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Primary Grade Teacher Perspectives About the Challenges of Teaching Remotely

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Walden University

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Jennifer Sample

has been found to be complete and satisfactory in all respects,
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the review committee have been made.

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2024

Abstract

Primary Grade Teacher Perspectives About the Challenges of Teaching Remotely

by

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MA, Western Governors University, 2017

BA, Western Governors University, 2015

Dissertation Submitted in Partial Fulfillment

of the Requirements for the Degree of

Doctor of Education

Walden University

May 2024

Abstract

The problem this basic qualitative study addressed was that primary grade teachers, who taught different curricula, were not prepared to teach in a fully remote environment. The purpose of this study was to investigate teachers' perspectives about the challenges they experienced teaching primary-grade students remotely and to explore their perspectives on providing remote instruction training to teachers. This was accomplished using the conceptual framework of Garrison et al.'s community of inquiry model. Two research questions explored primary teachers' perspectives on the challenges of teaching primary grade students in a remote platform and explored teachers' suggestions for training in remote instruction. A basic qualitative research study was conducted using semi-structured interviews with 12 primary-grade teachers who had experience teaching completely remotely. After the interviews were completed, coding with thematic analysis was used to analyze the data collected. The study results showed that participants believed that teaching completely remotely is less effective with primary-grade students than teaching face-to-face and found few benefits in doing so. The participants shared suggestions for online training for teachers should a remote environment be necessary in the future. This study may promote positive social change by providing educators with insight into improving their quality of teaching and decision-making when they need to educate in a remote setting. This includes a positive understanding of learning more effective ways of educating students remotely.

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Dedication

This dissertation is dedicated to my two children. Regardless of where you start or where you end up, you decide your happiness and your destiny along the way. Thank you for being patient with me while I found mine. No matter what road you choose in life, it is never too late to change your direction and live the life you want to live. If you ever find yourself veering off that path, lace up your hiking boots, grab your trekking poles, and begin the road that you really want to take. Buen Camino my loves.

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Chapter 1: Introduction to the Study

In March 2020, in a quick response to rapidly escalating case numbers of COVID-19, schools temporarily ended face-to-face teaching and immediately moved to remote instruction (Onyema et al., 2020). What was aimed at being only a couple of weeks turned into an indefinite period, which quickly required educators to move from brick-and-mortar teaching to complete remote teaching (Baxter et al., 2022). Once schools gradually began to open again, many students chose to take advantage of the option to stay home and continue to learn from a remote experience for the next school year (Baxter et al., 2022). The focus of this study was to investigate teacher perspectives about the challenges they experience teaching primary-grade students remotely.

To support teachers as they attempted to learn and navigate teaching remotely, there was an increased need to understand how to teach in a remote environment (Bilal et al., 2022). The purpose of this study was to explore primary grade teachers' perspectives on the challenges of teaching students remotely and to gain suggestions for remote instruction training for teachers. The teachers' perspectives provided insight and guidance on ways to be prepared to teach primary-grade students in a remote environment in ways they were not prepared for before. Data from this study may assist fellow educators in learning preparations for remote learning that they did not have before when they taught solely in a face-to-face classroom.

Background

When the COVID-19 pandemic spread throughout the world, many changes came about in how students were taught in schools each day (Sahlberg, 2020). The country

mandated classroom closures and face-to-face teaching, which immediately left the education community at an impasse on how to continue teaching despite not having access to a brick-and-mortar learning environment (Dewan, 2022). This challenge brought with it the suggestion that students and teachers were not prepared to teach or to learn in a remote environment.

Many schools immediately began transitioning to remote learning which was a new concept for many teachers and students alike (Pine et al., 2021). As schools began this transition, everyone had to adapt quickly to this new fashion of learning (Oliveira et al., 2021). The research identified reoccurring topics such as the impact that COVID-19 had on the education community, remote learning, and challenges of a successful education during a pandemic (Tarkar, 2020). Some research showed that primary grade teachers struggled to adapt to new methods of teaching because they had little or no warning of school closures due to the virus. They were unable to properly prepare to teach remotely, yet they were expected to continue to successfully teach from home (Pryor et al., 2020). In Chapter 2, background information regarding these topics will be introduced and discussed in detail.

Although some schools used technology at times before the pandemic, it now suddenly needed to be used by all teachers, in all school systems, everywhere (Francom et al., 2021). Many schools and educators were left wondering where to come up with remote educational resources, materials, and training, as they immediately transitioned to a remote learning environment (Abel, 2020). At the same time, teachers were also

required to make sure strategies and curriculum were all being met during their everyday, remote teaching (Minkos & Gelbar, 2021).

Despite the information available regarding the COVID-19 pandemic and the way it impacted the school system (Shaw et al., 2021), there is little information regarding the issues of teachers not being prepared to teach primary-grade students in a fully remote environment. The study I did needed to be done to explore teachers' perspectives on how to better meet the needs of their primary students in a remote setting. The potential results may help to inform educators' perspectives for providing remote instruction training to other teachers.

Problem Statement

The problem this study addressed was, that teachers, were not prepared to teach primary-grade students in a remote environment when schools closed physically due to the COVID-19 pandemic. These schools that closed in March of 2020 due to the COVID-19 pandemic, caused schools to pause in-person learning at that time, which continued into the following school year. Although students still needed an academic education, alternate ways to conduct this had to be found (Timmons et al., 2021). Districts turned to remote teaching to fill the void of in-classroom instruction. Educators were expected to teach students remotely even though they had not been trained to do so nor had they received any preparation on the best way to conduct the remote instructions (Friedrich & Perrotta, 2021). Although blending technology with face-to-face teaching has been encouraged for some time, there is a gap in research in terms of how to completely teach in fully remote instruction, especially during times such as a world pandemic.

Purpose of the Study

The purpose of this study was to explore primary grade teachers' perspectives on the challenges of teaching students remotely. It was also to add suggestions for remote instruction training from teachers who have taught in a remote environment. This was a basic qualitative study used to investigate teacher perspectives about the challenges they experienced teaching primary students remotely and to explore their perspectives on providing remote instruction training to teachers. This study provided information about teaching remotely and ways to use remote education in the future. I conducted individual semi-structured interviews with primary education teacher participants who taught fully remotely, to fulfill this purpose.

Research Questions

The following research questions guide this study:

RQ1: What are primary teachers' perspectives on the challenges of teaching primary students in a remote platform?

RQ2: What are primary teachers' suggestions for remote instruction training for teachers?

Conceptual Framework

The Community of Inquiry (CoI), introduced by Garrison et al. (2001), was the conceptual framework that was used to frame this study. This foundation included three concepts regarding online learning which are cognitive presence, teaching presence, and social presence. The foundations of the study and CoI are designed around an emphasis on teachers creating a remote and effective learning environment as well as forming a

connection with others in remote circumstances (see Garrison et al., 2001). The model of the CoI (Garrison et al., 2001) forms the conceptual framework to examine teacher perspectives about the challenges they experienced teaching primary students remotely, and to explore their perspectives on providing remote instruction training to teachers.

In this study, CoI (2001) was used as the framework and supported the investigation of teachers' perceptions of students' cognitive abilities using remote activity (Garrison et al., 2001). CoI guided the study in that it allowed the exploration of standardized delivery of remote teaching as well as explored potential challenges in delivering lessons remotely. The CoI helped to guide my study as a model of typical ways that education is normally delivered, but also sparked methods teachers may need to overcome the challenges they have experienced by teaching students remotely. Garrison et al. (2001) believed that educators should be able to form successful remote settings at any given time. When there was an unexpected move from face-to-face learning to remote learning during the 2020 COVID-19 pandemic, it conveyed a need for such successful remote settings (Short, 2021). The data collected from semistructured interviews explored teachers' perspectives regarding the training needed to develop skills to deliver remote lessons effectively.

Using qualitative research improves understanding of people's perspectives of experiences and how to improve specific phenomena they are exposed to (Aspers & Corte, 2019). I conducted a basic qualitative research by interviewing 12-15 primary teachers who taught completely remotely, using semistructured interviews based on the CoI model (Garrison et al., 2001). This foundation provides the importance of

maintaining social, teacher, and cognitive presence in online education (Garrison et al., 1999). The interview questions were based on this framework to identify primary teacher perspectives on the challenges of teaching students in a remote platform and also primary teachers' suggestions for remote instruction training for teachers.

Nature of the Study

In this basic qualitative study, I addressed the research questions by using the approach of semistructured interviews with 12-15 primary-grade teachers who taught primary students completely remotely. These teachers have had experience teaching remotely to be able to determine their perspectives regarding this topic. The semistructured interviews approach is based on the work of Merriam and Tisdell (2016) who described interviews as an important method of collecting data for qualitative research. Interviewing is a beneficial technique to use when conducting a study with only a few selected individuals. Interview questions are usually open-ended questions allowing in-depth information to be collected from those in the study (Merriam & Tisdell, 2016). The interview approach allowed me to collect data using primary grade teachers' perspectives about the challenges of teaching remotely and primary teachers' suggestions for remote instruction training for teachers. I coded the responses from the interviews by interpreting, organizing, and structuring the information into meaningful themes (Charmaz & Thornberg, 2021). I then used the themes to progress into a deeper identification of patterns and topics and then analyzed the information from the interviews by examining and interpreting the qualitative data to fully understand what it represents (Raskind et al., 2019).

Definitions

COVID-19: A new public health crisis starting at the end of 2019 that was diagnosed as an acute respiratory syndrome and later named Coronavirus (Centers for Disease Control and Prevention [CDC], 2020)

Remote learning: A method of educating students where the teacher and the student are not physically present in a brick-and-mortar classroom but instead taught and instructed through technology (Khlaif et al., 2021).

Face-to-Face learning: A method of education where students are with teachers in a physical classroom, teaching in a brick-and-mortar-based school environment (Gherhes et al., 2021).

Remote platform: Online teaching platforms that provide tools needed to create a full learning experience on the internet. Those tools and approaches can be very different, as some are standalone platforms and others integrate into designated websites (Bilal et al., 2022)

Assumptions

I believe several assumptions were made regarding this basic qualitative research with interviews, based on my prior experience as a professional educator. Because this is a qualitative study based on semistructured interview questions, I assumed that the interview participants' responses would represent the actual experiences of the teachers and their perspectives on the challenges they faced teaching remotely during the pandemic. In addition, I assumed that the participants who were selected for the interviews were honest and real with their responses regarding the required criteria:

primary grade teachers who taught fully remotely to primary grade students. Finally, I ensured the privacy and confidentiality of each participating educator which gave them the confidence to be honest and forthcoming in their answers and responses to all the interview questions.

Scope and Delimitations

There were specific boundaries that produced the scope of this study. The focus of the study was to investigate primary grade teachers' perspectives on the challenges they experienced teaching primary students remotely during a pandemic. This confined the participants to being primary grade teachers who must have taught completely remotely. Confining the participant selection to this particular group satisfied the gap in the literature on challenges teachers experienced going from brick-and-mortar type instruction to fully remote instruction during the pandemic. I chose a basic qualitative research design to fully understand the teachers' perspectives on the challenges of teaching remotely. To avoid delimitations of this study, I only included the perspectives of teachers who had experienced teaching remotely. I also only included participants who were primary school educators regardless of their geographical locations or the disciplines they teach.

Limitations

As with all studies, many limitations need to be considered (Akanle et al., 2020). One of the limitations that might take place when collecting information from the interviewees is that a small qualitative study will not be transferable to other research settings (Ross & Bibler, 2019). Another limitation to consider during the participant

recruitment process is that teachers may be opposed to participating in the study due to their current workload or stress as they begin the school year. I addressed this limitation by emailing teachers who were qualified to be in the study and then turned to snowball sampling (Leighton et al., 2021). I completed all of the interviews face-to-face which all participants were comfortable with.

Significance

As schools moved to an online delivery mode during the COVID-19 pandemic, new understandings, strategies, and techniques on how to educate students had to occur (Anthony & Noel, 2021). The significance of this study was that it filled in the gap in the literature on primary school teachers' perspectives on the challenges of teaching students remotely. This qualitative study filled in a gap in the literature by discovering an understanding of how primary teachers can move forward in teaching remotely. It also suggested the most constructive ways to be able to be successful in doing so (Crompton et al., 2022). Exploring these perspectives may contribute to positive social change since the teachers shared their perspectives on how to better meet the needs of their primary-grade students and explore their perspectives for providing remote instruction training to teachers. Social change may be accomplished by providing information on teachers' perspectives to successfully be able to teach students remotely.

Summary

In Chapter 1, I discussed the topic of my qualitative study, the need for this research, and the possibilities that can lead to social change based on the conclusions of the research. The gap in the literature related to my study were recognizable as well as

solutions to the problem and purpose by using the research questions to demonstrate connections between my program and the study. I provided a background to the study, a problem statement, the purpose of the study, the research questions, the conceptual framework, the nature of the study, and definitions of key terms. I also included assumptions, scope and delimitations, limitations, and the significance of the study. In the next chapter, I will provide an exhaustive review of the literature.

Chapter 2: Literature Review

The problem associated with this study is that many teachers were not prepared to teach primary grade school students in a remote environment when school buildings closed due to the COVID-19 pandemic. The purpose of this study was to explore primary grade teachers' perspectives on the challenges of teaching students completely remotely. The participants also added suggestions for remote instruction training from teachers who had taught in a remote environment. The research done widely used the study from Garrison et al.'s (2001) Community of Inquiry (CoI) to help as a staple in understanding remote teaching in the school classroom. In Chapter 2, I will present the literature search strategy, conceptual framework, literature review related to key concepts and variables, and a summary of all the main themes that were used in the literature. It will also conclude by identifying the gap in the literature. A generalization of the phenomena needs to take place to show the experience of primary teachers using remote learning and the perspectives of these teachers, including the challenges they faced teaching remotely during a pandemic. (Golden et al., 2023). The following key concepts are discussed: COVID-19, remote teaching, CoI, and teacher's perspectives on remote education.

Literature Search Strategy

Over the course of a year, a search of existing literature was conducted to provide relevant knowledge regarding the chosen topic, the concepts, and its theories. Conducting a literature review establishes your familiarity with and understanding of current research in a particular field before carrying out a new investigation (Snyder, 2019). It also allows a researcher to find their unique approach to their topic (Kraus et al., 2020). I also met

with a Walden librarian who helped me find additional literature as well as keywords and additional databases to search for further resources. To find these supplementary materials, I used current, scholarly, and peer-reviewed sources that I found available using online data and search engines such as: the Walden Online Library, Google Scholar, Thoreau, ERIC, SAGE Journals, EBSCO, and general Google searches. I made sure they were peer-reviewed and were published in the last five years of the date of the current dissertation.

When researching to further locate information on the teachers' perspectives of the challenges they face teaching remotely, using key terms was important during the exploration. Many terms that were key in searching for information on the internet were as follows: *remote teaching, remote educators, remote teachers, online learning, remote teaching, remote educators, remote teachers, primary teachers and remote and pandemic, blended learning, hybrid learning, technology, and primary school, primary teachers and remote, technology advantage, technology disadvantage, remote advantage, remote disadvantage, remote advantage, and COVID-19, and community of inquiry and online*. The articles and journals were put onto a spreadsheet where I organized and kept up with the search and key terms.

