three categories which make up the theme of lack of at-home engagement (see Figure 2). The theme encompassed coded references to three categories: in-school learners vs. at-home learners, contact and engagement of at-home learners, and teacher-student relationships.

Figure 2

Theme 2 Categories, Codes, and Quotes



The findings indicated that strong teacher-student relationships were built with in-person learners, while it was difficult for teachers to engage and relate to at-home learners. The resulting theme statement I created to explain the data was that At-home learners and families were less engaged and more difficult to contact, whereas in-person

teacher-student relationship thrived. Reflexive journaling allowed me to note that cohorts at my school had more in-person students than at-home students and found that engagement from at-home students in my experience was contrary to the results of this study in the high school setting.

In-School Learners vs. At-Home Learners

In-school learners expressed to teachers that they enjoyed being at school where they could socialize with their friends (T3, T5). However, for teachers, having in-person learners "wasn't as personable" (T3) as students were "physically in the classroom of another teacher" (T7). T2 stated, "Actually, our cohort, when we were hybrid, was not in our classes that we were teaching, so we were teaching at the same time as they were doing other things, and that was challenging, I think."

It was a challenge for teachers to relate or get to know student needs (T3) as they "didn't know what any of my students look like" (T5). Teachers also struggled with how to support online students. Teacher T6 noted:

> I think there's not a lot of trainings or there's not a lot of information out there on how to support students online in emergency situations, so that's kind of up to the individual teacher to use their intuition on how to do that.

Most teachers related that there was little engagement, interaction, and feedback from students during synchronous sessions (T1, T4, T5, T6), although some students who showed up to synchronous sessions did engage well online (T7). It was a challenge for most of the teachers to keep students on-task during synchronous sessions (T1, T3, T4,

T5, T6). Some teachers found it “easier to connect” (T1) through the synchronous sessions with students “in a one-on-one setting” (T2, T6) or “with small groups” (T4). T1 said:

> Keeping the students on-task during live lessons that was, uhm, sometimes more challenging than I would have thought. Uhm, it’s interesting to see one of the things, uhm, how much growth the ones in person made versus the ones who were all online. Uh, they, the ones in person, seems to make quite a bit more for you know, obvious reasons in my opinion.

Teachers with in-person cohort students were able to monitor their progress in other classes and better support their students’ academic and social-emotional growth. With online only students, the synchronous and recorded lessons seemed one-directional to some teachers. It was difficult for teachers to engage student in collaboration through asynchronous learning.

Contact and Engagement of At-Home Learners

Each of the teacher participants found that contacting all students in their cohort was challenging. T3 said of some students, “I couldn’t get ahold of or couldn’t get ahold of very often. They weren’t like checking in or being able to understand the work.” Parents or guardians were also difficult to contact. T4 said, “the majority of the time I would not reach anyone.” Because it was difficult to reach parents and students of at-home learners, there was inconsistent information about each student’s individual needs

(T2, T3, T4). Teachers had to consider every student and remember that everybody's situation is different (T2). T2 noted:

> Just also understand that not every kid is going to be able to concentrate as much at home. They're not going to be able to always access the stuff on time because they have three siblings, and they all need to be on a live session at once and they can't do that. Uh, so just uh, try and be respectful of like what's going on at home for the students so that they can be fully engaged when you do get a chance to communicate with them.

Some students also had full-time jobs that hindered their attendance for synchronous sessions and limited their time to do asynchronous work (T7). With home situations in mind, however, it was difficult to receive feedback from students (T4, T6, T7) and families. T7 noted the difficulty:

> That was probably the most difficult thing to do was to build that communication ability so that I could get feedback from my students… so I think the biggest struggle through the whole thing was keeping kids engaged in contact.

Teachers were required to contact each cohort student throughout each semester to monitor progress and problem solve. Teachers used various tactics to contact students. Student contact attempts included emails, surveys, post mail, and even home visits (T1, T2, T4, T6, T7).

Teacher-Student Relationships

Regardless of whether a student was easy to contact, teachers wanted them to know that they wanted what was best for the student. T5 stated that they "Enjoy having kids in my room." Teachers were concerned for the social-emotional well-being of the students and wanted to make sure they were safe, okay, and dealing with anxiety appropriately (T1, T3, T4). Cohort teachers valued the connections they made with in-person students. T4 stated:

> Uhm, connections with students, being able to build that relationship. Which I mean you already hear about it, but last year it was really lived for most of us, I think. Uhm, knowing that really education can sometime, I don't want to say take a back seat, but it's not as important to impart the knowledge as it is to impart your care and compassion.

Some teachers felt a special relationship with their in-person cohorts. T5 said:

> The kids who were physically in my room, because after they were done with their online classes, we would take breaks. We played volleyball, ping pong. We'd walk, we played games with each other. That was honestly my favorite part of last year was I got to really bond with those students in a way that I've never been able to. Because they were literally with me all day, you know half a day, but still. And we were like family. So that was fun. I liked that.

Two teachers, T3 and T7, did not have in-person cohorts for the entire school year. These two teachers taught mostly at-home students in the online environment once they relinquished their in-person cohorts to other teachers. For these two teachers, the

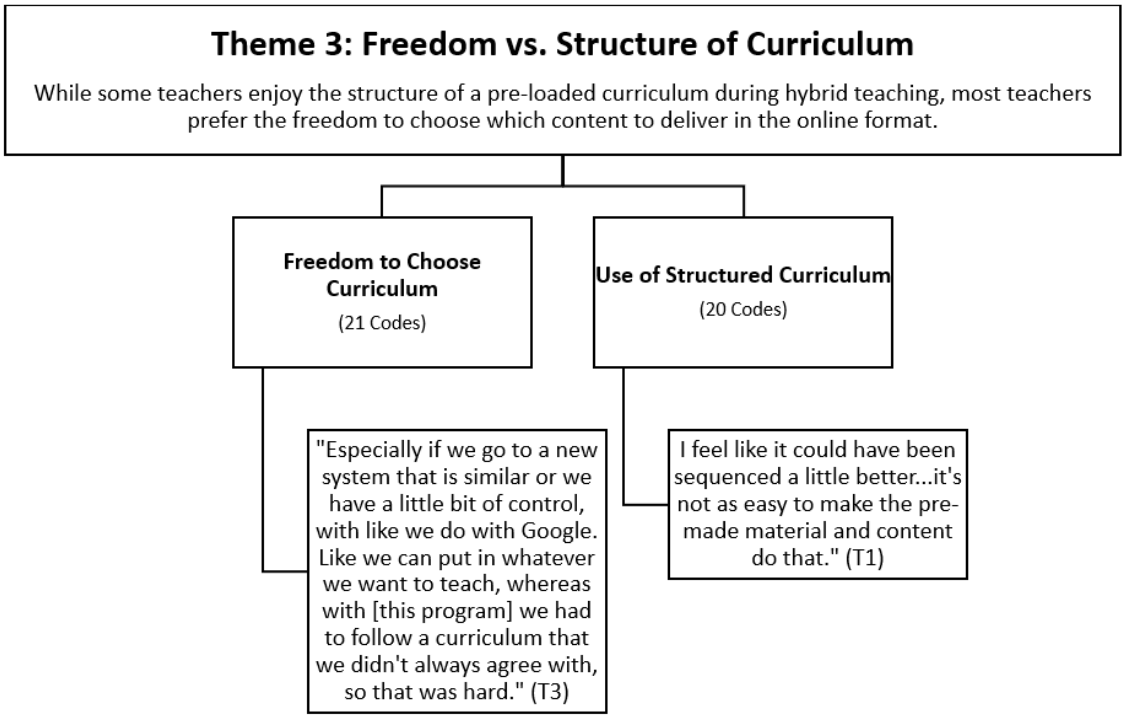
relationships built between in-school students and teachers was a missing factor. The two teachers found it “difficult to connect” (T7) with “fully online students” (T3).

Theme 3: Freedom vs. Structure of Curriculum

I coded 41 chunks of text and separated the codes into two categories which make up the theme of freedom vs. structure of curriculum (see Figure 3). The theme encompassed coded references to two categories: freedom to choose curriculum, and use of structured curriculum.

Figure 3

Theme 3 Categories, Codes, and Quotes



Findings indicated that teachers had mixed feelings regarding the new pre-loaded curriculum, which took less time than loading original content, but more time to figure

out how to use. The resulting theme statement I created to explain the data was that while some teachers enjoy the structure of a pre-loaded curriculum during hybrid teaching, most teachers prefer the freedom to choose which content to deliver in the online format. Reflexive journaling caused me to put aside my own opinions about the pre-loaded curriculum, as the high school had different courses and course sequences. Personal feelings toward the pre-loaded curriculum were kept in check as I used and analyzed quotes from participants.

Freedom to Choose Curriculum

During the initial school closure in March-June 2020, teachers at West High School were requested to continue their current curriculum in an online format and through weekly packets. Some teachers found that adapting resources and putting them online took a considerable amount of time (T2, T4, T7). Teachers also found it a challenge to prioritize content to consider realistic expectations of student engagement (T1, T2, T7). One teacher adapted group projects into individual assignments (T2), while another used collaborative online projects to further engage students in online learning (T3). Teachers were challenged with the task of finding relevant and hands-on learning activities that students could perform in the home environment to further their understanding of content (T4, T7). Mostly, teachers enjoyed the freedom of having control over the content to deliver fully online (T2, T3, T5). Teachers were creative in finding ways to provide options, choices, and alternative ways for students to show what they know (T6, T7).

One discrepancy is that, though the teachers interviewed all indicated that they continued to engage students in relevant content during the finality of the 2019-2020 school year, they felt that other teachers at West High School did not do so. T5 said:

> I felt like there were a lot of other teachers that just sort of signed out. Not a lot. There were some other teachers that just kind of signed out and I was hearing from students like, 'they're not doing anything; I'm not getting anything from them.' And I felt like I was busting my butt to stay engaged and keep teaching and keep the kids learning and then there were other teachers that just seemed like they were on vacation.

The interviewed teachers all assured me that they were taking on the task of adapting their current curriculum to the online format with fidelity and creativity. Many, though, preferred the freedom to adapt their own curriculum to the online platform. T3 agreed:

> Especially if we go to a new system that is similar or we have a little bit of control, with like we do with Google. Like we can put in whatever we want to teach, whereas with [this program] we had to follow a curriculum that we didn't always agree with, so that was hard.

Use of Structured Curriculum

During the 2020-2021 school year, the West State School District adopted a learning management system and pre-loaded online curriculum that was new to West High School teachers. The school district had used the program in their online consortium and adopted that program for West High School and other brick-and-mortar schools in

the district. However, there was very little notice of or training for the new program prior to implementation. Teachers had to maneuver a new video conferencing program and struggled to record and create videos to teach the content (T4, T7). The curriculum was full of reading passages that were "dry" (T4) and "boring" (T5). Though these teachers also found the sequence and list of units and subunits in the curriculum was "easier to follow" (T4), had a "nice flow" (T1) and was easy to "track progress" (T7).

Not every teacher saw the benefits of the new program and curriculum. T1 said, "I feel like it could have been sequenced a little better… it's not as easy to make the pre-made material and content do that." T1 and T5 found there was no curriculum to match the courses they were to teach and T6 had a course that was outdated and catered to older standards rather than newly adopted standards (T6). T6 said:

> And I found myself kind of moving away from the curriculum that was put in the system and kind of creating my own based off what I felt the students were capable of doing and were emotionally able to do as well.

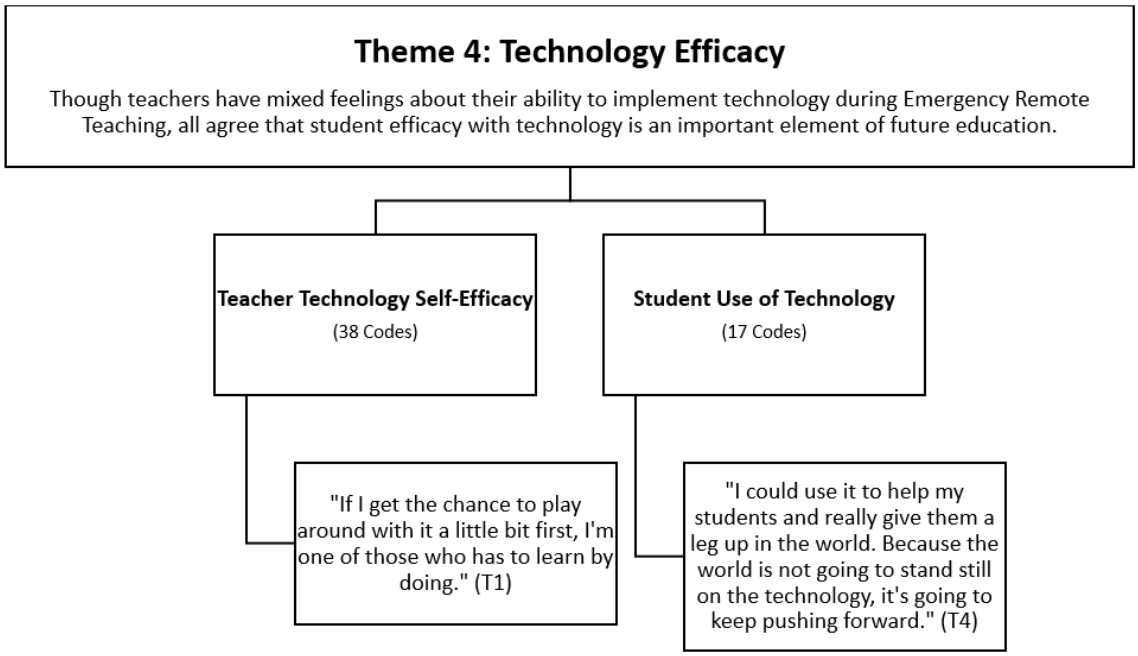
T3 agreed by saying, "we had to follow a curriculum that we didn't always agree with," others tried to create "student buy-in" (T4) by adding content to synchronous sessions "just to try to make it not so boring" (T5). Thus, there were mixed views and feelings related to the adoption of the pre-loaded online curriculum versus the time-consuming online adaptation of previously used curriculum.

Theme 4: Technology Efficacy

I coded 55 pieces of text and separated the codes into two categories which make up the theme of technology efficacy (see Figure 4). The theme encompassed coded references to two categories: teacher technology self-efficacy and student use of technology.

Figure 4

Theme 4 Categories, Codes, and Quotes



Findings indicated that most teachers were previously using the Google Suite making the transition to fully online learning in March 2020 easier, while the adoption of a new learning management system created some unease among teachers. The findings also noted that, while some students had connectivity and bandwidth problems, students

who had connectivity thrived in learning and using various technologies during the COVID emergency. The resulting theme statement I created by to explain the data found in theme four concluded that teachers have mixed feelings about their ability to implement technology during ERT, all agree that student efficacy with technology is an essential element of future education. I spent extra time on this category as I discovered that my pre-conceptions of the topic aligned with the thematic results. I used direct participant quotes to ensure that my own ideas were not infused into the theme, as they were similar in nature.

Teacher Technology Self-Efficacy

Most teachers felt comfortable using the Google Suite, as they had previously used it in their classrooms prior to the March 2020 school shutdown. However, once the new learning management system was adopted, there were mixed feelings of efficacy related to the program. Many teachers admitted they "learn by doing" in that they can "play around" (T2) with the program and figure it out (T1, T2, T5, T6). T1 said, "if I get a chance to play around with it a little bit first, I'm one of those who has to learn by doing." Although, many teachers also admitted that training of the new program was inadequate (T2, T3, T7). Newer teachers with less than six years of teaching experience were more positive about their ability to learn new technologies quickly. T6, a newer teacher, felt "pretty comfortable, I feel like I'm from a generation that's okay clicking around until I figure it out, whereas I know not all generations are comfortable with that." Veteran teachers found it more difficult to adapt to the recent technology. T7 noted "a

learning curve involved in just using the technology and being able to get a handle on using it."