Conceptual Framework

The conceptual framework that I will use for this research is Garrison et al.'s (2001) Community of Inquiry (CoI). The CoI framework (Garrison et al., 2001) was used to explore the perspectives of teachers' challenges of teaching remotely. The CoI framework theory and methodology were developed during a research-funded project

entitled “A Study of the Characteristics and Qualities of Text-Based Computer Conferencing for Educational Purposes” which was studied from 1997 to 2001 (Garrison et al., 2001; Goedert et al., 2022). From this project, the three essential elements of an educational experience were developed: social presence, cognitive presence, and teaching presence (Guo et al., 2021). They were used to explore the introduction of learning in remote environments (Garrison et al., 2001). The three components of CoI worked together to represent a process of creating a deep and meaningful learning experience through the development of their interdependent elements (Kim & Gurvitch, 2020). Researchers often turn to the elements of CoI when searching for more understanding of remote education (Garrison et al., 2001). The conclusions of the study were published in numerous peer-reviewed journals and therefore have resulted in countless research studies relating to and expanding the theories, methods, and instruments of the original CoI theory (Garrison et al., 1999). This has offered a structure for beneficial studies in the learning theory across numerous disciplines and in diversified academic environments (Garrison et al., 1999). It is not unusual for students who learn remotely to believe that remote classes provide not only flexibility but also convenience to them. It is a chance for students to work at their own speed and have access to assorted classes and academic opportunities (Lin & Gao, 2020). However, downfalls have been noted as well, such as a lack of one-on-one teaching and socialization in the classroom in relating to other students personally and academically (Diaz et al., 2020; Lowenthal & Dennen, 2020). In this given aspect, the CoI framework (Garrison et al., 2001) provides not only abstract guidance for organizing and promoting important remote learning experiences but

methodological guidance as well (Lowenthal & Dennen, 2020). As an outcome of the research and findings on the discovered framework, the CoI (Garrison et al., 2001) has been quite prominent when it comes to remote teaching and learning research and practices (Caskurlu et al., 2021).

Social Presence

Social presence is the first component in the CoI model (Garrison et al., 2001) and contains three categories; emotional expression, open communication, and group cohesion according to Garrison (2000). Social presence can be described as the ability of teachers to share their personality in a remote setting so that he or she is presenting themselves and are perceived as a real person in front of their students and not just a character on a screen (Garrison et al., 2001). Social presence may be established by teachers changing the design of their lessons from being geared toward individual students, to shared education towards many students. This opportunity to involve many students in an educational community often results in increased confidence in students to participate and ask questions about the lessons they are engaging in (Guo et al., 2021; Dempsey & Zhang, 2019).

Emotional Expression

Emotional expression is the first of the three categories of social presence and an important factor in successful online learning (Caskurlu et al., 2021). It is defined as an aspect of where students share personal experiences and values. Sharing emotions between students and educators proves to be necessary for making connections in socializing and learning (Jiang & Koo, 2020).

Open Communication

Open communication is the second category of social expression. This is where learners establish features of common awareness and recognition (Fiock, 2020). Open communication reflects a trusting environment and the significance of being able to process critical discourse (Dempsey & Zhang, 2019). The open communication learning climate should allow all participants to feel safe and comfortable so that they can express themselves freely and take part in remote learning activities.

Group Cohesion

Group cohesion is the last category of social expression is group cohesion. During this aspect, learners build and support a sense of group dedication. It allows students to be their true selves and build a sense of community and belonging within the online environment (Lowenthal & Dennen, 2020). Group cohesion is achieved when learners create a sense of group identity and successfully collaborate to achieve group objectives even though they are in a remote environment.

Cognitive Presence

Cognitive presence can be described as the extent to which students can assemble meaning through communication. Students are more likely to be able to retain more information about a specific topic when lessons and assignments are produced in a cognitive way of communicating remotely to learners that they can understand (Garrison et al., 2001; Sidiropoulou & Mavroidis, 2019). Cognitive presence has four primary components; triggering events, exploration, integration, and resolution (Guo et al., 2021).

Triggering Event

The first aspect of cognitive presence is triggering events (Galikyan & Admiraal, 2019). This is where an issue or problem is identified for further inquiry. Activities or questions are designed to engage, capture interest, and generate curiosity amongst learners. This could be a dilemma or problem that students can relate to (Chen et al., 2021; Guo et al., 2021).

Exploration

Exploration is found during this aspect of cognitive presence, where students begin to understand the nature of the problem (Galikyan & Admiraal, 2019). Learners begin to search for relevant information and possible explanations. Identifying cues are brainstorming ideas, information exchange, personal narration and opinions, and suggestions of conclusions (Barbosa et al., 2020; Chen et al., 2019).

Integration

Integration is the third aspect of cognitive presence (Galikyan & Admiraal, 2019). It is a more structured and focused phase of making meaning out of situations. It is a reflective stage for students marked by critical discourse that shapes understanding. Teachers and learners may push for deeper understanding and attempt to correct misconceptions (Sadaf, 2021).

Resolution

The resolution is the steps taken to fix the problem or the dilemma (Galikyan & Admiraal, 2019). It often includes testing solutions in the real world or by using real-

world context. This can also lead to additional triggering events since real-world situations are used (Kilis et al., 2019).

Teaching Presence

Teaching presence is the final element of the CoI framework for teaching effective, engaging courses remotely (Dempsey & Zhang, 2019). It is defined as the design, facilitation, and direction of cognitive and social processes to realize personally meaningful and educationally worthwhile learning outcomes (Fiock, 2020). In short, teaching presence is how the instructor shows up and facilitates the class. Teaching presence consists of three components: design, facilitation of discourse, and direct instruction which play equally important roles in online teaching success (Dempsey & Zhang, 2019).

Design

Teaching presence begins with design. It involves the decisions we make about learning goals for the course and the process that will facilitate student success in meeting them (Kilis & Yildirim, 2019). Design, in the teaching online environment, opens new options for online teaching. Some examples include videos, audio, sharing online content, and breaking into small groups in a remote learning environment. The design also consists of how comfortable the students are with the online tools they are asked to use each day to complete the educators' assignments (Wang et al., 2021).

Facilitation of Discourse

Facilitation of discourse is another component of teaching presence. This aspect mainly focuses on how the teacher will present the subject matter to the class (Kilis &

Yildirim, 2019; Shuja et al., 2019). An example would be, when a student reads a passage from a book, instead of continuous reading, the teacher will stop the student to discuss the paragraph by asking what the passage is about or what the student thinks the character was trying to say or do.

Direct Instruction

The final component of teaching presence is direct instruction. This is a teacher-directed method. This means that the teacher presents the information or gives explicit, guided instructions to the students and the students follow them out on their own (Kilis & Yildirim, 2019; Özüdoğru, 2022). Direct instruction can also include other types of interactions such as assisting students with answering questions regarding specific assignments and giving feedback on lessons a student does not understand fully (Caskurlu et al., 2020). Direct instruction, for instance, can be teachers assigning pages for students to read in a textbook and having them answer questions regarding it.

Theories Applied in Previous Research

The framework I used for the study is the CoI (Garrison et al., 2001). Originally, the CoI framework was created to evaluate the application of computer meetings; however, it has later been used to assess more current forms of remote academic learning (Huang et al., 2019; Lowenthal & Dennen, 2020; Shea et al., 2022). Research has been conducted to better comprehend the three presences of the CoI model and the satisfaction that goes with it (Dempsey & Zhang, 2019). Garrison (2001) developed a survey that was outlined to calculate others' perceptions and has been used in research since 2008. A recent study discusses constructing an additional learning presence to the CoI framework

(Garrison et al., 2001). The new presence covered diverse instruction methods of learners and how they impact the remote educational experience (Huang et al., 2019). Regardless of whether the fourth presence is added, there is a strong necessity for all presences to coexist in the community of inquiry framework (Sidiropoulou & Mavroidis, 2019). Using the CoI framework for my investigation established how remote education commonly occurs (see Garrison et al., 2001) and what worked for educators who taught remotely to be able to encourage rewarding cognitive and social presence and what did not (Dempsy & Zhang, 2019). Current studies on the CoI such as active learning online (Tan et al., 2020) have led to believe a need for remodeling current remote models to include the social, cognitive, and teaching presence and to fit the framework of how remote teaching is taught (Fiock, 2020). The CoI framework can be used as a foundation for educators' execution of online teaching as it occurs in a remote environment (Lee, 2021).

Current Literature Related to Key Concepts

In this section, I reviewed literature related to the perspectives of the challenges teachers have teaching remotely. I synthesized information from peer-reviewed academic journals from the past 5 years on how teachers coped with teaching online during the COVID-19 pandemic. The review begins with types of learning that are regularly used and then goes into the CoI which was presented in the conceptual framework. Although teachers' perspectives on teaching remotely are the primary focus of the study, I include issues faced by teachers teaching remotely, interventions for students, teaching strategies, remote teaching skills, and communicative skills.

In-Seat Learning

Face-to-face learning is an instructional method where course content and learning material are taught in person to students. This usually is a live interaction between an instructor and a learner (Foo et al., 2021; Gherhes et al.; Mali & Lim, 2021; Neuwirth, 2021). Although many students are used to learning in this fashion, researchers (2021) have reported that there is an upward trend of survey results indicating that virtual schools dramatically outperformed brick-and-mortar schools when it came to promoting active learning, communicating effectively, managing a classroom, and providing high-quality instruction (Kingsbury, 2021).

Hybrid Learning

During hybrid learning, students would alternate between learning remotely and coming to the school to be taught face-to-face (CDC, 2021). This would offer schools a better possibility of social distancing the students and teachers and would also allow smaller groups to be in the school building at one time (Milne & Xiw, 2020; Mourtzis, 2021; Singh, 2022).

Remote Learning

Remote learning refers to an environment where students are taught by instructors using an online or remote approach instead of face-to-face learning (Diaz, 2020; Torres et al., 2021). After schools began teaching in a face-to-face environment again, educational facilities realized they needed a system for addressing children and school staff who were sent to school ill, became sick while at school or came in close vicinity with those who

were. Remote learning remained a possibility because of these instances even when schools were starting to reopen again (CDC, 2020; Singh, 2021; Xie, 2020).

Synchronous Education

Synchronous education references all varieties of schooling in which learners and instructors are in alike environments, at identical schedules, where academics are taking place. Incorporated in this are face-to-face classes and remote conferences in real time that either include an entire class or smaller groups. During synchronous learning, learners normally progress during the learning process in conjunction with their teacher. The educators can offer assistance while the learners are finishing assignments and lessons in real time (Kurbakova et al., 2020; Murphy et al., 2020; Shi et al., 2021).

Asynchronous Learning

Asynchronous learning is a student-centered learning technique widely used in remote education. Its primary assumption is that educating others can happen at unlike times and spaces, especially for different students. Teachers normally design an instruction pathway, where learners capture the lessons at their own speed. (Rehman & Fatima, 2021; Severino, 2021). Most primary school teachers chose to mainly focus on synchronous learning so they could guide the students and offer help and explanations of lessons in real time to help children understand the curriculum better (Chen et al., 2021; Mahoney & Hall, 2019; Nurwahyuni, 2020).

The Impact of COVID-19 on Education

At the end of 2019, a new virus was discovered in Wuhan, China that soon became known as the Coronavirus, also known as COVID-19 and SARS (severe acute

respiratory syndrome) (Lamers & Haagmans., 2022). Because it spread so quickly throughout numerous countries and mutated during its spread, researchers began studying where exactly it originated, how it developed, and later, how to stop it in the public and school systems (Chang et al., 2020). Around March 2020, approximately three billion people went from a brick-and-mortar school lifestyle to suddenly moving into a life of quarantine to prevent and slow down the spread of COVID-19 (Singhal, 2020). Many businesses closed with little warning as well as all levels of educational buildings, from early childhood to high schools to colleges. Academia searched to find other ways to keep their students educated. Those who had the option, were able to use remote platforms and technology to keep learning after the schools closed (Gostin & Wiley, 2020). Teachers and students were able to teach and learn from home and keep learners educationally involved because of this (Singhal, 2020). Schools with students of all ages were able to continue teaching remotely to complete the rest of the school year. These remote abilities were also made available the next school year in areas where it was needed as well (Pratama et al., 2020). Educational institutions across much of the United States were mandated to shut down their schools and immediately move into a form of education using remote platforms as suggested by CDC in an attempt to control and slow down the spread of the virus (CDC, 2021).

School Closures

In response to the coronavirus epidemic of 2020, most countries had executed mandates for national school closures by March of the same year. The local, state, and national governments had to make decisions on how to continue educating children who

were not permitted to be in a face-to-face environment (Alfano, 2022; Viner 2020).

Schools decided to move instruction online across the United States for the remainder of the 2019-2020 school year and made it optional for students to remain remote for the next school year. With these decisions, teachers, schools, and districts faced many challenges when providing face-to-face, hybrid, and remote teaching (Redinger, 2020; Selvaraj et. al., 2021). By the middle of May 2020, almost every state in the United States forced all schools to shut their doors for the remaining 2019-2020 school year and turn to remote teaching for instruction (Kaden, 2020; Klimek-Tulwin & Tulwin, 2022).

Shift to Remote Teaching

During the school closures, the teachers had to navigate their way from being educators in a brick-and-mortar environment to educators in a remote one (Alfano, 2022; Pressley, 2021). While teachers were directed to transform their educational style, they also had to make sure that the state standards and curriculum were being taught and met (Owolabi, 2020). Some teachers turned to previous studies to search for suggestions on remote styles of teaching to facilitate engaged learning in hopes of making sure state standards are met (Ganesha et al., 2021; Sweetman 2021). One example is using Zoom platforms which showed to be a highly desired program with the teacher's third-grade class while learning remotely (Cohen, 2021). Although remote teaching is not completely new, to many teachers it was their first time educating students completely remotely, especially during a pandemic. Lesson plans that they were used to were no longer adequate and challenges to quickly learn how to use technology and teach their students to also do so, brought on a highly transformative event of the 2020's. Some relative

studies focused on the student's acceptance of technology-mediated learning instead of face-to-face and these changes taking place in the middle of the second semester in schools. (Code et al., 2020; Kaden, 2020; Vladova et al. 2021).

Parents and Remote Teaching

Not only did the move from face-to-face to remote teaching in schools bring about challenges with the teachers, but it also brought about ones with parents and guardians who were struggling with working from home, providing childcare on their own, and now making sure their children were being supported with their schoolwork (Buschelman, 2020). Parents and students were having difficulties finding environments that were appropriate for learning during class each day. The parent's views on the students' experiences of remote teaching during the COVID-19 pandemic were researched in numerous studies. The research suggested that the remote teaching process had been challenging for both students and parents (Lemay et al., 2021; Mirsirli & Ergulec, 2021;). Other studies explored the experiences of the parents who acted as learning supervisors, tutors, and home-schooling teachers for remote learning during the health crisis, particularly those who had students with special needs (Agaton & Cueto, 2021; Susilowati & Azzasyofia, 2020). Many students struggled with noisy environments at home due to daycares and businesses closing. Numerous parents were forced to not only work from home but care for their children of all ages at the same time causing a noisy atmosphere at home for learners of all ages. Studies were done showing that siblings who had to learn together from home and parents who worked from home, had a

difficult time supervising learning and helping their children with assignments that many didn't know how to do (Carrion-Martinez, 2021; Herman et al., 2021; Kaden, 2020).

Although many parents were struggling to focus on numerous priorities at the same time, teachers were struggling with students who were not showing up to remote classes (Kaden, 2020). Parents and Guardians were responsible for making sure students of all ages were online and in their remote classes during school hours. The students who typically needed the most help were the ones who were not attending the class remotely. A study was done by researchers to analyze and describe the teaching strategies of children with special needs (Meteyesil et al., 2022; Smith, 2021). The COVID-19 pandemic has presented multiple challenges for teaching students with disabilities in an online instructional environment, but there are also opportunities for collaboration, training, and communication for special educators to meet the needs of their students (Owolabi, 2020; Porter et al., 2021; Yakut, 2021).