Some of the newer teachers had taken online college classes and used Google Classroom in their courses prior to the March 2020 school closures. All seven teachers used the Google suite with Google Classroom during the initial school closure and were mostly comfortable using the programs. Some had even taken professional development courses on the Google Suite prior to March 2020 (T4, T6). However, the roll-out of the new learning management system was staggered with very little professional development offered on the program or its curriculum. T6 found it difficult "having to learn how to use that platform as the students were." All schools in the district were trying to use the program all at one time, which caused accessibility issues as well. One teacher even admitted that stressing about the new technology "made me ill" (T4).

All teachers experimented with using a variety of tools to engage students, though they were cautioned by administration to limit the number of tools used so as not to overwhelm the students. Tools used included the Google Suite (all teachers), Screencastify (T4, T5, T7), Go Guardian (T2, T3), Readworks (T1), IXL (T1, T3), Padlet (T5), webquests (T5), and YouTube (T5, T7). Most of these applications were used between March and October 2020. Once the new learning management system was rolled out, teachers were less likely to use the Google suite as it was "not compatible with the new program" (T3).

Student Use of Technology

Accessibility was a problem perceived by teachers. Initially, in March 2020, many students did not have internet access at their homes. Each student in the high school was assigned a Chromebook, but many were unable to connect at home (T1, T5, T7). Then, when hotspots were delivered to student houses, there was limited bandwidth (T7), which caused problems for students to watch videos made by teachers (T6, T7) or to open websites to learn content (T3). The learning management system, which became accessible to students in October 2020, required students to be on the program for hours at a time, burning up bandwidth and access time. Also, some students had siblings who were also using the same hotspots and could not access the internet at the same time as their siblings.

Teachers found difficulty in connecting to at-home students as many of them had low connectivity and low engagement. At-home students "turned in assignments a lot less online" (T1) than in-school students. Also, when technology did not work, students did not try to contact teachers (T7). Students who had connectivity problems "just sort of signed out" (T6) rather than participating in classwork or trying to contact the teacher via phone. Because the new learning management system did not become fully operational for students and teachers until late October 2020, teachers had to learn the program as the students were learning it.

There are positives to students' use of technology. Many students had previously used the Google Classroom and other Google Suite programs, thus the initial transition to online learning in March 2020 was more streamlined. Many teachers had already used the

Google Classroom and had their classes set up, so students did not need to join a new class. Once hybrid instruction began in October 2020, some students aided teachers in troubleshooting the new learning management system (T2, T6, T7). T5 said:

> Students really had to adapt in many ways that felt kind of important. You know they were writing way more emails than they ever had. They had to communicate in different ways. They were helping each other out with technology. They were helping teachers out with technology. And the fact that they were learning how to be adaptable and resourceful and collaborative, I think I was impressed with them.

Some teachers put together newsletters, or lists of content websites and applications, which would help students with online learning (T1, T2, T7). Though not all students engaged fully in online learning, some thrived in the environment (T4, T6, T7). Some students learned soft skills such as collaboration, problem-solving, and self-monitoring of progress. T4 said "there were components of what happened that year that really did work better for students in their learning abilities." All seven teacher participants noted the importance of using technology in the classroom in the future to give students the skills needed to succeed in today's world. T4 said:

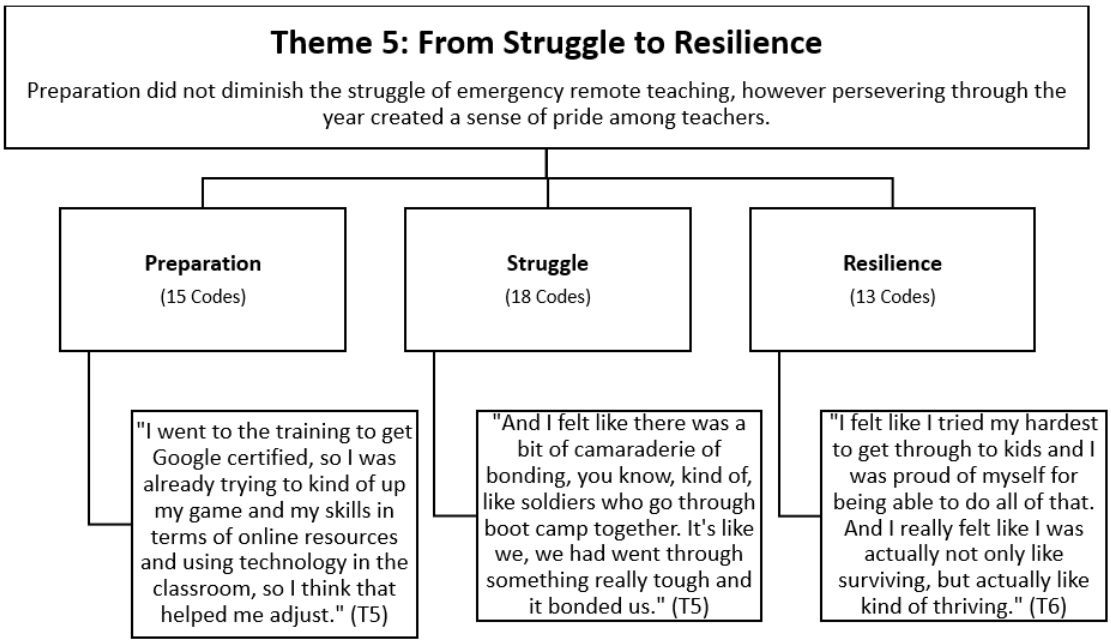
> And as far as moving forward, I mean there is so much technology that I still feel like I don't know is out there that could help me in my classroom now. I could apply it not just to remote or emergency remote teaching, but I could use it to help my students. And really give them a leg up in the world. Because the world is not going to stand still on technology. It's going to keep pushing forward.

Theme 5: From Struggle to Resilience

I coded 46 pieces of text and separated the codes into three categories which make up the theme of from struggle to resilience (see Figure 5). The theme encompassed coded references to three categories: preparation, struggle, and resilience.

Figure 5

Theme 5 Categories, Codes, and Quotes



Findings indicated that preparation was paramount to making it through the year, though there were still struggles. The findings also indicated that teachers felt proud of making it through the 2020-2021 school year. The resulting theme statement created by the research to explain the data was preparation did not diminish the struggle of ERT; however, persevering through the year created a sense of pride among teachers. Though the research question addresses challenges, I included the resilience category as the

participant transcript data for all seven participants included some reference to strength and pride because of completing the 2020-2021 school year. My reflexive journal included pre-conceived ideas that the 2020-2021 school year was not successful rather than the productive struggle described by the participants. Because my own beliefs were different than the thematic results, my bias was deemed important to include in the final analysis of this theme.

Preparation

At the onset of the initial March 2020 school closures, many teachers engaged in online professional development covering topics for engaging students in content through online means (T1, T5, T6, T7). T5 said:

> I went to the training to get Google certified, so I was already trying to kind of up my game and my skills in terms of online resources and using technology in the classroom, so I think that helped me adjust.

T5 said, “felt a little more prepared for it because [they] had gotten professional development in those tech tools.” T5 also suggested that future teachers be trained in “just how to infuse technology in your classroom and best practices” so if teachers are required to make the transition again to fully online, they will be more prepared. T1 suggested professional development, “where you can even like, look at your own weaknesses and say, oh, I need to learn more about this type of program, or I need help with this.” T3 noted that teachers need to “keep working on resilience” because “teachers need to be flexible so that when students are asked or forced because it’s out of our

control" both teachers and students can adapt. T3 also noted the importance of "teacher self-care" as a method of "caring for students." All teacher participants felt that tech professional development in online teaching was or would be beneficial.

Struggle

The lack of technology efficacy during the initial school closure in March 2020 made teachers feel like they were "juggling and keeping those balls in the air" (T7). Technology and the ability to troubleshoot technology made teachers feel "frustrated" and "stupid" (T4, T7). The pre-loaded curriculum took the teaching out of the teachers' control. T4 mentioned "feeling like I wasn't really teaching. Feeling like I was more of a babysitter. The term used was facilitator. We were specifically told we were facilitating and not teaching." T4 felt "like I am stuck on stupid island, and I am trying to swim out to the boat that's going to shore. And I would revisit that island quite often throughout the year" (T4). All teachers voiced that there were struggles, frustrations, and lack of self-confidence in their teaching abilities at some point during the 2020-2021 school year. All teachers also voiced that collaboration with colleagues was a contributing factor to making it through the school year. T5 said:

> And I felt like there was a bit of camaraderie, of bonding. You know, kind of like soldiers who go through boot camp together. It's like we had went through something really tough and it bonded us.

Resilience

Despite struggles, teachers were able to come out of the 2020-2021 school year with a renewed sense of pride. Teachers collaborated more with each other on adapting content online, troubleshooting technology, and caring for social-emotional needs of others. T7 said they "also learned how to collaborate with the teachers who had my students in their in-school cohorts." T4 agreed that "we definitely relied on each other as a staff to be able to" get through the year.

Teachers agreed that learning technology and using it in the classroom will benefit teaching in the future. T2 said:

> And I also think that there's a lot of great strategies and techniques that you learn through remote teaching, which you can implement into your class so that gives you a basis for technology in the classroom, so I felt pretty good about implementing it.

The consensus of the teachers was that technology, whether easy or difficult to use, is important and that learning to persevere and get better at using online platforms will benefit the future of the teaching classroom and enhance student learning.

Teachers also felt a sense of self-pride in their ability to make it through a difficult year of teaching in an emergency remote and hybrid setting. T6 expressed their renewed pride and strength:

> Well, even though last year was really exhausting in a whole different way than has ever been before, I felt like I came out of last year feeling like, uhm this is probably not teacher language, but I felt like I was a badass teacher at the end of

last year. Like I felt like I accomplished a lot and I dealt with what I could to the best of my ability. And I felt like I tried my hardest to get through to kids and I was proud of myself for being able to do all of that. And I really felt like I was actually not only like surviving, but actually like kind of thriving.

Outliers

Previously discussed in thematic results are the mixed feelings about technology self-efficacy, especially the difference between new and veteran teachers' perceptions, and the mixed feelings about the required learning management system and pre-loaded curriculum. T2 recommended that synchronous online sessions for at-home students should be at a different time than those with in-school students, thus eliminating the hybrid model altogether.

T4 mentioned inability to secure reliable at-home childcare as a major stressor during the 2020-2021 school year. Also, T4 mentioned that, when teaching from home in March 2020, it was difficult to remove themselves from their own children's needs and education while trying to teach their online students. Though most of the respondents mentioned ERT being more work and added stress, T4 said this "was the first time since I started teaching that I was home before 5:00 o'clock and it was the first time since I started teaching that I've truly left work at work and didn't bring it home."

T7 relinquished their in-person students to another teacher for a time and, when returning to school, was co-teaching the in-person cohort, which made students anxious. Then T7 was asked to continue with the at-home cohort only and leave the in-person

cohort to the other teacher. T7 finished the year completely online, though they worked from the in-school classroom.

Evidence of Trustworthiness

To address trustworthiness, I outlined in Chapter 3 the methods I used to show credibility, transferability, dependability, and confirmability. Methods to address each element of trustworthiness are also described below along with any deviations or changes from the plan outlined in Chapter 3.

Credibility

I used the strategies of prolonged contact with data in a 2-month period of analysis, member checks of transcripts, and reflexive journaling to address credibility. During data analysis, I heard each audio recording 2 times to verify accuracy of typed transcripts. I made corrections including punctuation, word correction, and identification of participant responses separate from researcher questions and probing. Transcripts were sent by email to each of the seven participants. T2, T5, and T6 replied that their transcripts were accurate. The other four participants did not respond to the member check email within the 2-month data analysis period. I, therefore, assumed that the transcripts were accurate via careful matching to the audio recording and both digital and manual processes used in the initial transcriptions of the data. All three member checks were replied as accurate with no revisions needed. I assumed that the additional four transcripts were also accurate with no revisions needed.

Transcripts were then read at least ten times each over a period of 2 months for coding and categorizing of data. Upon thematic coding, the transcripts were perused an additional two or three times to find quotes from participants with which the themes aligned. I viewed each theme through reflexivity to address any personal bias. A reflexive statement for each theme was made in the results section.

Triangulation occurs within the transcripts themselves through grouping of frequently-used words, phrases, and ideas. Triangulation is enhanced in Chapter 5 as findings are verified by recent research. Review of audio recordings, reading of written transcripts, and use of the Quirkos coding program helped to triangulate within the data itself. Additional resources for triangulation, including questionnaire results and district-collected documentation, were not used as there was an insufficient amount of data from these sources to yield credibility results.

Credibility was increased by ensuring the consent form was delivered to and understood by each participant. Each participant also verified that they met inclusion criteria for the study. Three participants verified via email that their transcripts were accurate with nothing more to add.

Transferability

Transferability was addressed through thorough descriptions of the research site, setting, and participants (Shenton, 2004). Data collection circumstances were explained to better assist future researchers in replicating the study. However, due to circumstances including tragedies for both myself and then the school, the study may not be accurately

replicable. The untimely IRB approval also resulted in a larger 3-month window of data collection than originally anticipated. Though a unique setting of rural high school teaching in half-day, hybrid model during the 2020-2021 school year, the study may be relevant to other schools in similar settings. The results can be added to a growing body of research on teaching challenges during the COVID-19 pandemic.

Dependability

Codes, categories, and themes were induced from participant transcripts without prior codes or ideas being formulated. To address dependability, the data was repeatedly read as codes and categories emerged. The 2-month period of analysis allowed me to delve deeply into the interview data. The results included answers to the research question that addressed challenges related to strategies, technologies, and curriculum, as well as additional thematic ideas that emerged during the analysis process including the positives of resilience and teacher-student relationships.

Dependability was also achieved through adherence to the procedures outlined in Chapter Three, including elements of the IRB application, following ethical protocols, and describing any deviations from the data collection and analysis process. The data was triangulated from within and quoted throughout the results to ensure thematic analysis was accurately induced from the participant interview transcripts.

Confirmability

I established confirmability through reflexive statements of personal biases and assumptions, use of direct participant quotes to confirm thematic analysis results, and

member checking of three participants. A reflexive statement was included for each theme in the results section to address any biases I may have had regarding the data results. I taught in a similar setting at a different school during the 2020-2021 school year in the same district and under similar conditions of the high school. By first acknowledging my own ideas and views, the act of reflexivity helped to lessen bias in the analysis results (Ravitch & Carl, 2021). Use of direct participant quotes to explain the categorical and thematic analysis of the data was also a method I used to ensure confirmability of results (Lincoln & Guba, 1986/2007).

Summary

I addressed challenges related to strategies, technology, and curricula while also addressing transition and efficacy components of the research question. Challenges related to strategies included changing expectations of both teachers and students, lessened engagement of at-home learners, and teachers' inability to contact or relate to at-home learners. Challenges related to technology included mixed teacher self-efficacy in using new tech tools, lack of teacher training involving new technology tools, and inadequate or untimely access to online technologies for students. Challenges related to curricula included time needed to adapt curricula to online formats, use of unfamiliar curricula with unfamiliar learning management systems, and use of too many applications and programs at one time. The transition to remote and hybrid learning left teachers feeling unprepared and caused them to struggle throughout the year. Making it through the year allowed teachers to feel resilience and pride; thus addressing the efficacy

component of the research question. Themes are discussed and cross-referenced with current research in Chapter 5, ending with recommendations for further research and implications for stakeholders.

Chapter 5: Discussion, Conclusions, and Recommendations

The purpose of this qualitative case study was to investigate challenges that West High School teachers in the rural West State School District faced as they implemented strategies, technologies, and curricula when they transitioned to remote and hybrid instruction during the 2020-2021 school year. Study data included perceptions of seven West High School teachers via semi-structured interviews. Results of thematic analysis revealed five themes describing strategies, technologies, curriculum, and self-efficacy related to teaching during the pandemic. This chapter includes interpretations of the findings, recommendations for future research, limitations of the study, and implications for social change in education.