As time progressed during the COVID-19 pandemic, education continuously changed as did the way that it was conducted. Not only were the students adjusting to the constant everyday change in the way academics were being taught, but teachers were as well (Adnan & Anwar, 2020; Lai & Widman, 2021). Analysis showed many teachers who had never taught remotely were required to learn how to teach in a remote environment and were required to use new resources that numerous educators had never used before (Pressley et al., 2021). They were also expected to know how to find a way to motivate students to log on remotely during class time. Many did not know how to begin to do this, and students started falling behind (Ford et al., 2021; Kim, 2020)

Need for Technology

At the start of the pandemic, moving from face-to-face teaching to remote teaching was the most popular option to be able to continue education in the school systems (Fakurunisa & Prabawanto, 2021; Vargo et al., 2021; Webb et al., 2021). For many however, the aspect of technology, or lack of it, proved to be a major challenge for students, teachers, and school district leaders alike (Pryor et al, 2020). Many schools would issue chrome books at the beginning of each school year to all their students. This puts these students in the most prepared situations (Kaden, 2020). Although they were mostly issued via grade appropriateness, when schools closed due to COVID, districts were able to hand out these chrome books to all students to be able to accompany all grades during remote learning. Not all schools however had the financial means of being able to loan technology devices to their students, leaving these children at a disadvantage over those who did receive them. Students who had access to Zoom and Google Meets had an advantage over those who did not have access to the internet or WIFI that was needed to conduct and learn online studies (Al-Marroof et al., 2023; Rahayu & Wirza, 2020; Tinubu & Herrera, 2020). Another challenge was the internet and WIFI connections. Research showed that low-income and minority students and families were particularly disadvantaged in accessing hardware and software technologies to support teaching and learning. (Gandolfi et al., 2021; Means & Neisler, 2021; Young & Donovan, 2020). Although some teachers and students had Chrome books and laptops to use for remote learning, many did not have internet service or did not have internet service that was strong enough to keep students online for an entire school day period

(Kaden, 2020). Some districts tried to set up hot spots with internet service throughout the counties, but even then, it did not reach all homes and sometimes proved to be slow and unreliable (Armstrong-Mensah et al., 2020; Beaunoyer et al., 2020; Sundaram et al., 2021).

Despite all the technology that was being offered, many students needed the skills to be able to navigate the internet and WIFI to help their learning and socializing with remote technology, especially when that technology stopped working (Beaunoyer et al., 2020). Not only did students need to be trained on remote technology and how to overcome any problems that they developed, but teachers and parents did also (Trust & Whalen, 2020). These students and teachers had no choice but to rely on parents for help signing their children on to the internet, helping them get to their remote teacher assignments, and helping assist when the technology fails (Beaunoyer et al., 2020; Gupta et al., 2022; Ireri, 2021).

Returning to the Classroom

By the beginning of the 2021-2022 school year, the CDC organized a plan for sheltering-in-place protocols to be lifted and schools to begin reopening with many preventative actions in place for both students and teachers. (CDC, 2021). Schools would be kept constantly informed with the local statistics of the COVID-19 virus and in return, the districts would keep the community up to date on the data of those who tested positive for the coronavirus or were exposed (Kearney & Childs, 2021; Lordan, 2020; Sheikh, 2020; Viner, 2021).

When schools began reopening, they offered several options as to how students wanted to proceed in coming back. They would still offer remote learning but also include in-seat learning and hybrid learning. Many safety measures were put into effect as well to keep not only the students safe but also the teachers and staff (Epstein, 2021; LoMoro, 2020; Melnick & Darling-Hammond, 2020).

Literature Related to Remote Teaching

Because of the academic difficulties, brought on by school shutdowns due to the coronavirus pandemic, almost every country put in place some type of remote teaching strategy (Unicef, 2020). Remote learning quickly grew significant in schools worldwide due to the contagiousness of COVID-19. With remote teaching continuously expanding, concerns increased about remote teaching with the socialization of the students as well as assistance for parents, remote teaching environment, advantages and disadvantages of remote teaching, and suggestions for future pandemics (Bhamani et al., 2020; Ma, 2020; Unicef, 2020;)). As teachers transitioned to remote learning at such a quick pace, they practiced compassion, flexibility, and understanding to help support their students as they tried to manage how to successfully teach and learn remotely from home (Irawan & Dwisona, 2020; Khalili, 2020).

Remote Teaching and Socialization

As remote teaching grew during the pandemic, an expansion of remote learning programs used to distribute curriculum grew as well. Some of the most popular sites used during the pandemic were Zoom, Google Classroom, Microsoft Teams, Moodle, and Blackboard. These not only helped remote learning but also increased socialization

between classmates and peers (Carrillo & Flores, 2020; Collins et al., 2020; Fawns, 2020;). Teachers encouraged engagement with discussion boards, games, screen sharing, breakout rooms, and remote group work (Huang et al., 2019). Although teachers were helping students interact online and with each other, it was not the same as being in a face-to-face environment. This not only occurred in children but in teachers as well (Bailey, 2022; Larsen, 2022; Peimani & Kamalipour, 2021).

Remote Teaching Environment

Distance learning can be enabled anywhere and anytime and can offer creative activities for students as well as meaningful lessons. Online learning has ensured that learning can resume with minimal disturbance of the normal teaching procedures until it is safe to go back to a brick-and-mortar environment (Xie & Yang, 2020). At times when Emergency Remote Teaching (ERT) is needed, such as times of a pandemic, it offers alternative ways of preserving the teaching-learning process. ERT can be conducted in either a synchronous or asynchronous environment using different apparatuses that can obtain access to the internet (Anthony & Noel, 2021; Webster et al., 2021; Trust & Whalen, 2020).

Advantages of Remote Teaching

Remote learning is not completely different from face-to-face learning (Huang et al., 2019). Students and teachers can learn in real-time, ask questions, and adjust the pace of the lessons and teaching just as they could in a brick-and-mortar. It supplies learners with growing possibilities regarding where, when, and how their education will take place (Cheng, 2020, Ma, 2024; Wilcha, 2020;). The remote classroom is more flexible

than and brick and mortar environment. Remote schooling allows the instructor and the learner to determine their educational rate and allows them the ability to set a due date schedule that fits everyone's agenda. This permits more stability in studying and completing lessons. Therefore, students have more time to focus and take their time understanding and getting assignments correct (Checa & Bustillo, 2020). Students are taught time management skills and are given more responsibility in learning and completing the curriculum on time. They have consistent access to most materials when teachers enter the lessons online. This allows them to view and review information needed to master curriculums (Huang et al., 2020; Levac et al., 2019; Sadeghi, 2019).

Disadvantages of Remote Teaching

Numerous advantages to remote education helped not only students but teachers as well, however, the difficulties seemed to outweigh the benefits. Time management and technology are some of the many aspects that may be a hindrance to successful learning. Many students are prone to procrastination. Allowing students to have extended time to turn in assignments and projects could decrease motivation, making it difficult to focus and get assignments in on time (Cardullo et al., 2021; Carpenter et al., 2022; Herwin, 2021;). Students who were remotely learning in a home environment they shared with other siblings could not focus, especially when television, cell phones, and video games were allowed (Gonzalez & Bonal, 2021; Fakhrunisa & Prabawanto, 2021). This could be overcome by creating a designated working space or using nearby libraries. Turning off technology that is not relevant to the lesson and using headphones are other ideas to reduce distraction as well. Selecting a regular time each day to work and creating and

sticking to a schedule, can leave students and teachers with minimized distractions and allow them to make the remote teaching and learning process a successful one (Chirinda et al., 2021; Dinh & Nguyen, 2023; Mesghina et al., 2021).

Remote education can put limitations on the possibilities of growing a unique relationship with other students and educators. If there is engagement in asynchronous learning especially, there may be fewer opportunities to collaborate and interact with others (Baber, 2022; Yorkovsky, 2022). Even if there is remote engagement, remote interactions can be less engaging than if they were in person. To overcome this, strategies of spending additional time with peers and mentors, even remotely, can be beneficial. Creating and attending remote meetings outside of class can help reestablish a connection. Although it is not the same as in-personal engagement, you can maintain consistent communication to help develop strong relationships (Bailey, 2022; Li et al., 2020; Qurotul et al., 2020).

Future Remote Teaching

The CDC (2020) advised that in the event of another instance such as a future pandemic, schools should be able to offer both a face-to-face option as well as a remote learning option for both students and teachers. The COVID-19 pandemic was an awakening as to how important technology is in a classroom or learning environment (Dooley et al., 2020). Many students expressed their preference for traditional face-to-face learning over remote learning during the previous school closures but with an upgrade in the education system and its use of technology with the teachers and students, this might change (Gherhes et al., 2021; Marpa, 2021). The advancements made in

technology just from the COVID-19 pandemic offer a look into all the sources that are available for the learning education system. Seeing the possibilities in remote opportunities for both teachers and students and how they can impact education daily, gives hope for implementing technology in the future (Buschelman, 2020; Stark, 2019).

Literature Related to Teacher Perspectives

Teacher perspectives are a particular attitude toward how they view themselves and their personal beliefs, personalities, skills, and knowledge (Ozdemir et al., 2019). An educator's perspective is additionally enlightened by how they see their professional potential and connections with their coworkers and their learners (Nicholson & Lander, 2022). Often, an educator's profession or history can impact their views, which can change as they grow in their position or experience new phenomena (Boylan et al., 2018; Ozdemir et al., 2019;).

Shareholders appreciate educators' beliefs and their viewpoints. In the schooling community, the word shareholder or stakeholder usually refers to someone who is devoted to the accomplishment or well-being of a school, the educators, learners, faculty, guardians, and school board representatives (Boylan et al., 2018). Educators' views can often offer awareness of what they believe and what sways their decision-making and thinking the way they do regarding specific aspects of education (Langrafe et al., 2020; Ozdemir et al., 2019).

Summary and Conclusions

In Chapter 2, I discussed the conceptual framework and the community of inquiry model that I used for my study, research, and literature that already exists on COVID-19,

the impact of COVID-19 on education, remote teaching, and the benefit of teacher perspectives. It has been discovered that the community of inquiry model and the steadying of social, cognitive, and teacher presences in remote institutions could assist a significant academic circumstance (Garrison et al., 2001). The community of inquiry model should be researched when exploring the shift to remote education during the coronavirus epidemic that rapidly moved across many countries, causing the closure of many school buildings and companies everywhere (Marshall & Bradley, 2020). Researchers have collected confirmation on the difficulties of remote learning once it became in demand during the COVID-19 pandemic and proved that there is a need for further research on remote education and its benefits (Huang et al., 2019). Using teachers' perspectives in research on the school curriculum and remote learning can help support improvements, explore change, and bring about improvement and development of the educational system (Ozdemir et al., 2019).

After assessing the research, I was able to locate and confirm that researchers have investigated and administered studies on the effect of the coronavirus epidemic on teaching and learning. Researchers have also investigated remote teaching and the use of the community of inquiry. There is a gap however in the literature on the perspectives of primary grade teachers' challenges in teaching remotely during school shutdowns due to COVID-19. This gap promoted the necessity for my research study.

In Chapter 3, I describe the practice and methods that were used in my study as I seek to close the gap in the literature. Chapter 3 involves the research design I used as well as the rationale for the study. It explains my part as the researcher, which

methodology I used, and also includes the instrumentation, participant selection, data collection, and data analysis plans. I guarantee a trustworthy and ethical study.

Chapter 3: Introduction

The purpose of this study was to explore primary grade teachers' perspectives on the challenges of teaching students completely remotely and suggestions for remote instruction training for teachers. I explored by specifically investigating teachers' perspectives about the challenges they experienced teaching primary students remotely during the COVID-19 pandemic. I also explored the participant's ideas for providing remote instruction training to teachers.

Chapter 3 includes research on the design and rationale that was used during the research for the study as well as the researcher's role. In the methodology section, the participant selection process, and the logic behind it will be discussed as well as the instrumentation, procedures for recruitment, participation, data collection, and the data analysis plan. Chapter 3 also contains a discussion of issues of trustworthiness and the ethical procedures that were involved in the study.

Research Design and Rationale

A basic qualitative study was selected as the research design for the study. Interviews related to remote teaching were used, due to many educators experiencing rapid conversion to remote teaching during the COVID-19 pandemic (Bilal, 2022). Remote teaching is a design of educating students in a largely web-centered way by the usual use of multimedia. It enables a high level of interaction among teachers and learners both synchronously and asynchronously due to the inability to participate in a typical face-to-face classroom (Sirghea, & Brezuleanu, 2021). During the COVID-19 pandemic, remote learning was adopted to help slow down the spread of the virus,

forcing the traditional brick-and-mortar education system to transition to a remote platform (Friedrich & Perrotta, 2022).

This study will address the research questions as follows:

RQ1: What are primary teacher perspectives on the challenges of teaching primary students in a remote platform?

RQ2: What are primary teacher suggestions for remote instruction training for teachers?

I chose to do a basic qualitative study that used semi-structured interviews. These interviews investigated the perspectives of primary grade teachers about the challenges they experienced teaching primary students remotely and explored their ideas for providing remote instruction training to teachers. The qualitative approach is used to understand phenomena by studying perspectives and natural situations (Aspers & Corte, 2019). I chose to utilize a qualitative methods approach for this study because of the organic inquiry for researching participants' perspectives on the challenges of teaching primary students in a remote objective during a pandemic (Rotteau et al., 2021). The qualitative data collection lines up with the study and supports the experience being investigated, making this an appropriate methodology choice for the study. Qualitative research is used to seek perspectives and experiences from participants. Using interviews for the research helped obtain a better grasp of the participant's personal experience of the occurrence and the phenomenon being researched (Butcher, 2022). I used a quantitative model as a case study approach for the methodology since I was looking to grasp the teachers' thoughts and perspectives of educators who had taught fully remotely. Case

study approaches can shed more chances of biased results, however, quantitative studies focus more on numerical responses instead of the thoughts and motivations of others that I sought to gain (Webster, 2021). Therefore, a qualitative study seemed most appropriate.

Role of the Researcher

For this qualitative study, I was the only researcher responsible for all aspects of this basic qualitative study (data collection, analysis, evaluation, and presentation). I obtained the position as an interviewer in this study. Using the interview questions I created, I implemented semistructured interviews with participants who were primary grade teachers who taught fully remotely during the school year. The interviewer in a qualitative study is commonly responsible for choosing the participants, arranging the interviews with them, and conducting the interviews in an appropriate and relaxed place. At times, some researchers scribe the recording of the interviews themselves but many times, they arrange a company to have it done for them. From this transcribing, researchers will code and analyze the data that will be included in the research study (Aspers & Corte, 2019).

There are three roles in qualitative research. One is a participant-observer which would be the researcher. The researcher will participate in the group's activities while they are observing the group's behavior and interactions with each other. Another role is the participant. The participants are a diverse group of individuals who are studied during the research and on whom the study is based (Parker et al., 2019). The final role is the observer. The observer will collect data using their senses, especially looking, and listening in a meaningful way (Smit & Onwuegbuzie, 2018).