Interpretation of the Findings

Each theme was interpreted in terms of participant perceptions, supporting or refuting literature, and through the lens of self-efficacy. The five themes are interpreted separately and then holistically to create a rich and thick view of analyzed data. The views of seven teachers at West High School and current literature on teaching during the pandemic can be used to interpret self-efficacy.

Interpretation of Theme 1: Changing Expectations

The first theme that emerged from data was that there were unclear expectations for both staff and students during remote and hybrid teaching in the COVID-19 pandemic. Rasmitadila et al. (2020) confirm that because the pandemic emergency was fluid and changed, expectations of teachers and students who were going through the

emergency also changed. It was a challenge for teachers to engage students in remote and hybrid learning in emergency situations. The malleability of both teachers and students is needed for adequate learning to occur during an emergency teaching situation. Challenges related to changing expectations found in study data include unclear expectations for asynchronous and synchronous learning, difficulty monitoring students not in synchronous sessions, and being unsure of student attendance in both synchronous sessions and asynchronous work.

A true hybrid model did not exist at West High School in that the in-person students were not in the same class or session as the online students. A true hybrid model requires face-to-face learners and online learners to engage in the same synchronous lessons (Raes et al., 2020). Blended learning occurs when teachers choose the amount of synchronous and asynchronous learning that occurs while students are either in-person or remote (Archibald et al., 2021). T2 related that "our cohort, when we were hybrid, was not in our classes that we were teaching, so we were teaching at the same time as they were doing other things." Lieberman (2020) said 9% of U.S. schools during the pandemic used the cohort model of hybrid learning. Because student attendance was inconsistent, it was difficult for teachers in this study to gauge their students' physical and emotional presence during synchronous sessions as student cameras were turned off most of the time. Flynn and Noonan (2020) noted emotional and physical presence of students is difficult to ascertain when in a remote learning environment.

Soft skills learned during remote teaching in the pandemic could be an impetus for teachers and students to grow in their ability to adapt to changing situations in the future. Soft skills, such as adaptability, utilization of technology as a learning aid, and two-way communication feedback looping are part of the hidden curriculum taught because of the instability of emergency teaching conditions (Whittle et al., 2020). Flexibility and resilience are another set of soft skills learned by 21st century students that separate in-school content knowledge from real-world attributes (Naamati Schneider et al., 2020). Co (2019) said, “the skills that most correlated to success were so-called soft skills of teamwork, critical thinking, problem solving, and the ability to draw connections among different ideas” (p. 22). At West High School, soft skills learned by students include problem-solving with technology, self-monitoring of progress, and finding internal motivation to engage in content.

Martinez and Broemmel (2021) found that teacher self-efficacy during the pandemic may be influenced by their ability to adapt to constant changes. While all teachers in the study felt some form of success, they referred to challenges related to their ability to adapt to changes with regards to technology, expectations for staff and students, and educational requirements resulting from changing conditions of the pandemic. Teachers with low technology efficacy in ERT situations often end up using less engaging teaching strategies as they struggle to use technology to optimize student learning (Li et al., 2019). T6 said, “consistency was hard there and follow-through because everything was changing, and we were still learning how to use the technology

and the best practices to use." Teachers with low efficacy also find peer feedback and collaboration difficult to do in remote situations (Stehle & Peters-Burton, 2019). Confusion regarding expectations for teachers can cause low self-efficacy, which results in lack of student engagement.

Interpretation of Theme 2: Lack of At-Home Engagement

Teachers at West High School noted a lack of engagement from at-home learners and even some in-school learners. T3 said, "I couldn't get ahold of [some students], they weren't like checking in or being able to understand the work." The challenge of engaging students in participation of online and hybrid learning is echoed by current literature on the topic (Chaturvedi et al., 20201; Ferri et al., 2020; Korkmaz & Toraman, 2020; Raes et al., 2020). Flynn and Noonan (2020) said, "the increasing level of concern which staff have for their students within a remote learning environment, not only around their understanding of content, but more significantly, in respect of their level of engagement" (p. 6).

Online learners not accustomed to learning in this environment often fall behind (Kaden, 2020; Whittle et al., 2020). Emergencies may also cause students to be internally unmotivated to participate in class activities, as they are preoccupied with outside events (Carlson, 2020; Martinez & Broemmel, 2021). T1 said, "Just also understand that not every kid is going to be able to concentrate as much at home." T7 added that lack of engagement may be due to having to care for siblings or having a part-time job. Lieberman (2020) said, "the trickiest part… has been getting students to complete

assignments at home, where they might have other responsibilities like childcare or a part-time job" (p. 3).

Constant communication and additional support from teachers is needed to ensure equity in learning environments because students are not accustomed to autonomous learning in ERT (Alvarez, 2020; Asvial et al., 2021; Kaden, 2020; Shim & Lee, 2020). The half-day model at West High School ensured that teachers had afternoons free to plan, prepare, connect with, and monitor progress of at-home students. This agrees with Kaden (2020) in that "student engagement in learning needed constant daily contacts" (p. 6). Teachers at West High School had time to address at-home and low-engagement students through the half-day model. Lieberman (2020) said, "the students who are at home full time could easily get lost in the shuffle if teachers don't put in extra work to engage them" (p. 5)

Haverback (2020) said:

> Interestingly, all three of these areas may look very different when teaching virtually than they do in person. One example is student engagement. While in a classroom a teacher will engage students through a variety of techniques that may not be available virtually. This change may make a teacher's self-efficacy to differ in the virtual setting. (p. 3)

Also affecting teacher self-efficacy was lack of relationships with online and hybrid students. T5 said:

> Other programs besides [this one] I think would have been much more effective and I saw that at the end of the school year. You know when we first shut down, when I did have more freedom, I knew those kids already and we had already had almost a year together, so those relationships were already built. I felt like they continued. Last year was hard because I didn't know what any of my students look like.

One struggle at West High School was that students had not previously been exposed to the rigorous online curriculum and had not gained the skills needed to be autonomous online learners. The lack of students' prior autonomous skills may have led to lower student engagement in academic content during online learning in the pandemic.

Interpretation of Theme 3: Freedom vs. Structure of Curriculum

ERT can cause teachers to reinvent the way they employ teaching strategies and content (Kaden, 2020; Naamati Schneider et al., 2020; Santi et al., 2020). The freedom allowed in March 2020 of teachers in this study to shift their current teaching and content to an online format was an impetus for reinvention and creation of a new style of engaging curriculum. Teachers at West High School were actively engaged in exploring new ways to support learners in the emergency remote and hybrid learning environments from March – June 2020. Flynn and Noonan (2020) said online learning is an impetus for changing teaching practices. With that freedom to re-imagine teaching methods, is the burden of time commitments that seem to multiply in the face of remote and hybrid environments (Kaden, 2020). T2 said "curriculum, you know, it's just time, but taking

curriculum and making it conducive to both online and offline students" took a great deal of time to manage. The idea of requiring additional time to create videos and content for asynchronous learning is echoed in literature (Bond, 2020; Rasheed et al., 2020).

Some teachers in emergency learning shift or modify existing curriculum to include social-emotional learning aspects (Bozkurt & Sharma, 2020). T5 said "even though you know they missed a lot of content, there were other skills they got that I observed, and I was impressed with them." As with teachers at West High School, some teachers were more concerned with students' emotional well-being than with content learning outcomes (Moser et al., 2021). T4 said, "education can sometimes, I don't want to say take a back seat, but it's not as important to impart the knowledge as it is to impart your care and compassion." ERT during the pandemic made most of the teachers in this study aware of the duality between student content knowledge and student social-emotional well-being (T1, T2, T4, T5, T6).