As the single researcher of the study, I confirmed that there were no personal relationships with any of the participants that were present, including any professional connection that could involve persuasive answers to the interview questions. The participants were recruited from a recruitment flyer I sent to the primary schools in the area. I was not able to recruit enough qualified participants using this matter and therefore referred to the snowballing method in which I asked the current participants to refer additional qualified participants that they knew of. This also assisted in avoiding research bias since I did not know the participants recruited in this manner (Parker et al., 2019). This study was also conducted separately from a work environment and did not contain any incentives for participants. I also used reflective journaling to move through the study.

Methodology

A qualitative methodology design was used for this study. It was important to hear directly from the primary grade teachers who taught class completely remotely, to fully understand their perspectives about the challenges of teaching remotely. To acquire a description of the perceptive process, a qualitative research study was necessary to fully utilize a descriptive, exploratory design. By using semi-structured interviews, the researcher was able to evaluate and analyze the perceptions of teachers who taught remotely during the pandemic.

By using this approach, participants were able to express their feelings and talk about their true perceptions and their relative experiences. They were able to explain the

rationale behind their thinking and strategies in a true and organic atmosphere with no judgment or bias (see Aspers & Corte, 2019).

Participant Selection Logic

For the study, I selected participants who were primary grade educators who experienced teaching completely remotely. All participants involved were recruited from a recruitment flyer and snowballing. I included a sample of 12-15 participants who meet the qualifications of having taught completely remotely. Selective sampling helped to guarantee that the participants in the study had the potential to provide meaningful data and the capability of answering specific research questions during the study. The reason for selective sampling is to target a specific audience such as educators who taught primary grades and who also taught remotely. The margin of error is lower because participants are chosen based on the qualities that match the criteria, thus raising the trustworthiness of the data and the results (Gill, 2020). Snowball sampling will also be used where participants can recruit other appropriate participants who are primary school educators who meet the correct criteria to be members of the study. The number of participants will grow until the correct saturation has been met.

Instrumentation

For this basic qualitative study, I used semistructured interviews based on the research questions as the method of data collection. Conducting interviews allowed me to collect valuable qualitative data that was authentic and in-depth (Sah et al., 2020). I created research questions and interview questions that assisted in understanding teachers' perspectives on teaching remotely. I also created an interview protocol form

that supported the data collection process. Due to the COVID-19 pandemic and the expectation of social distancing, interviews were conducted face-to-face with the participants. I used encouragement and follow-up questions, when necessary, to elicit expanded answers from the participants. All interviews were audio recorded for future reference and transcription to ensure data collection accuracy.

Researcher-Developed Instruments

I used semistructured interviews as the method of data collection for this basic qualitative study with 7 questions that are relative to the research. This was the primary tool for collecting the data. Using semi-structured interviews allowed me to gather qualitative information that was valuable to the study with open-ended questions that helped to gather more perspectives and openness from the teachers (see Aspers & Corte, 2019). I created semi-structured interview questions (See Appendix A) that assisted in obtaining primary-grade teachers' perspectives about the challenges of teaching remotely. This was obtained from a template provided by the Walden University IRB department. I also created a protocol for interviews that supported the process of the data collection. The interview protocol contains questions and prompts that facilitated me in eliciting sufficient responses to the questions from study participants. To confirm validity, the interview questions were sent to a panel of primary grade principals for review, twice. To establish the sufficiency of the interview protocol when answering the research questions, the research questions and interview questions were aligned with the conceptual framework. All interviews were conducted face-to-face at a private location of the participant's choice. I used follow-up questions and encouragement when necessary,

during the interviews. I recorded all interviews for future use and easier transcription for accuracy. Dependability was maintained through using a reflective journal of the experiences and details of the data collection and analysis process.

Procedures for Recruitment, Participation, and Data Collection

Once the proposal was complete, it was sent to the Walden University Institution Review Board (IRB) for review. This ensured that all research complied with the ethical standards of the university as well as the U.S. federal regulations (Protections, 2021). Once the IRB reviewed and approved the research, IRB approval was granted, and I moved to the next step of gathering participants (Kostere & Kostere, 2021). I attempted to recruit 12 to 15 teachers who met my criteria. The criteria were as follows: Must have taught primary grades and must have taught completely remotely.

Recruitment

After approval from the IRB, I began recruiting a sample of participants that consisted of 12-15 primary-grade teachers who have taught on a completely remote basis. I recruited participants using a recruitment flyer at the local primary schools, however, I was not able to recruit enough participants in this manner, so I was able to obtain the remaining ones by snowball sampling, where participants recruited other qualified participants for the study.

Participation

Next, I gained permission from the participants to be a part of the study. I emailed the participants the consent form for them to review and followed the IRB manual to make sure the participants knew they were able to reject doing the study at any time as

well as have the right to contact me to ask and clear up any questions they may have.

They also knew ahead of time what to anticipate with each new step of the study. Once the participants had signed the consent form and returned it via email, along with a reply to the email that stated, "I consent", I was able to schedule the interviews with each participant so that I could begin collecting the data. Most interviews lasted no more than 30 to 45 minutes and were recorded for transcribing and future reference.

Data Collection

Before the interviews began, I went over the process again with each participant and included all the information on the consent form they signed and the fact that their interviews and responses would remain confidential. If no one had any questions and was ready to begin, the interview progressed with the first half of the questions relating to research question one and the second half of the interview questions relating to research question two. I began each interview by advising the participants that I needed to record their interview and would be transcribing and saving it electronically in a secure online account. I conducted each interview face-to-face and allowed each participant as much time as they needed to share their perspectives. I provided each participant with an opportunity to ask any questions they had. The participants were made familiar with their right to view the summaries of their interviews as well as the study findings. The participants and I exchanged contact information in case any clarification was needed during transcription as well as answer any follow-up questions the participants had if there was a need. After all interviews were complete, I thanked all the participants for

offering their perspectives in my study and reminded them that they would be welcome to request the results of the study when it is complete.

Data Analysis Plan

For this basic qualitative study, after all interviews had been completed, I used Thematic Coding Analysis for Open Coding and Axial Coding to analyze patterns and themes. Analyzing data is a way for a researcher to answer research questions (Mills & Gay, 2019). Data using open-ended questions from each interview were collected, coded, and classified to determine common themes.

Once all interviews had been completed and transcribed, I examined the transcriptions and began using the process of initial data analysis by coding keywords that stood out in the responses (McMullin, 2021). As I continued to code each interview transcription, I concentrated on data that was associated with aspects of the research questions. Finally, in the coding process, I used open coding to organize the data into units for analyzing ideas, concepts, and theories (Wiggins et al., 2021).

My next step was then to use axial coding to assign categories and subcategories in the open coding. I created an organized Excel spreadsheet to separate similar key terms into categories. Creating categories of similar data, allowed me to begin identifying themes that were congruent in the qualitative study (Williams & Moser, 2019). Analyzing this data helped support answering both research questions of this study. Until saturation was met and new patterns and themes stopped emerging, I continued to collect and analyze data for the study (Lester et al., 2020).

I predicted the analysis of this data would uncover related themes to primary grade teachers' perspectives about the challenges of teaching remotely. I was prepared to understand and analyze these discrepancies. Discrepant data is when comparable data sets do not align and may be contradictory to the patterns and themes that have emerged in the study (Cassell & Bishop, 2019). This data needed to be included in the findings of the study so that all participants and their perspectives were represented. This allowed the study's trustworthiness, credibility, and validity. By using member checking and including all the data in the study, other future researchers will have access to every gained perspective.

Trustworthiness

During this basic qualitative research, a level of trustworthiness, credibility, and validity was provided to the researchers. Using true data from the participants' perspectives and experiences allowed for the validity of the qualitative study. The researcher ensuring the study's credibility resulted in the confidence I have as a researcher and in the confidence, I have to trust my sources and the methods I used (Cassell & Bishop, 2019). Researchers who explore designing a study, need to be able to produce a proper level of trustworthiness and validity that can ensure the confidence that researchers have in qualitative studies (Ravitch & Carl, 2021). By staying true and accurate to the participant's experiences and perspectives, the validity of a qualitative study can be gained. By ensuring the study's credibility and dependability, the trustworthiness of the study can be reached (Merriam & Tisdell, 2016).

Credibility

When performing qualitative research, it is important to establish credibility in the data from the study (Merriam & Tisdell, 2016). Credibility is best established by including prolonged engagement with the participants and reflective journaling of the data to ensure its truthfulness. Evidence should also be presented in the questioning and the data should be examined several times (Adler, 2022). To ensure validity, I used recordings of the interviews and took notes during each of the interviews I conducted. The notes contained details of the participant's perspectives and made sure every factor was accounted for. I followed the interview protocol by asking each participant the same questions in the same order and made sure clear language was used to avoid bias (Ravitch & Car, 2021). I allowed the participants in the study to perform a member check on the summaries of their interviews to ensure that all details were correct and accurate. Member checking is widely and consistently recommended as a validity check for rigorous qualitative research. It is the process of participants reviewing and editing their responses if needed so that trustworthiness is met (Lemon, 2020).

Transferability

The transferability of a qualitative study is relative to generalizability or external validity in qualitative research (Maxwell, 2021). Transferability is established by furnishing others with evidence that the research findings could be relevant to other settings. (Munthe-Kaas et al., 2020). For this study, I worked to ensure transferability by providing detailed descriptions of the data that was collected, the themes, procedures, and the methodology that was used. By doing this, it allowed the readers of the study to make

connections to the data and decide if any aspects of this study could be shifted to studies in the future. I also included variations in the participants that were chosen for this study. The participants were recruited from a recruitment flyer I sent to local primary schools. Snowballing was also used to support recruitment from participants as I did not receive enough teacher volunteers from the flyer alone. The criteria for participation in the study was to be a primary grade teacher who had taught remotely in the education system. Due to the nature of this study, there was limited transferability.

Dependability

The dependability of a qualitative research study is determined by the reliability of whether the data would remain steady if the study was able to be reproduced (Merriam & Tisdell, 2016). I ensured the dependability of this study by using the code-recode strategy (Nassaji, 2020)). This involves me as a researcher coding the data, leaving the analysis for a period, and then coming back and re-coding the data and comparing the two sets of coded materials (Nelson et al., 2021). I also made sure that each teacher who participated in the study understood that their participation was only voluntary and that if they chose to withdraw from the study at any time, they could do so.

Confirmability

Confirmability is the last standard of trustworthiness that a qualitative researcher must put in place when doing a study. Confirmability of qualitative data is certain when data has been checked and then rechecked and found to be consistent. Throughout the data collection, data should be analyzed and re-analyzed to ensure results would likely be duplicated by others doing the study (Nyirenda et al., 2020). For this study, I ensured

confirmability by using reflective journaling as I proceeded throughout the study. This will ensure that any assumptions are eliminated. By providing this transparency into the coding and decision-making process about the final findings, it also confirmed that I kept precise records during the research process and also provided a detailed record of any adjustments I made throughout the length of the study (Trainor & Bundon, 2021).

Ethical Procedures

There are often distinctive ethical challenges for the participants in qualitative research due to the disposition of how data is collected throughout the interviews (Sim & Waterfield, 2019). At all times, a researcher must be sure that participants' privacy is protected, that no harm comes to a participant, and that their experiences and opinions are respected during the study process (Merriam & Tisdell, 2016). To ensure I followed ethical compliance, I did not collect any data for the study until I had received the approval from IRB to do so. The IRB approval for the study helped ensure that participants that are involved in the study were protected from any kind of potential harm (Barrow et al., 2023). This was done in accordance with the standards and federal regulations of Walden University and the local school district where the study took place.

Once I received IRB approval from Walden, I began recruiting 12-15 primary teachers who taught in a completely remote setting. I had no affiliation, neither personal nor professional, with any of the participants. I also reiterated to them that their participation in the study is completely voluntary and that they can withdraw at any time.

Once the participants had been chosen and secured, I began the pre-interview process. During this time, I made sure all participants felt secure and comfortable and

assured them that they were continuously monitored (Ibbett & Brittain, 2020).

Throughout the entire interview, they were asked intermittently if they were comfortable.

They were reminded that their information would remain private and would not be shared. Alphanumeric codes were used when presenting their interview data.

I then began the interview process, asking each participant their perspectives on 7 questions, the first set relative to research question 1 and the second set, relative to research question 2. These were open-ended questions, so the participant could express their opinion in their own words and expressions without any bias.

I provided the participants the chance to ask any questions they had before and after the interview. I then explained to the participants the procedures that followed and made sure they were aware of their right to member check my summary of the study findings and also advised them that they could adjust their answers if they felt called to.

Finally, I thanked all my participants with written notes of gratitude and let them know that I would follow up with the results of the study when it was complete.

Summary

Throughout this chapter, I have presented information on the research design of this study. I have discussed the rationale of the research as well as the role that the researcher took. The methodology that was chosen for the study is a qualitative one. It included semi-structured and one-on-one interviews with participants who were selected for the research. I have also included information on the data collection method and how I went about collecting and preserving it. I discussed how the participants were selected and the procedures for their recruitment. The instrumentation and the data analysis plan

have been outlined as well. Information was provided about the trustworthiness of the study and the ethical procedures that were followed throughout the process of the research. I verified that IRB approval was granted before moving forward with the study both from Walden University as well as the local school district where the study took place. Once approval was given, I proceeded with recruiting participants, collecting of their consent forms, and ethically began the interviews as I transcribed and interpreted all the data collected. In Chapter 4, I present the findings of my study, including the setting, data collection, demographics, trustworthiness, and the results.

Chapter 4: Results

Introduction

The purpose of this qualitative study was to explore the perspectives of teachers who taught primary grades in a fully remote environment. It was also to research primary teachers' suggestions for remote instruction training for teachers. Two research questions for this study directly addressed this purpose. After receiving IRB approval, I recruited 12-15 participants to answer questions about remote teaching in the school system. Chapter 4 provides the setting detail for the study, the process for data collection, data analysis, evidence of trustworthiness, and the results of the study.

Setting

Participants were recruited by using a recruitment flyer sent via email. I was not able to recruit enough participants in that manner, so I then used snowball sampling where participants recruited other qualified participants for the study. This study was affected by teachers just returning to work after a winter break, inclement weather conditions, and other COVID-related disadvantages due to a spike of the virus in the area. Because I sent the recruitment flyers out to local primary schools, I was able to narrow in on teachers in the area which made it easier for them to participate without having to travel or add extra expense. The characteristics that were required for this study are as follows: (a) teachers who taught a primary grade, (b) teachers who taught in a fully remote environment, and (c) are open to discussing the challenges of remote teaching. The 12 interviews took place at the location of choice for the participants. Each interview was at a place that was away from the presence of others so that it would be confidential.

Demographics

Each participant was assigned an alphanumeric code for confidentiality purposes. For example, A1 is the alphanumeric code that represents the teacher I interviewed first who taught 1st grade. All participants were primary grade teachers and were an experienced group of educators. Many of the participants worked with only one grade level at a time although some were Early Intervention Plan (EIP) teachers and worked with more than one grade level during the school day. In Table 1, it was noted all grades each teacher taught, including the 2 EIP teachers. All participants were currently teaching in a primary school setting with at least 10 years of teaching experience, although many stated they would be retiring after this year. All participants had a bachelor's degree or higher and a teaching certificate. Collectively, they have taught 1st through 3rd grade.

Table 1

Demographics of Participants

Participant Identifier	Grade Taught	Experienced Educator	Taught Remotely
A1	1	Y	Y
A2	1	Y	Y
A3	2	Y	Y
A4	2	Y	Y
A5	2	Y	Y
A6	2	Y	Y
A7	2	Y	Y
A8	3	Y	Y
A9	3	Y	Y
A10	3	Y	Y
A11	1-2	Y	Y
A12	1-3	Y	Y

Data Collection

After obtaining IRB approval (11-29-23-0753104), I began emailing out my recruitment flyer with eligibility requirements to teachers and principals in numerous

primary schools. The qualifying requirements were to be a teacher who taught primary grades, taught in a fully remote environment, and was open to discussing the challenges of remote teaching. Although I emailed the recruitment flyer out to 5 principals who stated they would forward it to the teachers in primary grade levels, only 4 qualified teachers responded. I had to then turn to snowball sampling where the 4 research participants were asked to assist in identifying other potential qualifying subjects to interview and email the recruitment flyer to them (Mweshi et al., 2020). Before scheduling interviews with the qualifying participants, consent forms were sent out and participants were required to sign them, giving consent to be interviewed. All 12 participants selected a date and time for the interview that was convenient for them, and the interviews were recorded so they could be transcribed at a later time. One of the participants would not sign the consent form before the interview and was therefore removed from the study. Another qualifying participant was later found to replace that participant. Recordings were saved in a folder on a password-protected computer to keep it secure and confidential.

The interviews began in the middle of December and lasted until the end of February. I emailed the interview questions to the participants before beginning the interviews. Because of this, each participant had time to review the questions and think about their experiences teaching remotely so they could consider all the information they wanted to share. During the interview, the participants agreed to be recorded so I could later transcribe it, ensuring every detail was captured and allowing the participants to member check to make sure what they wanted to say was captured in the interviews. All

written and audio transcriptions are kept in a secure folder on a computer that is password protected to access.

Data Analysis

Once I had collected all the necessary data from the interviews I conducted in my study, I followed Maguires and Delahunt's (2017) step-by-step guide which explained there were specific steps for analyzing qualitative data: a) gathering and collecting data b) organizing and transcribing your qualitative data c) coding your data d) analyzing the data into themes e) reporting your insights derived from the analysis.

I used the NVivo software to perform the transcriptions of each interview. After the transcriptions were completed, I went through each one and listened to the recording while I read the transcription for accuracy. I also asked the participants to member-check the summaries I did of the transcriptions to make sure I captured what it was they wanted to share about their perspectives on teaching remotely (Amin et al., 2020).

Once I ensured the written transcripts were a replica of the audio recordings and that the summaries were accurate on every interview I did, I then continued to prepare, organize, and analyze the data in relation to the research questions. I then highlighted codes by comparing the transcriptions and was able to come up with categories and themes.

Table 2*Categories and Themes*

Patterns & Categories	Theme
1. Computers unmuted, turning screens off, background hinderances, sibling distraction, multiple students in room, uncontrollable behavior, playing with toys, pets, parents having conversations, students falling asleep, showing off surroundings, making classmates laugh, acting silly	Theme 1: Disturbances by Students
2. finding online lessons, teaching reading on laptop, lack of hands on, emotional challenges for students, students getting sick, students not signing on classes, lack of WIFI, more to prep for teachers, recording all lessons, lack handwriting practice, teachers lacked resources like manipulatives	Theme 2: Hindrances in Online Teaching
3. teachers getting sick, lack of support from administration, no technology support, poor cameras, poor recording equipment, parents not supportive due to work, parents not caring, making sure the WIFI worked in county, covering for sick teachers doubled class size, some teachers not tech savvy, students in bed on camera, no learning environment.	Theme 3: Lack of Support for Teachers and Students
4. socially behind, lost teamwork, loss of time to learn students on personal level, only socialization was thru computers, relied on technology to teach, cannot socialize face to face, teachers lost socialization with each other as well, no relationships built, feeling of removal from other teachers.	Theme 4: Social Interaction
5. Google Classroom site to store assignments, lessons, and recordings., Google Suite like zoom but simulates a classroom, Google Chromebooks issued by the county/state, Teacher-Pay-Teacher to support other teachers & Power Points, Google Classroom to assign small groups for student engagement, sent home manipulatives.	Theme 5: Training and Manipulatives in Remote Teaching
6. sick children and teachers could still attend school remotely, recordings could be re-listened to, parents could watch recorded lessons, easy to differentiate with different levels of learners, no bullying or being mean, not having to buy gas, more breaks during the day.	Theme 6: Benefits of Remote Learning

Evidence of Trustworthiness

Trustworthiness is an important aspect of qualitative research. It involves different terms consisting of credibility, transferability, confirmability, and dependability (Adler, 2022). In my study, I have shown an accurate reflection of how the teachers I interviewed have perceived teaching remotely in primary grades and their suggestions for remote instruction training for teachers. Evidence of credibility, transferability, dependability, and confirmability of this qualitative study are presented.

Credibility

Credibility is how confident the qualitative researcher is in the truth of the research study's findings (Nassaji, 2020). I used several strategies during the data collection process to increase the credibility of my study. One was being aware of my personal bias and not letting it interfere with interviews regarding the questions I asked the participants and the responses I gave after they answered. I also used a journal to record notes throughout each interview to help note the teacher's thoughts and perceptions of each question so I would be clear in their answers. Saturation was used by taking the data I collected and then comparing and contrasting the raw data between each participant. The commonalities began becoming apparent and repetitive, offering evidence of saturation in the study. Finally, member checking was used to conclude the credibility, allowing each participant to review the summary of their interview to make sure it was accurate.

Transferability

Transferability is how the qualitative researcher demonstrates that the research study's findings are applicable in other, similar situations. This shows that the findings apply to other circumstances and situations (Maxwell, 2021). Using a recruitment flyer, I was able to locate 4 educators who taught primary grades completely remotely. I was able to use the snowballing effect to recruit the remaining educators. Ultimately, 12 teachers who taught remotely in primary grades, volunteered to participate. The transferability of this study was enhanced with probing questions which generated richer descriptions and produced deeper participant data. However, the transferability of this study will be established by the reader of the research (Johnson et al., 2020).

Dependability

Dependability is the extent that the study could be represented by other researchers and that the findings would be consistent. During the study, I documented each research step. This started from the development of research questions, all the way to conducting the interviews and analyzing the data. Themes were derived and categories were determined after the data collection process. Dependability was further improved by triangulation of the data by collecting data from 12 different participants. Collecting data from multiple participants allowed the exploration of various perceptions and provided more in-depth details and findings (Janis, 2022).

Confirmability

Confirmability is the degree of neutrality in the findings of the study's research. The findings are based on the participant's responses and not the bias or motivations of

the researcher. This is done by making sure the researchers' bias does not skew the interpretation of what the participant's responses are (Amin et al., 2020). During the entire study, I kept a detailed journal, notes, and transcripts from the participant's interviews, so I have clear and precise documentation from each teacher. Although qualitative research is subject to researcher bias, the goal is to eliminate these biases, so that if other researchers replicated the study, the original results would be reiterated proving reliability and confirmability. Confirmability exists to verify that the findings in a study are shaped by participants more so than they are shaped by the researchers themselves (Johnson et al., 2020).

Results

In this basic qualitative study, I addressed the primary grade teachers' perspectives about the challenges of teaching remotely. The purpose of this study was to explore primary grade teachers' perspectives on the challenges of teaching students remotely. It is also to research primary teachers' suggestions for remote instruction training for teachers. I used recruitment flyers for purposeful sampling as well as snowball sampling and collected data from the interviews of 12 teachers who taught primary grades in a fully remote environment. An inductive process was followed to identify codes, patterns, categories, and themes in the data (Locke et al., 2022). The conceptual framework for the study was based on a framework in which the three essential elements of an educational experience were explored: social presence, cognitive presence, and teaching presence (Guo et al., 2021). The findings of this study indicated teachers' perspectives on the challenges of teaching primary students in a remote platform as well as their suggestions

for remote instruction training for teachers, which revealed themes that answered RQ1 and RQ2 as follows:

1. Disturbances by Students
2. Hindrances in Online Teaching
3. Social Interaction
4. Lack of Support for Teachers and Students
5. Training and Manipulatives in Remote Teaching
6. Benefits of Remote Learning

Theme 1: Disturbances by Students

All the teacher participants discussed the challenges they went through while teaching remotely in primary grades. One obstacle that was almost unanimously felt by all the educators interviewed was, the daily disturbances caused by students that made giving instruction and teaching remotely a very difficult task.

A1 educator stated, “getting students to turn their sound off on their internet devices as well as learn in a private space without background distractions, was, many times, impossible.” A4 educator said:

younger siblings and parents would constantly walk in front of the camera on the student's internet devices to see what was going on. Often, parents or older siblings would be inappropriately dressed, and other students would notice when the parent or sibling or parent stood behind the student on camera. There were many times when students heard or saw things that they normally wouldn't see at school.

The amount of disrespect from the students felt by the teachers was also a large disturbance some teachers felt. A11 explained, “when the students could type on a computer, turn their video off, and were not face to face anymore, I don’t believe they saw us as authority figures and were often very disrespectful. Some stayed remote for an entire year, and they knew they would never have to face us so they could say what they wanted with pretty much no reprimanding.” A6 stated:

students would play on their cell phones or other electronic devices and not pay attention to the teacher. They had issues with students taking toys and showing them to the camera or playing with them on camera to try and get their classmate's attention. Sometimes, the students would even leave the class and walk over and help their younger siblings who were also in a class at the same time.

Many others agreed with the difficulty of students walking off in the middle of a lesson to help a sibling. A8 stated, “when we did live lessons, it often got difficult because some students found it very hard to focus. Some students would unmute and just begin randomly talking about unrelated things. Often, parents would be heard talking as well.”

Teachers found the student's behavior the most challenging and felt it was impossible to control through a computer screen while they were at home. They shared that many students would lay in their beds or fall asleep on camera during class and miss the lesson altogether. A10 said:

When students saw other students sleeping in class or laying down during class, they would begin to mimic their behavior and lay their heads down too. At times,

it was impossible to get the entire class to focus at one time to get through just one lesson.

Theme 2: Hindrances in Online Teaching

There were many hindrances in the curriculum and ways of teaching that prevented successful online teaching. In the classroom, educators are surrounded by many manipulatives and materials to use when teaching students and differentiating between them. When teaching remotely, many of those options disappear, especially when teaching is transformed into being completely remote, an emergency. Participant A3 stated:

I found it more difficult to find or make material to put online for the students to use. Teaching students to read on a Chromebook was not the same as being able to teach them using manipulatives and books.

A2 shared that the students needed something in their hands to read instead of just looking at a screen. “Sounding out words was difficult when you could not move your finger across the word and sound out each letter.” Participant A5 also agreed that learning to read remotely was hindered by not being able to read one-on-one using a book instead of the Internet. According to A8, they felt the lack of internet was a hindrance felt by many teachers at their school. A8 said:

dealing with overloaded servers and lack of Wi-Fi daily made teaching hard. The parents and students lost their motivation halfway through the day. Students were either not able to get online at all or missed all or some of the classes because of bad Wi-Fi. When they could get online, they simply saw the remote assignments

as just something they must complete online and not as a way of learning certain standards in school.

Although many participants talked about the lack of Wi-Fi and the problems it brought with it, Participant A10 thought that it was difficult for students to log in or stay logged in because of the internet and WIFI at their location. They went on to say:

because of the lack of internet for some students, some parents would have to drive their child/children to the school and sit in the parking lot to log in to class for their child to do their work.

A6 spoke about another time-consuming hindrance which was having to record numerous videos in addition to the live classes for students to refer back to. They thought that, for any lesson that they taught, there should be at least one video that helped to elaborate and review what was in that lesson. A6 said:

This was a long process of videoing, downloading, uploading, and editing. Because we were having shortened days, there was no way to cover all the material that needed to be covered in a 7-hour instructional day, so videos were the most obvious answer.

A7 agreed that many of the state standards were being missed because their instructional time had been lessened each school day. A4 taught English and found a hindrance in students not being able to get the handwriting practice that they would normally get in a face-to-face setting with paper and pencil. A4 stated: "In a classroom, there were manipulatives and books for students to use to practice with, not only for handwriting but other subjects as well."

Teaching remotely was very different for Early Intervention Program (EIP) teachers as well. Many worked with and used hands-on materials to help students who were falling behind in school. At A12's school, they made boxes for all the students in our EIP program with numerous different types of hands-on manipulatives. A12 said:

We asked the parents of EIP students to come to the school in a drive-thru style so we could hand out boxes of manipulatives to them so they could use them at home as they would in class. This seemed very helpful to the students. Without these devices, we felt that proper teaching was difficult when we had to rely solely on technology for things, we used to do hands-on.

One of the biggest concerns most participants found was that their classroom was a safe place. It was a hindrance not being able to offer students a room where they were able to share their thoughts and ideas, free of bias and judgment. A1 said: "Many students became reserved and didn't share answers or thoughts causing a strain on their learning".

Theme 3: Social Interaction

A10 explained that after a lengthy time of children living and attending school without any social interaction, besides that in their homes, students began to fall behind both on a social level and an academic level. A10 stated:

"the students had trouble working together in groups remotely as well as getting along together online. This caused behavior problems during remote teaching that were often hard to control when parental figures were not involved."

Other participants felt the same way. A3 offered the perspective that teachers and students both lost the ability to communicate, work in groups, and be respectful of other

people because of the lack of socialization. A5 also agreed that teachers felt this lack of socialization. A5 stated:

we had to use YouTube videos to demonstrate lessons we would normally have demonstrated ourselves in a classroom. As a remote teacher, I felt removed from the rest of the teaching staff I used to work with daily.

A1 agreed that the socializing that was done through a computer screen lacked boundaries and social skills that both students and teachers had when they were face-to-face with others. They explained that students and teachers both learn from in-person experiences and others they can freely communicate with. Both also benefit from working with other students and teachers and that opportunity was limited and not of high quality when put in a remote environment.

Other teachers said it was not just basic manners that were lacking but also everyday life skills. A1 said:

Instead of teaching students' academics during the day, I was teaching them to sit in a chair and attend remote school sitting up and paying attention, instead of laying across a kitchen table or hanging upside down on a bed.

A12 agreed that, at times, a lot of effort was spent trying to socialize the students and getting them on task than it was on teaching them subjects that had to do with school standards. Their minds were easily distracted without a teacher in a classroom and they had to often be refocused.

Theme 4: Lack of Support

Many of the participants interviewed found a lack of support from not only the administration of the schools where they worked but also from the parental figures of the students as well. A9 said that teachers in their district had to purchase their own remote material to use to teach online. The district did not supply the teachers with anything to use so everything that was used online, was bought with their own money.

A participant expressed a situation in which technology supports were not strong enough to supply internet to every student in the county. A7 said:

“although Chromebooks were issued and hot spots were set up around the county, they were not strong enough to supply the internet they needed for every student to be online. The cameras in the Chromebooks were aged and the audio would go in and out causing students to lose focus and eventually venture off-screen to do other things.”

A11 also stated that although the school district knew this was a serious problem for the teachers and the students, they did not come up with anything further to offer teachers support. They stated that any ideas or anything the teachers came up with, they did on their own.

A10 felt that the lack of support the teachers at their school experienced was academic-wise. A10 believed there were no real repercussions for students missing assignments or not completing them. They also believed there weren't any real consequences for students missing class online either. A10 said,

“there were numerous excuses expressed by the students and we just had to accept them. There was little to no involvement or support from the parents either”

Although the teacher would assign homework or assignments, A3 felt that the parents did not see to it that the students completed those assignments. They also believed that when the child did not show up or showed up remotely without their work, the student expressed many times that there was no one to help them complete it.