As was the case with West High School, teachers in the pandemic were provided a pre-written curriculum and learning management system with which they were previously unfamiliar (Rodriguez-Segura et al., 2020). The pre-loaded curriculum seemed to be of a low-end nature in that the content was mostly unidirectional with readings and videos, rather than the high-end, which requires more interactivity (Martin et al., 2019; Openo, 2020). T4 noted there was not a lot of student buy in because the content was mostly "dry" and "boring" reading. The reasoning behind the pre-loaded curriculum may have been to allow teachers and students to switch from online to hybrid learning with

ease if the pandemic required (Lieberman, 2020). However, in the case of West High School, they did not switch between the two models; they were fully online March – October 2020 and then fully hybrid the remainder of the 2020-2021 school year.

An additional challenge with curriculum is that remote and hybrid courses may be out-of-field or different than the in-person curriculum teachers are usually assigned to teach (Kaden, 2020). AP teachers at West High School found that the pre-loaded curriculum was not aligned to current AP standards. Special education teachers at West High School found that each of their students required multiple levels of courses from the pre-loaded curriculum to meet their individual students' needs. Also, they were assigned this new curriculum and learning management system without prior training (Korkmaz & Toraman, 2020).

Some teachers at West High School took trainings during the initial school shutdown to further their knowledge of delivering instruction online, causing them to feel more comfortable and efficacious with the transition. Efficacy can be further explained by König et al. (2020) in that "the extent to which teachers perceive such efficacy may influence whether or not they take action, invest effort in an action, and how long they may sustain possible challenges" (p. 611). Because of teaching an unfamiliar curriculum on a previously unused learning management platform, teachers at West High School may have seen a shift in their self-efficacy. Haverback (2020) echoed this notion in that "the COVID-19 pandemic has created a situation in which usually efficacious teachers may not feel efficacious now" (p. 3). Content knowledge must also be enhanced with

teacher ability to navigate technology-infused learning environments (Cai & Gut, 2020). Teachers need to be efficacious with regards to both content and the ever-changing educational technology landscape to engage 21st century students in active online and hybrid learning.

Interpretation of Theme 4: Technology Efficacy

While most teachers in the study would have liked more training, they felt that they were able to learn the technology by trial and error, rather than reading instructions or participating in online professional development. T3, T4, and T7 said prior training in technology helped them when they needed to adapt to online teaching. Moser et al. (2021) said teachers are unprepared for ERT from prior professional development or in-class teaching experiences.

Though much literature references inequities in internet connectivity as a major barrier in online learning, only three participant teachers at West High School mentioned connectivity issues and none placed a high emphasis on them. The West State School District was fortunate to have hot spots set up for students to connect to the internet and each student was provided a Chromebook for access to coursework. T7 mentioned bandwidth as a challenge for students to access video content.

There was a disparity between the perceptions of novice teachers and experienced teachers regarding technology efficacy. Cai and Gut (2020) said “educators’ digital problem-solving skills tend to decrease as their age increases” (p. 197). While teachers with fewer than six years of experience at West High School claimed they could learn by

doing through trial and error, veteran teachers seemed to note “a considerable learning curve” (T7) and “as I get older, some things are harder for me to pick up” (T5). T5 said:

> Some teachers who are people you know, and they’re great with kids and when kids are in their classrooms are engaged and it’s awesome and they have great lesson plans and projects. But technology was not their wheelhouse, and those are the teachers, I think, that struggled the most, uhm, with remote because they had to, you know, jump into a pool they didn’t know how to swim. So in general, I think, it’d be good to develop those technology skills so that if we have to transition again… it won’t be as hard for those teachers.

Findings involving the gap in technology efficacy among teacher participants at West High School is, therefore, consistent with current research.

Along with teachers, students must also grow their self-efficacy related to digital literacy and problem-solving skills to succeed in the future global educational environment (Cai & Gut, 2020). Key factors in successful online learning include knowledge of tech applications and teacher-to-parent collaboration (Rasmitadila et al., 2020). Teacher self-efficacy related to technology use in the traditional classroom influences how much, which, and in which manner to use technology (Li et al., 2019); however, with West High School, the teachers were told to explicitly use the new learning management system and curriculum while limiting any outside applications. Bozkurt and Sharma (2020) said technology should be a resource to learn from, rather than a means to learn with. When an online curriculum and learning management system

is required or pushed as an obligation on a teacher, then it affects their self-efficacy and ability to adapt their current teaching pedagogy to online and hybrid environments.

Interpretation of Theme 5: From Struggle to Resilience

Both students and teachers at West High School were noted to have grown in perseverance because of struggling through the 2020-2021 remote and hybrid school year. T4 said:

> In the beginning it was a bit shaky. I kept telling people I feel like I am stuck on stupid island, and I am trying to swim out to the boat that's going to shore. And I would revisit that island quite often. So, throughout the year, uhm, I wouldn't say that it was easy, but once we got the hang of it, it became second nature, my ability to troubleshoot. There would be time that it was frustrating. We definitely relied on each other as a staff to be able to do that.

Other participants felt similar changes in efficacy. T5 mentioned that the struggle resulted in "camaraderie of bonding" of the staff as they "went through something really tough." T6 was proud of their effort to "get through to kids" and felt that the act of "surviving" led to the feeling of "thriving." T2 said, "there's a lot of great strategies and techniques that you can learn through remote teaching, which you can implement into your class, so that gives you a basis for technology in the classroom," indicating that they learned through the experience and will be able to transfer that knowledge to future situations. Ferri et al. (2020) said in Italy, educational challenges brought forth by the pandemic were overcome by the resolve to continue online learning, rather than shutting

down the schools. Stakeholder collaboration resulted in ensuring equity during online teaching during the onset of the pandemic (Ferri et al., 2020). Flynn and Noonan (2020) indicated teacher respondents had more communication with colleagues, benefitted from building new expertise on a variety of online pedagogies, and "that engaging with colleagues during the crisis was beneficial to assuring best practice, gaining advice, and practical tips from colleagues during the transition to remote teaching" (p. 12).

Bandura (1977) defined self-efficacy in terms of internal persistence and effort resulting in the motivation to succeed and development of skills necessary for desired outcomes. I surmise that the teachers interviewed in this study had some positive or higher self-efficacy at the end of the 2020-2021 school year than they did when the initial March 2020 school closure due to the pandemic began. The reasoning is that Santi et al. (2020) notes that high self-efficacy results from perseverance, recognizing and meeting challenges, and making efforts to achieve success. When teachers perceive success, their perceived self-efficacy grows as a result of the mastery experience (Haverback, 2020). Patston et al. (2021) agreed that ERT has allowed both students and teachers to adapt resiliently and flexibly to new methods of learning.

Holistic Interpretation

To answer the research question, I must first view the data by theme and then holistically. Challenges related to strategies included uninformed teachers, unclear expectations, lack of student engagement in online synchronous and asynchronous learning, and reduced teacher-student communication during the pandemic. West High

School teacher challenges related to curriculum included the lack of freedom in using pre-loaded lessons, lack of student ability to learn autonomously, and the need for a social-emotional learning component. Technology challenges, including inadequate training in the learning management system, affected how teachers viewed their ability to provide adequate education for students. Holistically, the perceived self-efficacy of West High School teachers during the school year was mixed, whereas the end of the school year saw perceived growth in efficacy in the guise of success and pride.

Semi-structured interviews took place in June, August, and September 2021 after the full year of hybrid teaching. Therefore, teachers were able to look back on the experience holistically, rather than in the moment. Because the interviews were reflective of past experiences, participants may have had a more optimistic view of their growth as a result of teaching emergency remote and hybrid instruction in the pandemic. However, the participants at West High School were candid about their struggles and challenges they faced throughout the year of teaching. Also, since all the participants taught at the school prior to the March 2020 shift to ERT, they had a baseline for which to perceive their growth from before the remote teaching, during the hybrid teaching, and after the hybrid teaching. It is also important to note that in the 2021-2022 school year, West High School returned to fully in-person learning with a normal schedule resembling one from before the pandemic.

The more teachers understand about their perceptions and abilities to approach challenges in adversity, such as due to the pandemic, the better they can view the

problems and solutions to ERT. Self-efficacy begins with perception, grows through struggle, and results in strengthened ability (Bandura, 1977). Though self-efficacy is difficult to measure, analyzing the challenges, successes, and readiness of teachers as they navigate a new situation can inform research of teacher perceived self-efficacy (Martin et al., 2019). Bond (2020) said, "research centered predominately on general challenges around the switch to ERE, as well as teacher digital competencies and digital infrastructure, with teacher ICT skills, family access to technology, parent engagement in learning, and student health and well-being key foci" (p. 215). Challenges perceived from West High School teachers include changing expectations due to the fluidity of pandemic mandates, difficulty in connecting with and supporting at-home learners, administering unfamiliar curriculum in the online format, and inadequate training in technology applications needed for successful online and hybrid teaching. However, teachers struggled through the challenges and emerged with new skills, efficacies, and strategies as a result of perseverance during the pandemic.

Limitations of the Study

Limitations of the study include reduced generalizability, limited sample size, non-transferable interview protocol, and geographic location. Generalizability of findings in this study were limited to rural high schools who taught using a hybrid model during the 2020-2021 school year. Generalizability was also limited due to the small sample size of seven teachers who all had different perceptions of the phenomenon of ERT. However, the thickness of data and thematic analysis of commonalities between participants may

have increased possible transfer to similar settings. The interview protocol was adapted to fit the needs of the study and therefore may not be transferable to other studies. The questionnaire element was eliminated from the study due to limited participant responses, which may hinder generalizability of the findings. Another limitation was my closeness to the study, as I taught at a school in the same district, though not at the same level. Reflexive journaling and transparency were utilized to minimize bias, but my bias may still have influenced results. Though schools world-wide have been impacted by the COVID-19 pandemic, this study was limited to rural settings in the Western part of the United States of America. Though limited in scope, the findings and recommendations may be relevant to teachers who face the future of remote and hybrid learning environments.

Recommendations

Reflection on the thematic findings of this qualitative case study concludes there are questions still to be answered and further attention needed in examining teaching during the pandemic. There is an emerging set of literature on teaching during the COVID-19 pandemic in the US, but still more research on the 2020-2021 school year and beyond are needed to keep research current to the changing situation. Related to the first theme, I noted that educational requirements during the pandemic are constantly changing, therefore more research is needed on the challenges and more importantly the successes of ERT. The second theme brought to light the lack of student engagement. Future research from students' perspectives on what motivates them in online, in-school,

and hybrid environments would help teachers and administrators understand why student engagement during the pandemic was lacking. The third theme encompassed a pre-loaded curriculum and the fourth theme was about how new technology weaves together the recommendation to study learning management systems and curriculum that can be utilized in-person, remotely, and in hybrid model that would make the transitions during emergencies more seamless. The final theme recommends that researchers search for the positive outcomes related to ERT and learn from the successes of resilient teachers during the pandemic. Research on growth of self-efficacy would allow researchers to make recommendations that would further the field of emergency remote and hybrid education, rather than focusing solely on perceived challenges.

This study, while adding to the existing and growing body of literature on pandemic teaching in the rural areas of the United States, does not fully address the challenges that teachers may face or the perceived self-efficacy of the majority of teachers. This study showed that teachers are still out of their pedagogical comfort zone with regard to online and hybrid teaching. The pandemic required teachers to tap into the prior knowledge, if any, of digital pedagogy to find best practices to enhance student engagement (Rasmitadila et al., 2020; Santi et al., 2020). More empirical studies on teacher perceptions of online and hybrid teaching during the pandemic are needed to continue the conversation and add to the data collected in this study.

Implications

I found that a breadth of perception information was found with only a few participant interviews. The thematic findings could encourage future researchers to use similar methods to find commonalities amongst participant interviews in their own studies. Similar small-scale studies at rural schools or larger studies at more urban schools could yield comparable results to confirm the thematic interpretation of this study. Understanding challenges through thematic coding can help districts and school administrations to address the concerns of their staff and students.

The data of this study also revealed that the district implemented a new learning management system and curriculum that had not previously been used by the teachers. Lack of training on the program created a challenge for the teachers in this study. It would be wise, therefore, for administration to professionally train teachers in advance so they are prepared in the event of an emergency remote or hybrid situation in the future. Because the pandemic is still occurring, I recommend that teachers continue the use of programs they are trained in and receive new trainings as needed. If future emergencies occur, teachers and students will be familiar with the educational and technological programs and therefore make a smoother transition while continuing a high level of teaching and learning.

Because emergencies are fluid and ever-changing, there is not a proven method for preparing teachers for the educational transitions that result. From this study, teachers can find commonalities or differences to their own experiences and learn vicariously

through the perceptions of other teachers. I hope the fifth theme of struggle leading to resilience and heightened self-efficacy will encourage teachers who continue to face challenges as the pandemic persists. Knowing that teachers across the globe, including Turkey, Italy, Germany, and the U.S. are all facing challenges as the pandemic causes shifts in the educational landscape can promote a sense of unity and encourage teacher collaboration via online applications to find what best works for their students in emergency learning.

Technology is now an integral part of the learning environment, and a shift in focus from content learning to learning of softer skills and technology literacies will shape the educational landscape of the future. T1 encouraged more standardized student expectations with regard to requirements of online attendance and T4 suggested that in-person and online learning not be in the hybrid model but occur at separate times. Regardless of the model, students need to know that engagement in learning activities, even in emergency situations, is for the greater good of their education. Teachers can also increase engagement through communication and teacher-student relationship building in the guise of social-emotional learning.

Implications for Social Change

A major finding of the research is that teachers feel both challenged and encouraged through the process of ERT during the pandemic. As the pandemic continues, it is the hope of this researcher that teachers collaborate more, districts encourage and provide more trainings for teachers, and students gain a new set of skills to learn in a

more autonomous environment. Change begins with knowledge and moves through understanding into a positive element of change (Fullan, 2011). The knowledge that the West High School district and other similar districts can gain from this research on thematic elements of teaching during the pandemic can help school leaders to understand what faculty and students are facing during these troubling pandemic times. The understanding gained through perusal and study of this research paper can lead to positive outcomes in district decisions to better the conditions both teachers and students face during transitional, remote, and hybrid instruction.

By reading the findings of this study, teachers and administrators may find common ground upon which to stand and move forward during pandemic teaching. Mastery experiences of teachers grows their self-efficacy which leads to increased student efficacy and engagement in learning (Bandura, 1993). West State School District administrators can utilize the findings in this study to provide needed professional development for teachers, clarify expectations for both staff and students, and prepare for future emergency learning environments with knowledge of teacher perceptions at West High School.

The social atmosphere of education has changed as a result of the pandemic. The findings of this research show that understanding social changes in technology, curriculum, and strategies can bring understanding of how to better meet the needs of students and faculty. Remote and hybrid instruction has been the answer to the pandemic emergency for many schools around the world, including West High School. Embracing

the positives and moving forward to face the challenges involved with remote and hybrid instruction will bring a profound impact on student learning through teacher efficacy. Students are the citizens of the future. School leaders need to take the knowledge gained from teaching in the pandemic to re-define how technology, strategies, and curriculum are delivered to students in the future. Accounting for future emergency teaching situations and adapting for future advancements in technology, leaders and educators can make positive social change happen for all students under their care.

Conclusion

In this chapter, I interpreted the thematic findings of the data, recommended future research topics, and made implications for social change in the educational setting. Though teachers at West High School faced challenges including changing expectations, lack of student engagement, freedom and then required structure of curriculum, and mixed self-efficacy with regards to technology, they were able to persevere throughout the year and renew their view of best practices for students. The challenges at West High School, when faced as a faculty, brought camaraderie, collaboration, and bonding among the staff. Though the struggle was throughout the year of pandemic teaching, the result was a renewed sense of ability and purpose among teachers at West High School. Bozkurt and Sharma (2020) noted that students "will not remember the educational content delivered, but they will remember how they felt, how we cared for them, and how we supported them" (p. iii). The same could be said about teachers who faced online and

hybrid models during the pandemic. Positive outcomes perceived by teachers during the 2020-2021 school year will inform leaders to create better ERT strategies in the future.