When a teacher was absent or sick, other teachers would have to remote in and take their class. There were times when teachers had over 60 students. A8 said:

“if there had been better organization, more realistic class sizes, and access to resources, it would have been a much better experience. Not every teacher is tech-savvy, and many of us became discouraged and gave up hope at the end of the school year.”

It was not just the administration that was not completely supportive. A6 believed that many parents were not either. Many parents felt remote learning was not real ‘teaching’ and offered no help or support to their children. They completely relied on the teacher. A4 stated:

“parents would often interrupt class to ask questions that were completely irrelevant to the lesson I was teaching to the students. With all the remote interruptions by parents, siblings, or others in the homes of the children, many students lost interest in lessons that were trying to take place, topics they were learning, or just school altogether. Sometimes I would not see them back in the remote classroom for a couple of days because they just didn’t want to log on”.

Theme 5: Training and Manipulatives in Remote Teaching

Participant A9 felt that because they were teaching in a remote environment, it was difficult to get manipulatives to the students that teachers thought were resourceful for learning. A9 said:

“we had to resort to finding our own remote learning activities and ways to teach using online material.”

Many of the participants turned to the Google platform which was popular because it was an opportunity to have material that the children could use, interact with, and manipulate, such as sheets and slide shows. A4 used the Google platform, including Google Meets. A4 said:

“with Meets you could present your screen so if the student had finished a piece of work or if they had drawn a picture to go along with an activity that we were doing, they could put it up to their camera and then they could present their screen so everybody else could see it at that time. This helped the students engage instead of just being lectured.”

A7 felt they did a lot of research as a team to find ways that they could get students engaged by using online activities. One of the ideas they used was providing virtual field trips with slides and hyperlinks in them so the kids could explore other places and interact on the field trips. Remote escape rooms were another hit with students. Teacher-created material was used a lot to find these field trips and escape rooms and when they did, they shared them with others.

Participant A12 stated that they wished there was more training in teaching students remotely. A12 stated:

“when you go from teaching fully hands-on in a brick-and-mortar situation, to teaching fully remotely, every subject, every day, it starts taking a toll on questioning yourself and your teaching abilities when you are thrown into the situation with no training and no support.”

For teachers who focused on reading, such as A10, a program called A-Z was used where students can listen to a story, record themselves reading the story back, and then allow the teachers to hear it so they can assess their fluency. Reading could also be practiced with programs like ICL English, MobyMax, and iReady Reading, remarked A2. The same teacher used IXL for Math as well as Xtra Math, Raz Kids, and Happy Numbers. When it came to other subjects, the teacher used Quizlet and Kahoot. A2 stated:

“although these were learning programs, they made the subject more fun and kept the students highly engaged.”

A5 tried to do anything they could to make it more personable. They even purchased cameras so the students could see them as if they were in a face-to-face classroom. They focused on small group settings in Google Classroom where the teacher would move remotely from group to group and rotate to help anyone who needed help and talk to them on a one-on-one basis. A1 said:

“making the remote classroom as realistic to a brick-and-mortar classroom as possible, not only helped with student engagement but made the students want to log on to class each day.”

Theme 6: Benefits of Remote Learning

Although there were many challenges felt by teachers who taught primary grades remotely, there were also some benefits that could be found as well. A8 stated:

“when a student was sick with a virus, they could still attend class since it was all being taught remotely. Teachers could make videos or record a lesson and post it to an online forum such as Google Classroom, which allowed students and parents to come back and watch the lesson as many times as needed until they understood what was being taught.”

Participant A3 said that teachers in her grade circle would make weekly videos as well and save the recorded lesson so students would be able to rewatch it and study the material for a test. Numerous participants said they recorded phonics lessons each day to show the following day, rather than teaching these live. A4 stated:

“recording lessons before class gave me a 5-minute break from nonstop talking online, while they watched the prerecorded phonics lesson and followed along. I could stop the lesson and address any questions as needed.”

A5 saw the benefits of being able to help slow learners better by giving out a story at a lower level with some extra prompts to help with vocabulary and fluency for students who struggled with reading. On the opposite side, they could give higher vocabulary stories to those students who were reading on or above grade level. A2 suggested that

parents could see the amount of rigor teachers were going through and hoped that they would reach out and help their students and not put it all off on the educators.

Participant A7 enjoyed the fact that teachers did not have to spend gas money going to and from work each day and teachers were given breaks more often since their teaching time in between periods had shortened. A1 said:

“I was able to create my schedule and had more time for planning than I did when I was teaching face-to-face. That was a big help.”

Table 3

Themes by Participants

Theme 1 Disturbances by Students	Theme 2 Hinderances in Online Teaching	Theme 3 Social Interaction	Theme 4 Lack of Support	Theme 5 Training and Manipulatives in Remote Teaching.	Theme 6 Benefits of Remote Learning
A1	A1	A1	A3	A1	A1
A4	A2	A3	A4	A2	A2
A6	A3	A5	A6	A4	A3
A8	A4	A10	A7	A5	A5
A10	A5	A11	A8	A7	A7
A11	A6	A12	A9	A9	A8
	A7		A10	A10	A10
	A8		A11	A12	
	A10				
	A12				

Summary

In Chapter 4, I reported the results of this study. The purpose of this study was to explore primary grade teachers' perspectives on the challenges of teaching students remotely. It was also to add suggestions for remote instruction training from teachers who have taught in a remote environment. I interviewed 12 teachers who taught primary

grades using a basic qualitative model to achieve this purpose. I transcribed and analyzed the interviews for codes, categories, and themes. I presented the results of the data analysis, which showed the perspectives of the challenges of the teacher participants and suggestions for remote instruction training. I report the implications of these results in the next chapter. In Chapter 5, I interpret the findings, discuss the limitations, present recommendations for further research, and suggest the implications of this study.

Chapter 5: Discussion, Conclusions, and Recommendations

Introduction

The purpose of this study was to explore primary grade teachers' perspectives on the challenges of teaching students remotely. It was also to add suggestions for remote instruction training from teachers who have taught in a remote environment. This was a basic qualitative study in nature that contained a research design using semi-structured interviews to explore the two related research questions. I gathered data from 12 participants through purposeful sampling as well as snowball sampling who were educators who taught primary grades completely remotely. Participants shared their perspectives on teaching remotely and the challenges that accompanied this.

Understanding these perspectives and considering the teachers' suggestions for remote instruction training for teachers, can help make decisions that improve the quality of teaching primary-grade students remotely. The understanding can also allow the teachers a more positive experience from it. This study is significant in that it fills the gap in the literature on the perspectives of teachers who have taught primary grades completely remotely and understands the challenges teachers felt from teaching in an online environment.

In Chapter 5, I include my interpretations of the findings of my study. I also include the current literature and conceptual framework. I discuss the limitations of the study as well as the recommendations for future research in this field. Finally, I share the implications that were found and then the conclusion.

Interpretation of the Findings

Many teachers have gone straight from teaching in a brick-and-mortar school to teaching in a completely remote environment within the past five years. Although many schools have gone back to a face-to-face education atmosphere, some teachers have decided to continue teaching online (Crompton, et al., 2022). It has been discovered that the community of inquiry (CoI) model and the inclusion of social, cognitive, and teacher presences in remote institutions could assist a significant academic circumstance (Garrison et al., 2001). The primary focus of CoI is developing effective learning through facilitating and supporting the social, cognitive, and teaching presence in an online learning environment. The community of inquiry model was highly researched when exploring the shift from face-to-face teaching to sudden remote education, especially during the coronavirus pandemic when many countries quickly turned from brick-and-mortar education to remote education (Bradley et al., 2020).

By using this qualitative study, I helped close the gap in researching teachers' perspectives on the topic of the challenges of teaching primary grades completely remotely. This study also helped support improvements, explore changes, and bring about enhancement and development to the educational system (Ozdemir et al., 2019). The perspectives each participant contributed to the qualitative research helped the educational environment move closer to a better understanding of how to teach primary grades remotely and to the full extent of each educator's teaching abilities.

In this study, the participants contributed to 6 themes that were picked up from the interviews of primary grade teachers who taught completely remotely. I found that

most teachers were affected by numerous disturbances by students daily. The hindrances in online teaching were also repeated by the participants as well as the lack of social interaction and how it affected the teachers as well as the students. The lack of support for teachers and students was overwhelming for some of the participants. It was a common theme and mentioned often by the different teachers. Even though the participants pointed out many downfalls of remote teaching however, they also found and shared some of the benefits of remote teaching as well as the desire to be better trained should they ever have to teach completely remotely in the future.

Research Question 1: The Challenges of Teaching Primary Students Remotely

Four themes emerged from the research findings from Research Question 1. The first was the disturbances that teachers had to battle from teaching remotely. Many educators made an emergency transition from brick-and-mortar teaching to remote instruction. Although some had taught lessons online in the classroom, most had not taught remotely in 100% capacity. With this, some challenges came about with teaching on a computer every day.

The first theme that emerged from the study was disturbances caused by the students. Although the transition was difficult for many participants in the study, it was particularly difficult when students showed behavioral problems or acted out during teaching. Many teachers resorted to using reprimands to stop disruptive student behavior; however, this was not always effective. Studies showed that teacher reprimands did not decrease students' future disruptive behavior in the remote classroom. Although it may

help misbehavior momentarily, it did not appear to be effective in decreasing students' disruptive behavior over time (Caldarella et al., 2021).

The second theme that became obvious was the hindrances that occurred from online teaching. Although many teachers used hands-on manipulatives and tools to teach students in such young grades, not having access to those anymore when teaching remotely, became a hindrance for many educators. They had to turn to remote material to replace the hands-on manipulatives they had used for most of the school year. Many had a difficult time integrating them into their lessons with them being fully remote (Kabel et al., 2021).

The internet also became a large hindrance for not only teachers but also students as well. Although many families could afford a strong and reliable internet service that allowed their students to learn remotely, some student's families could not afford internet at all (Ferri et al., 2020). Some counties placed hot spots around the counties but connecting to the hot spot and staying connected to it was difficult for many. Often the internet would drop, and a student would get disconnected in the middle of lessons. This caused the teacher to have to repeat lessons numerous times to catch the students up (Noor et al., 2020).

The third theme that was brought out was social interaction. With the lack of students being able to join in face-to-face groups, they began to lose sight of proper behavior in social gatherings, even if those gatherings were remote. When teaching solely online, there is the absence of recess or students coming together in a social sense and

they lose that interaction and how to behave around others begins to disappear as well (Wilcha, 2020).

When students are constantly being lectured, for hours at a time each day, they don't get to see the different personalities of their peers or classmates. In a face-to-face setting, you can use small groups or even partners but in a remote setting, it is harder to do so. Students are not able to socialize in these groups that they would normally be able to if they were in a brick-and-mortar environment. Students lose sight of how to handle different personalities and other students from different backgrounds when they are not socialized or around others often (Rana et al., 2021).

The fourth theme that emerged is a lack of support for teachers and students teaching and learning remotely, especially in emergencies. Teachers stated that the lack of organization and the lack of support can cause stress and burnout by the end of the school day. Including a feeling of mental exhaustion, teachers started to feel a feeling of being alone and unsupported and began to leave the profession. A teacher shortage soon followed (Gillani et al., 2022).

It was not only the district that teachers did not find supportive. Teachers also felt that the parents were not supportive either. Many parents did not respect the fact that the educators were on a computer teaching a class that often exceeded fifty students. The parents would interrupt the class or ask irrelevant questions and not support the fact that the teacher still had to teach standards even though it was remote instead of face-to-face (Ford et al., 2021).

Research Question 2: Suggestions for Remote Instruction Training for Teachers

Two themes emerged from the findings from Research Question 2. The first theme that emerged was training with online manipulatives in remote teaching. Many engaging manipulatives can be used by educators to teach primary students remotely. Although there are sites such as Teams and Google Classroom, there are also sites that have educational games, activities, and historical trips that students can go on and use virtually. Reading programs and math programs are also used by remote teachers and can be set to each student's educational level (Shamir-Inbal & Blau, 2021).

There were not just academic teachers who were teaching remotely. There were also music teachers, physical education teachers, art teachers as well as other elective teachers. These educators also were given the opportunity to teach the students as they did during class each school day but now, they had to come up with ways to teach them remotely. Using programs to learn to instruct the students in an online environment and sharing those ideas with their fellow elective teachers, was a popular way of serving their students and allowing them the same art and physical education they received face to face (Vilchez et al., 2021).

The final theme is the benefits that can be taught in remote learning. Because of online resources that are now accessible, educators can teach at their own pace. They can record videos with instructions for students to watch over and over if they need extra help. Teachers could also group students online with other students who got along and didn't have to worry about bullying in the classroom. Online chat rooms in school

learning technology can be controlled by the teacher as they monitor them and keep communication at an appropriate level (Wilcha, 2020).

Other benefits are, that teachers can learn programs that can be used to differentiate between students who are on grade level, those who are above, and those who are below. These programs can be set up so one teacher can make sure that all students on every level are getting the proper attention and level of learning they need. Although many students who were in Early Intervention Programs suddenly lost that help, they still had the capabilities of getting the extra help they needed from their main, classroom teacher (Anderson & Putman, 2020).

Limitations of the Study

This study was conducted with 12 participants who were teachers who taught primary grades in a completely remote environment. I came across a few limitations in my study. The first was the difficulty in finding educators who fell into this compliance of agreeing to be participants. After I received IRB approval, I used a Recruitment Flyer, however, I only was able to recruit 4 participants who met the criteria for the study. I got a lot of feedback from snowballing requests but even though many teachers showed an eagerness to be interviewed, in the end, only 5 of the 54 that replied allowed me to interview them. As the snowballing effect continued, I was finally able to secure the remaining 4 of my participants. I was able to recruit 13 during the process but one would not sign the consent form and I therefore could not interview them for the study. It took over 2 months to find and interview the 12 participants I needed for my study.

The second limitation was personal bias. I taught elementary education for many years, including the grades I required for my study. I had my own opinions of what it would be like teaching primary grades remotely. To avoid any opinion bias, however, I not only used a reflective journal to monitor my bias but also reviewed the interview recordings and transcripts from the interviews numerous times. I also studied the themes to make sure they were accurate from the interview transcriptions. To take it an extra step for accuracy, I summarized all interviews of the participants and emailed the summaries to the participants for member checking. Combining these steps helps to rule out any personal bias in qualitative studies (Bergen & Labonte, 2020).

The final limitation was educators were concerned about repercussions if the perspectives they gave in the interviews were to leak to their respective schools where they worked. Although I assured them there would not be a possibility of that happening per the consent form we signed, their fears still got the best of them. Many would not agree to participate and in the end, one participant would not sign the consent form and dropped out of the study.

Recommendations

This study was conducted to explore the perspectives of teachers who taught primary grades remotely. This topic and the study were largely based on a lack of existing research that was related to teaching these primary grades and this age group using a fully remote platform. It was also done to gain primary teachers' suggestions for remote instruction training for teachers. The results of this study are based on the information gathered from 12 primary teachers who taught primary grades fully remotely.

There are several recommendations for further research that are supported by this study. Due to the findings of this study, the first recommendation for further research is to include other grades such as middle school or high school educators to discover their perspectives on teaching in a completely remote environment. Another recommendation would be to study the same grade levels but in a different geographic area of the world. Finally, an additional recommendation for future research would be to take the perspectives of educators in primary grades, middle school grades, and high school grades, and compare their outlook on the benefits and the challenges of a fully remote teaching platform against the grade levels.