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Appendix A: Modified Interview Protocol

ERT Interview Protocol	
Adapted from Trust, T., & Whalen, J. (2020). Should teachers be trained in emergency remote teaching? Lessons learned from the COVID-19 pandemic. *Journal of Technology and Teacher Education, 28*(2), 189-199.	
DEMOGRAPHIC DATA	
A	How many years have you been in teaching?
B	How many years have you been at this High School?
C	What subject(s) do you teach?
D	What grade levels?
E	What specific courses did you teach during the 2020-2021 school year?
F	In your cohort, how many students were in person during hybrid learning? How many were at-home/online during hybrid learning?
G	How many days/weeks did you teach fully online during the 2020-2021 school year?
H	How many days/weeks did you teach in the hybrid model during the 2020-2021 school year?
I	Other Demographic Information?
SHIFTING TO EMERGENCY REMOTE TEACHING	
J	Prior to the March 2020 Shutdown, how much experience did you have with
K	1) Remote Teaching? None, A Little, Some, Good Amount, Significant Experience
L	2) Online Teaching? None, A Little, Some, Good Amount, Significant Experience
M	3) Blended or Hybrid Teaching? None, A Little, Some, Good Amount, Significant Experience
N	What challenges did you face when you were first asked to shift your instruction to emergency remote teaching by your educational institution?
O	In what ways did you prepare yourself for the shift to remote teaching?
P	Which digital tools/apps did you start using (or used more) as a result of emergency remote teaching?
LESSONS LEARNED & ADVICE FOR EDUCATORS	
Q	What were the three biggest challenges you faced once your started emergency remote teaching? (In the 2020-2021 School Year)
R	What were the 3-5 most important things you learned from the emergency remote teaching experience? (In the 2020-2021 School Year)
S	What recommendations and advice do you have for teachers who are

	asked to do emergency remote teaching in the future?
T	Should educators be trained in emergency remote teaching (e.g., in teacher preparation programs or professional development workshops)? Why or why not?
INTERVIEW PROTOCOL	
Adapted from Instrument in Graham, C. R., Borup, J., Pulham, E., & Larsen, R. (2019). K-12 blended teaching readiness: Model and instrument development. *Journal of Research on Technology in Education, 51*(3), 239-258. https://doi.org/10.1080/1539523.2019.1586601	
Subject	**Blended/Hybrid Competencies**
	How do you feel about your ability to…? Can you give me an example of…
1.1.1 – 5	Implement new online technologies, troubleshoot, use learning management systems, content-specific applications, and find online content or resources?
2.1.1 – 5	Create, sequence, combine, and incorporate online and offline educational materials?
3.3.1 – 5	Strengthen effective and caring relationships between students and teachers via online supports?
3.4.1 – 5	Use the learning management system to monitor progress, help students navigate through online content, and encourage persistence?
5.1.1 – 5	Manage the blended and online environment through procedures and organization?
5.2.1 – 5	Establish blended and online learning routines and procedures to maximize student learning time and allow them to work at their own pace?
Final	Are there any other examples or ideas you would like to add about the transition to emergency remote and hybrid instruction?

*Changes or additions to the original instrument are highlighted.

Appendix B: Whalen Permission

JW

Jeromie Whalen [redacted]
Tue 12/29/2020 12:09 PM
To: Marni Whitehead
Cc: [redacted]

Hello Marni!

Hope you've had a happy holiday season! You are more than welcome to use a modified version of our protocol, we just ask you include a note of attribution (citation) to our paper. And keep me updated on your project, I am a high school technology teacher myself and am interested in your findings.

Thank you!

Jeromie Whalen
Ph.D. Student
Mathematics, Science, and Learning Technologies
[redacted]

On Dec 29, 2020, at 1:59 AM, Marni Whitehead [redacted] wrote:

To Torrey Trust and Jeromie Whalen,

I would like permission to use the interview protocol in the appendix Table A1 of the Article "Should Teachers be Trained in Emergency Remote Teaching? Lessons Learned from the COVID-19 Pandemic" as published in the Journal of Technology and Teacher Education, Issue 28(2), Pg. 197 in 2020.

I am a doctoral candidate at Walden University. I am conducting a qualitative case study titled "Teacher Perceptions of Transition to Remote and Hybrid Instruction. My research questions are: How do teachers implement new strategies and technologies as they transition to remote and hybrid instruction? How do teachers implement new curriculum as they transition to remote and hybrid instruction?

I will be selecting a small rural High School as the setting, since the teachers have taught both remote and in hybrid form during the 2020-2021 school year. To support my own study, I made a few modifications to the protocol as follows: Different demographic information E-I, Date Change in J, Elimination of Table of Options in N and O, Addition of exact school year in Q, Addition of two research questions from the dissertation in U and V, additional invitation to interviewees for concluding thoughts or examples.

Please let me know if I am able to use this modified version of your protocol as part of my doctoral study.

Thank you,
Marni Ann Whitehead
Marni.whitehead[redacted]
Ed.D. Candidate in Curriculum, Instruction, and Assessment

Appendix C: Graham Permission

Marni Whitehead
Wed 1/6/2021 8:44 PM
To: charles.graham[redacted]

To Charles R. Graham
[redacted]

I would like permission to adapt the survey instrument developed in the article:

Graham, C.R., Borup, J., Pulham, E., & Larsen, R. (2019). K-12 blended teaching readiness: model and instrument development, *Journal of Research on Technology in Education*, 51(3), 239-258. https://doi.org/10.1080/15391523.2019.1586601

I am a doctoral candidate at Walden University. I am conducting a qualitative case study titled "Teacher Perceptions of Transition to Emergency Remote and Hybrid Instruction."

My research questions are:

How do teachers implement new strategies and technologies as they transition to remote and hybrid instruction?

How do teachers implement new curriculum as they transition to remote and hybrid instruction?

I will be selecting a small rural High School as the setting, since the teachers have shifted their teaching to both remote and hybrid form during the 2020-2021 school year due to the COVID-19 pandemic. I intend to interview 10-20 teachers for this research project.

I would like to adapt your survey instrument into an interview protocol so that I may garner in-depth responses for each survey item.

I would like to utilize the six subfactors of: Technology literacy, Planning Blended Activities, Facilitating Teacher-Student Interaction, Facilitating Student-Content Interactions, Managing the Blended Learning Environment, and Managing Blended Learning Routines. This would give the interview protocol a total of 30 questions.

Please let me know if I have permission to use this adapted version of your survey as part of my qualitative doctoral study. I will, of course, acknowledge the original survey and detail my adaptations into a qualitative instrument.

Thank you,
Marni Ann Whitehead
Marni.whitehead[redacted]

CG

Charles Graham <charles.graham[redacted]
Wed 1/6/2021 8:59 PM
To: Marni Whitehead

2021 BJET K-12 BTR Validatio...
852 KB

This email went to my spam folder. Sorry for not responding sooner. Of course you may use the survey. We have recently validated the latest version that has simplified some of the terminology for English language learners.

I am attaching the most recent article on validation.

Please don't hesitate to ask additional questions if you have them.

Charles

Appendix D: Site Permission

March 31, 2021

Dear Miss Marni Ann Whitehead,

I give permission for you to conduct the dissertation study entitled Teachers' Perceptions of Transition to Remote and Hybrid Instruction with participants from [redacted] High School within the [redacted] School District. The provided research brief has been perused and approved by stakeholders in the district.

As part of this research study as a Walden University doctoral candidate, I authorize you to recruit participants by attending a virtual faculty meeting and utilizing e-mail correspondence. I also grant you permission to distribute consent forms, conduct interviews via social distancing technologies, and request participation in an online survey. I also understand that you will include member checking via a summary of research findings. Participation by individuals at the school site must remain voluntary. We also understand that all participants will be adults, primarily teachers, and not current students in our district.

If our circumstances change, [redacted] School District reserves the right to withdraw from the study at any time. We understand that the collected data will remain anonymous and confidential, including the school and district site. Data will not be provided outside of the student and student's faculty supervisor, without permission from the Walden University IRB and the [redacted] School District.

I confirm that I am authorized to approve research at [redacted] High School, in the [redacted] School District and that the student's research plan complies with our district policies.

Sincerely,

[redacted]

[redacted], Superintendent