Implications

The goal of this study was to explore teachers' perspectives on the challenges of teaching primary students in a remote platform as well as discover primary teachers' suggestions for remote instruction training for teachers. Participants in this study shared concerns about teaching remotely, expressing that there were many disturbances by the students as well as many hindrances in remote teaching. It was stated that a lack of social interaction caused challenges when trying to teach students in primary grades after they only had interaction with their families every day. Participants also showed a concern with the lack of support for teachers by their administration and districts but also saw a lack of support for students by their parents. Even though there were many challenges shared by the participants when teaching remotely, the teachers interviewed also shared some benefits of teaching remotely and different ideas in training to make teaching remotely a more positive experience.

The results of this study have implications for primary school teachers who teach remotely as well as administrators and parents of primary school students. This study may contribute to positive social change by providing primary school teachers with insight, training, and ideas needed to make decisions that may improve the quality of teaching remotely to students in primary grades. This study may also impact the students who are participating in varying forms of remote learning, as the teachers are more informed and capable of providing support to the students and successfully teaching them in an online setting.

Conclusion

The purpose of this basic qualitative study was to explore the perspectives on the challenges of teaching primary students in a remote platform as well as discover primary teachers' suggestions for remote instruction training for teachers. Although there is a plethora of information on using technology in the classrooms, there is a gap in research on teachers being required to teach young children in primary grades in a fully remote academic environment without any brick-and-mortar allowance. The results of this study helped fill that gap in the literature.

I interviewed 12 primary teachers and explored their perspectives on teaching primary grades fully remotely and their experiences in doing so. Six themes emerged from the data, including: (a) teachers had to try to control disturbances by the students daily; (b) teachers felt the hindrances in remote teaching even though they constantly sought help from each other and administration; (c) a lack of social interaction caused behavior problems with students while educators were teaching remotely; (d) there was a

lack of support for teachers and students alike, both from administration as well as a lack of parent involvement; (e) teachers found and shared the training they taught themselves and also the virtual manipulatives they found from remote teaching; and (f) although there were many challenges in teaching fully remotely, there were benefits of teaching online as well. The findings of this study focused on the gap in research by contributing to an increased understanding of teachers being required to teach students in primary grades in a fully remote atmosphere and the teachers' perspectives of this.

The data and results of this study could lead to deeper knowledge of the experiences of teachers teaching in a fully remote environment and also primary teachers' suggestions for remote instruction training for teachers. It may improve the quality of teaching and learning in remote settings based on the recommendations and experiences of these primary-grade teachers.

References

- Adler, R. H. (2022). Trustworthiness in qualitative research. *Journal of Human Lactation*, 38(4), 598–602. <https://doi.org/10.1177/08903344221116620>
- Adnan, M., & Anwar, K. (2020). Online learning amid the COVID-19 pandemic: Students' perspectives. *Journal of Pedagogical Sociology and Psychology*, 2(1), 45–51. <https://doi.org/10.33902/JPSP>
- Agaton, C. B., & Cueto, L. J. (2021). Learning at home: Parents' lived experiences on distance learning during COVID-19 pandemic in the Philippines. *International Journal of Evaluation and Research in Education (IJERE)*, 10(3), 901. <https://doi.org/10.11591/ijere.v10i3.21136>
- Akanle, O., Ademuson, A. O., & Shittu, O. S. (2020). Scope and limitation of study in social research. *Contemporary Issues in Social Research*, 105-114.
- Al-Marouf, R. S., Salloum, S. A., Hassanien, A. E., & Shaalan, K. (2023). Fear from COVID-19 and technology adoption: The impact of Google Meet during Coronavirus pandemic. *Interactive Learning Environments*, 31(3), 1293–1308. <https://doi.org/10.1080/10494820.2020.1830121>
- Alfano, V. (2022). The effects of school closures on COVID-19: A cross-country panel analysis. *Applied Health Economics and Health Policy*, 20(2), 223–233. <https://doi.org/10.1007/s40258-021-00702-z>
- Abel, J. A. (2020). The phenomenon of learning at a distance through emergency remote teaching amidst the pandemic crisis. *Asian Journal of Distance Education*, 15(1), 127–143. <https://www.asianjde.com/ojs/index.php/AsianJDE/article/view/453>

- Amin, M. E. K., Nørgaard, L. S., Cavaco, A. M., Witry, M. J., Hillman, L., Cernasev, A., & Desselle, S. P. (2020). Establishing trustworthiness and authenticity in qualitative pharmacy research. *Research in Social and Administrative Pharmacy, 16*(10), 1472–1482. <https://doi.org/10.1016/j.sapharm.2020.02.005>
- Anderson, S. E., & Putman, R. S. (2020). Special education teachers' experience, confidence, beliefs, and knowledge about integrating technology. *Journal of Special Education Technology, 35*(1), 37–50. <https://doi.org/10.1177/0162643419836409>
- Anthony Jr, B., & Noel, S. (2021). Examining the adoption of emergency remote teaching and virtual learning during and after COVID-19 pandemic. *International Journal of Educational Management, 35*(6), 1136–1150. <https://doi.org/10.1108/IJEM-08-2020-0370>
- Armstrong-Mensah, E., Ramsey-White, K., Yankey, B., & Self-Brown, S. (2020). Covid-19 and distance learning: Effects on Georgia State University School of public health students. *Frontiers in Public Health, 8*. <https://www.frontiersin.org/articles/10.3389/fpubh.2020.576227>
- Aspers, P., & Corte, U. (2019). What is qualitative in qualitative research? *Qualitative Sociology, 42*(2), 139–160. <https://doi.org/10.1007/s11133-019-9413-7>
- Baber, H. (2022). Social interaction and effectiveness of online learning – A moderating role of maintaining social distance during the pandemic COVID-19. *Asian Education and Development Studies, 11*(1), 159–171. <https://doi.org/10.1108/AEDS-09-2020-0209>

- Bailey, D. (2022). Interactivity during Covid-19: Mediation of learner interactions on social presence and expected learning outcome within videoconference EFL courses. *Journal of Computers in Education*, 9(2), 291–313.
<https://doi.org/10.1007/s40692-021-00204-w>
- Barbosa, G., Camelo, R., Cavalcanti, A. P., Miranda, P., Mello, R. F., Kovanović, V., & Gašević, D. (2020). Towards automatic cross-language classification of cognitive presence in online discussions. *Proceedings of the Tenth International Conference on Learning Analytics & Knowledge*, 605–614.
<https://doi.org/10.1145/3375462.3375496>
- Barrow, J. M., Brannan, G. D., & Khandhar, P. B. (2023). Research ethics. In *StatPearls*. StatPearls Publishing. <http://www.ncbi.nlm.nih.gov/books/NBK459281/>
- Baxter, A., Oruc, B. E., Asplund, J., Keskinocak, P., & Serban, N. (2022). Evaluating scenarios for school reopening under COVID19. *BMC Public Health*, 22(1), 496.
<https://doi.org/10.1186/s12889-022-12910-w>
- Beaunoyer, E., Dupéré, S., & Guitton, M. J. (2020). COVID-19 and digital inequalities: Reciprocal impacts and mitigation strategies. *Computers in Human Behavior*, 111, 106424. <https://doi.org/10.1016/j.chb.2020.106424>
- Bergen, N., & Labonté, R. (2020). “Everything is perfect, and we have no problems”: Detecting and limiting social desirability bias in qualitative research. *Qualitative Health Research*, 30(5), 783–792. <https://doi.org/10.1177/1049732319889354>
- Bilal, Hysa, E., Akbar, A., Yasmin, F., Rahman, A. U., & Li, S. (2022). Virtual learning

during the COVID-19 pandemic: A bibliometric review and future research agenda. *Risk Management and Healthcare Policy, Volume 15*, 1353–1368.

<https://doi.org/10.2147/RMHP.S355895>

Boylan, F., Barblett, L., & Knaus, M. (2018). Early childhood teachers' perspectives of growth mindset: Developing agency in children. *Australasian Journal of Early Childhood, 43*(3), 16–24. <https://doi.org/10.23965/AJEC.43.3.02>

Buschelman, A. K. (2020). COVID and clinical practice: Now is the time to engage future educators. *Journal of Catholic Education, 23*(1), 142.

<https://doi.org/10.15365/joce.2302092020>

Butcher, M. (2022). Qualitative research methods I: Emotionally engaged approaches to working with vulnerable participants. *Progress in Human Geography, 46*(3), 907–914. <https://doi.org/10.1177/03091325221083212>

Caldarella, P., Larsen, R. A. A., Williams, L., Wills, H. P., & Wehby, J. H. (2021). “Stop doing that! ”: Effects of teacher reprimands on student disruptive behavior and engagement. *Journal of Positive Behavior Interventions, 23*(3), 163–173.

<https://doi.org/10.1177/1098300720935101>

Cardullo, V., Wang, C., Burton, M., & Dong, J. (2021). K-12 teachers' remote teaching self-efficacy during the pandemic. *Journal of Research in Innovative Teaching & Learning, 14*(1), 32–45. <https://doi.org/10.1108/JRIT-10-2020-0055>

Carpenter, E. L., Adams, A. M., Chick, R. C., Stull, M. C., Hale, D. F., Propper, B. W.,

- Clifton, G. T., & Vreeland, T. J. (2022). Maximizing the benefit of virtual learning: Lessons from the coronavirus disease 2019 pandemic. *Journal of Surgical Research*, 275, 43–47. <https://doi.org/10.1016/j.jss.2022.01.020>
- Carrillo, C., & Flores, M. A. (2020). COVID-19 and teacher education: A literature review of online teaching and learning practices. *European Journal of Teacher Education*, 43(4), 466–487. <https://doi.org/10.1080/02619768.2020.1821184>
- Carrión-Martínez, J. J., Pinel-Martínez, C., Pérez-Esteban, M. D., & Román-Sánchez, I. M. (2021). Family and school relationship during COVID-19 pandemic: A systematic review. *International Journal of Environmental Research and Public Health*, 18(21), 11710. <https://doi.org/10.3390/ijerph182111710>
- Caskurlu, S., Richardson, J. C., Maeda, Y., & Kozan, K. (2021). The qualitative evidence behind the factors impacting online learning experiences as informed by the community of inquiry framework: A thematic synthesis. *Computers & Education*, 165, 104111. <https://doi.org/10.1016/j.compedu.2020.104111>
- Cassell, C., & Bishop, V. (2019). Qualitative data analysis: Exploring themes, metaphors and stories. *European Management Review*, 16(1), 195–207. <https://doi.org/10.1111/emre.12176>
- Centers for Disease Control and Prevention. (2020). *Operating schools during COVID-19: CDC's considerations*. <https://www.cdc.gov/coronavirus/2019-ncov/community/schools-childcare/schools.html>
- CDC. (2020). *Covid-19 and your health*. Centers for Disease Control and

Prevention. <https://www.cdc.gov/coronavirus/2019-ncov/your-health/about-covid-19.html>

- Chan, M., Sharkey, J. D., Lawrie, S. I., Arch, D. A. N., & Nylund-Gibson, K. (2021). Elementary school teacher well-being and supportive measures amid COVID-19: An exploratory study. *School Psychology, 36*(6), 533–545.
<https://doi.org/10.1037/spq0000441>
- Chang, L., Yan, Y., & Wang, L. (2020). Coronavirus disease 2019: Coronaviruses and blood safety. *Transfusion Medicine Reviews, 34*(2), 75–80.
<https://doi.org/10.1016/j.tmr.2020.02.003>
- Charmaz, K., & Thornberg, R. (2021). The pursuit of quality in grounded theory. *Qualitative Research in Psychology, 18*(3), 305–327.
<https://doi.org/10.1080/14780887.2020.1780357>
- Checa, D., & Bustillo, A. (2020). Advantages and limits of virtual reality in learning processes: Briviesca in the fifteenth century. *Virtual Reality, 24*(1), 151–161.
<https://doi.org/10.1007/s10055-019-00389-7>
- Chen, E., Kaczmarek, K., & Ohyama, H. (2021). Student perceptions of distance learning strategies during COVID-19. *Journal of Dental Education, 85*(S1), 1190–1191.
<https://doi.org/10.1002/jdd.12339>
- Cheng, X. (2020). Challenges of “school’s out, but class’s on” to school education: Practical exploration of Chinese schools during the COVID-19 pandemic. *Science Insights Education Frontiers, 5*(2), 501–516.
<https://doi.org/10.15354/sief.20.ar043>

- Chirinda, B., Ndlovu, M., & Spangenberg, E. (2021). Teaching mathematics during the covid-19 lockdown in a context of historical disadvantage. *Education Sciences, 11*(4), 177. <https://doi.org/10.3390/educsci11040177>
- Code, J., Ralph, R., & Forde, K. (2020). Pandemic designs for the future: Perspectives of technology education teachers during COVID-19. *Information and Learning Sciences, 121*(5/6), 419–431. <https://doi.org/10.1108/ILS-04-2020-0112>
- Cohen, J. (2021). Teaching effectively with Zoom: A practical guide to engage your students and help them learn by Dan M. Levy, Chicago, IL, LSC Communications, 2020, 212 pp., \$12.99 (Paperback), ISBN 978-1735340814. *Journal of Public Affairs Education, 27*(2), 260–262. <https://doi.org/10.1080/15236803.2020.1834676>
- Collins, B., Day, R., Hamilton, J., Legris, K., Mawdsley, H., & Walsh, T. (2020). 12 tips for pivoting to teaching in a virtual environment. *MedEdPublish, 9*, 170. <https://doi.org/10.15694/mep.2020.000170.1>
- Crompton, H., Burke, D., Jordan, K., & Wilson, S. (2022). Support provided for K-12 teachers teaching remotely with technology during emergencies: A systematic review. *Journal of Research on Technology in Education, 54*(3), 473–489. <https://doi.org/10.1080/15391523.2021.1899877>
- Dempsey, P., & Zhang, J. (2019). Re-examining the construct validity and causal relationships of teaching, cognitive, and social presence in community of inquiry framework. *Online Learning, 23*(1). <https://doi.org/10.24059/olj.v23i1.1419>
- Dewan, M., Sharma, N., Panda, P. S., & Banerjee, P. (2022). School reopening: Back to

- classroom. A systematic review of strategies and their implementation during the COVID-19 pandemic. *Journal of Family Medicine and Primary Care*, 11(8), 4273. https://doi.org/10.4103/jfmpe.jfmpe_23_22
- Díaz, J. E. M., Saldaña, C. A. D., & Ávila, C. A. R. (2020). Virtual world as a resource for hybrid education. *International Journal of Emerging Technologies in Learning (IJET)*, 15(15), 94–109. <https://doi.org/10.3991/ijet.v15i15.13025>
- Dinh, L. P., & Nguyen, T. T. (2023). Convenient and comfortable, yet limited in many ways: Advantages and disadvantages of online learning during the COVID-19 pandemic from perspectives of social work students in Vietnam. *Asia Pacific Journal of Social Work and Development*, 33(3), 193–201. <https://doi.org/10.1080/02185385.2022.2131615>
- Dooley, D. G., Simpson, J. N., & Beers, N. S. (2020). Returning to school in the era of covid-19. *JAMA Pediatrics*, 174(11), 1028. <https://doi.org/10.1001/jamapediatrics.2020.3874>
- Epstein, D., Korytny, A., Isenberg, Y., Marcusohn, E., Zukermann, R., Bishop, B., Minha, S., Raz, A., & Miller, A. (2021). Return to training in the COVID-19 era: The physiological effects of face masks during exercise. *Scandinavian Journal of Medicine & Science in Sports*, 31(1), 70–75. <https://doi.org/10.1111/sms.13832>
- Fakhrunisa, F., & Prabawanto, S. (2021). Online learning in covid-19 pandemic: An investigation of mathematics teachers' perception. *Proceedings of the 2020 4th International Conference on Education and E-Learning*, 207–213. <https://doi.org/10.1145/3439147.3439179>

- Fawns, T., Jones, D., & Aitken, G. (2020). Challenging assumptions about “moving online” in response to COVID-19, and some practical advice. *MedEdPublish*, 9, 83. <https://doi.org/10.15694/mep.2020.000083.1>
- Ferri, F., Grifoni, P., & Guzzo, T. (2020). Online learning and emergency remote teaching: Opportunities and challenges in emergency situations. *Societies*, 10(4), 86. <https://doi.org/10.3390/soc10040086>
- Fiock, H. (2020). Designing a community of inquiry in online courses. *The International Review of Research in Open and Distributed Learning*, 21(1), 134–152. <https://doi.org/10.19173/irrodl.v20i5.3985>
- Foo, C., Cheung, B., & Chu, K. (2021). A comparative study regarding distance learning and the conventional face-to-face approach conducted problem-based learning tutorial during the COVID-19 pandemic. *BMC Medical Education*, 21(1), 141. <https://doi.org/10.1186/s12909-021-02575-1>
- Ford, T. G., Kwon, K.-A., & Tsotsoros, J. D. (2021). Early childhood distance learning in the U.S. during the COVID pandemic: Challenges and opportunities. *Children and Youth Services Review*, 131, 106297. <https://doi.org/10.1016/j.childyouth.2021.106297>
- Francom, G. M., Lee, S. J., & Pinkney, H. (2021). Technologies, challenges, and needs of k-12 teachers in the transition to distance learning during the covid-19 pandemic. *TechTrends*, 65(4), 589–601. <https://doi.org/10.1007/s11528-021-00625-5>
- Friedrich, J., & Perrotta, K. (2021). *Head above water: A study of k-12 teachers'*

perspectives on emergency remote learning during the covid-19 pandemic.

<https://ursa.mercer.edu/handle/10898/12594>

Galikyan, I., & Admiraal, W. (2019). Students' engagement in asynchronous online discussion: The relationship between cognitive presence, learner prominence, and academic performance. *The Internet and Higher Education*, 43, 100692.

<https://doi.org/10.1016/j.iheduc.2019.100692>

Gandolfi, E., Ferdig, R. E., & Kratcoski, A. (2021). A new educational normal an intersectionality-led exploration of education, learning technologies, and diversity during COVID-19. *Technology in Society*, 66, 101637.

<https://doi.org/10.1016/j.techsoc.2021.101637>

Ganesha, P., Nandiyanto, A. B. D., & Razon, B. C. (2021). Application of online learning during the COVID-19 pandemic through Zoom meeting at elementary school. *Indonesian Journal of Teaching in Science*, 1(1), 1–8.

<https://doi.org/10.17509/ijotis.v1i1.33534>

Garrison, D. R., Anderson, T., & Archer, W. (1999). Critical inquiry in a text-based environment: Computer conferencing in higher education. *The Internet and Higher Education*, 2(2–3), 87–105. [https://doi.org/10.1016/S1096-](https://doi.org/10.1016/S1096-7516(00)00016-6)

[7516\(00\)00016-6](https://doi.org/10.1016/S1096-7516(00)00016-6)

Garrison, D. R., Anderson, T., & Archer, W. (2001). Critical thinking, cognitive presence, and computer conferencing in distance education. *American Journal of Distance Education*, 15(1), 7–23. <https://doi.org/10.1080/08923640109527071>

Gherheș, V., Stoian, C. E., Fărcașiu, M. A., & Stanici, M. (2021). E-Learning vs. Face-

- To-Face Learning: Analyzing Students' Preferences and Behaviors. *Sustainability*, 13(8), 4381. <https://doi.org/10.3390/su13084381>
- Gill, S. L. (2020). Qualitative sampling methods. *Journal of Human Lactation*, 36(4), 579–581. <https://doi.org/10.1177/0890334420949218>
- Gillani, A., Dierst-Davies, R., Lee, S., Robin, L., Li, J., Glover-Kudon, R., Baker, K., & Whitton, A. (2022). Teachers' dissatisfaction during the COVID-19 pandemic: Factors contributing to a desire to leave the profession. *Frontiers in Psychology*, 13, 940718. <https://doi.org/10.3389/fpsyg.2022.940718>
- Goedert, L., Gomes, M. J., & Borges, M. K. (2022). Community model of online pedagogical inquiry and mediation: Necessary perceptions. *2022 International Symposium on Computers in Education (SIIE)*, 1–6. <https://doi.org/10.1109/SIIE56031.2022.9982338>
- Golden, A. R., Srisarajivakul, E. N., Hasselle, A. J., Pfund, R. A., & Knox, J. (2023). What was a gap is now a chasm: Remote schooling, the digital divide, and educational inequities resulting from the COVID-19 pandemic. *Current Opinion in Psychology*, 52, 101632. <https://doi.org/10.1016/j.copsyc.2023.101632>
- González, S., & Bonal, X. (2021). COVID-19 school closures and cumulative disadvantage: Assessing the learning gap in formal, informal and non-formal education. *European Journal of Education*, 56(4), 607–622. <https://doi.org/10.1111/ejed.12476>
- Gostin, L. O., & Wiley, L. F. (2020). Governmental public health powers during the

- COVID-19 pandemic: Stay-at-home orders, business closures, and travel restrictions. *JAMA*, 323(21), 2137. <https://doi.org/10.1001/jama.2020.5460>
- Guo, P., Saab, N., Wu, L., & Admiraal, W. (2021). The Community of Inquiry perspective on students' social presence, cognitive presence, and academic performance in online project-based learning. *Journal of Computer Assisted Learning*, 37(5), 1479–1493. <https://doi.org/10.1111/jcal.12586>
- Gupta, R., Aggarwal, A., Sable, D., Chahar, P., Sharma, A., Kumari, A., & Maji, R. (2022). Covid-19 pandemic and online education: Impact on students, parents and teachers. *Journal of Human Behavior in the Social Environment*, 32(4), 426–449. <https://doi.org/10.1080/10911359.2021.1909518>
- Herman, K. C., Sebastian, J., Reinke, W. M., & Huang, F. L. (2021). Individual and school predictors of teacher stress, coping, and wellness during the COVID-19 pandemic. *School Psychology*, 36(6), 483–493. <https://doi.org/10.1037/spq0000456>
- Herwin, H., Hastomo, A., Saptono, B., Ardiansyah, A. R., & Wibowo, S. E. (2021). How elementary school teachers organized online learning during the COVID-19 pandemic? *World Journal on Educational Technology: Current Issues*, 13(3), 437–449. <https://doi.org/10.18844/wjet.v13i3.5952>
- Huang, K., Law, V., & Lee, S. J. (2019). The role of learners' epistemic beliefs in an online Community of Inquiry. *British Journal of Educational Technology*, 50(4), 1882–1895. <https://doi.org/10.1111/bjet.12684>
- Ibbett, H., & Brittain, S. (2020). Conservation publications and their provisions to protect

research participants. *Conservation Biology*, 34(1), 80–92.

<https://doi.org/10.1111/cobi.13337>

Irawan, A. W., Dwisona, D., & Lestari, M. (2020). Psychological impacts of students on online learning during the pandemic covid-19. *KONSELI: Jurnal Bimbingan Dan Konseling (E-Journal)*, 7(1), 53–60. <https://doi.org/10.24042/kons.v7i1.6389>

Ireri, M. (2021). Teachers' and parents' preparedness to support virtual learning during the COVID-19 pandemic in Kenya. *African Journal of Empirical Research*, 2(1 & 2), 95–101. <https://doi.org/10.51867/ajer.v2i1.17>

Janis, I. (2022). Strategies for establishing dependability between two qualitative intrinsic case studies: A reflexive thematic analysis. *Field Methods*, 34(3), 240–255. <https://doi.org/10.1177/1525822X211069636>

Jiang, M. & Koo, K. (2020). Emotional presence in building an online learning community among non-traditional graduate students. *Online Learning*, 24(2), 93–111. <https://doi.org/10.24059/olj.v24i4.2307>

Johnson, J. L., Adkins, D., & Chauvin, S. (2020). A review of the quality indicators of rigor in qualitative research. *American Journal of Pharmaceutical Education*, 84(1), 7120. <https://doi.org/10.5688/ajpe7120>

Kabel, M., Hwang, J., & Hwang, J. (2021). Lessons learned from a rural classroom study: Transitioning from concrete to virtual manipulatives to teach math fact fluency to students with learning disabilities. *Journal of Curriculum Studies Research*, 3(1), 42–68. <https://doi.org/10.46303/jcsr.2021.7>

- Kaden, U. (2020). COVID-19 school closure-related changes to the professional life of a K–12 teacher. *Education Sciences*, 10(6), 165.
<https://doi.org/10.3390/educsci10060165>
- Kearney, C. A., & Childs, J. (2021). A multi-tiered systems of support blueprint for re-opening schools following the COVID-19 shutdown. *Children and Youth Services Review*, 122, 105919. <https://doi.org/10.1016/j.childyouth.2020.105919>
- Khalili, H. (2020). Online interprofessional education during and post the COVID-19 pandemic: A commentary. *Journal of Interprofessional Care*, 34(5), 687–690.
<https://doi.org/10.1080/13561820.2020.1792424>
- Khlaif, Z.N., Salha, S. & Kouraichi, B. Emergency remote learning during COVID-19 crisis: Students' engagement. *Educ Inf Technol* **26**, 7033–7055 (2021).
<https://doi.org/10.1007/s10639-021-10566-4>
- Kilis, S., & Yıldırım, Z. (2019). Posting patterns of students' social presence, cognitive presence, and teaching presence in online learning. *Online Learning*, 23(2).
<https://doi.org/10.24059/olj.v23i2.1460>
- Kim, J. (2020). Learning and teaching online during COVID-19: Experiences of student teachers in an early childhood education practicum. *International Journal of Early Childhood*, 52(2), 145–158. <https://doi.org/10.1007/s13158-020-00272-6>
- Kim, G., & Gurvitch, R. (2020). Online education research adopting the community of inquiry framework: A systematic review. *Quest*, 72(4), 395–409.
<https://doi.org/10.1080/00336297.2020.1761843>
- Kingsbury, I. (2021). Online learning: How do brick and mortar schools stack up to

virtual schools? *Education and Information Technologies*, 26(6), 6567–6588.

<https://doi.org/10.1007/s10639-021-10450-1>

Klimek-Tulwin, M., & Tulwin, T. (2022). Early school closures can reduce the first-wave of the COVID-19 pandemic development. *Journal of Public Health*, 30(5), 1155–1161. <https://doi.org/10.1007/s10389-020-01391-z>

Kostere, S., & Kostere, K. (2021). *The generic qualitative approach to a dissertation in the social sciences: A step by step guide* (1st ed.). Routledge.

<https://doi.org/10.4324/9781003195689>

Kraus, S., Breier, M., & Dasí-Rodríguez, S. (2020). The art of crafting a systematic literature review in entrepreneurship research. *International Entrepreneurship and Management Journal*, 16(3), 1023–1042. <https://doi.org/10.1007/s11365-020-00635-4>

Kurbakova, S., Volkova, Z., & Kurbakov, A. (2020). Virtual learning and educational environment: New opportunities and challenges under the COVID-19 pandemic. *2020 The 4th International Conference on Education and Multimedia Technology*, 167–171. <https://doi.org/10.1145/3416797.3416838>

Lai, J., & Widmar, N. O. (2021). Revisiting the Digital Divide in the COVID-19 Era. *Applied Economic Perspectives and Policy*, 43(1), 458–464.

<https://doi.org/10.1002/aep.13104>

Lamers, M. M., & Haagmans, B. L. (2022). SARS-CoV-2 pathogenesis. *Nature Reviews Microbiology*, 20(5), 270–284. <https://doi.org/10.1038/s41579-022-00713-0>

Langrafe, T. de F., Barakat, S. R., Stocker, F., & Boaventura, J. M. G. (2020). A

stakeholder theory approach to creating value in higher education institutions. *The Bottom Line*, 33(4), 297–313. <https://doi.org/10.1108/BL-03-2020-0021>

Larsen, L., Helland, M. S., & Holt, T. (2022). The impact of school closure and social isolation on children in vulnerable families during COVID-19: A focus on children's reactions. *European Child & Adolescent Psychiatry*, 31(8), 1–11. <https://doi.org/10.1007/s00787-021-01758-x>

Lee, R., Hoe Looi, K., Faulkner, M., & Neale, L. (2021). The moderating influence of environment factors in an extended community of inquiry model of e-learning. *Asia Pacific Journal of Education*, 41(1), 1–15. <https://doi.org/10.1080/02188791.2020.1758032>

Leighton, K., Kardong-Edgren, S., Schneidereith, T., & Foisy-Doll, C. (2021). Using social media and snowball sampling as an alternative recruitment strategy for research. *Clinical Simulation in Nursing*, 55, 37–42. <https://doi.org/10.1016/j.ecns.2021.03.006>

Lemay, D. J., Bazelais, P., & Doleck, T. (2021). Transition to online learning during the COVID-19 pandemic. *Computers in Human Behavior Reports*, 4, 100130. <https://doi.org/10.1016/j.chbr.2021.100130>

Lemon, L., & Hayes, J. (2020). Enhancing trustworthiness of qualitative findings: Using leximancer for qualitative data analysis triangulation. *The Qualitative Report*. <https://doi.org/10.46743/2160-3715/2020.4222>

Levac, D. E., Huber, M. E., & Sternad, D. (2019). Learning and transfer of complex

- motor skills in virtual reality: A perspective review. *Journal of NeuroEngineering and Rehabilitation*, 16(1), 121. <https://doi.org/10.1186/s12984-019-0587-8>
- Li, J., Ghosh, R., & Nachmias, S. (2020). In a time of COVID-19 pandemic, stay healthy, connected, productive, and learning: Words from the editorial team of HRDI. *Human Resource Development International*, 23(3), 199–207. <https://doi.org/10.1080/13678868.2020.1752493>
- Lin, X., & Gao, L. (2020). Students' sense of community and perspectives of taking synchronous and asynchronous online courses. *Asian Journal of Distance Education*, 15(1), 169–179. <https://www.asianjde.com/ojs/index.php/AsianJDE/article/view/448>
- Lo Moro, G., Sinigaglia, T., Bert, F., Savatteri, A., Gualano, M. R., & Siliquini, R. (2020). Reopening schools during the COVID-19 pandemic: Overview and rapid systematic review of guidelines and recommendations on preventive measures and the management of cases. *International Journal of Environmental Research and Public Health*, 17(23), 8839. <https://doi.org/10.3390/ijerph17238839>
- Locke, K., Feldman, M., & Golden-Biddle, K. (2022). Coding practices and iterativity: Beyond templates for analyzing qualitative data. *Organizational Research Methods*, 25(2), 262–284. <https://doi.org/10.1177/1094428120948600>
- Lordan, R., FitzGerald, G. A., & Grosser, T. (2020). Reopening schools during COVID-19. *Science*, 369(6508), 1146–1146. <https://doi.org/10.1126/science.abe5765>
- Lowenthal, P. R., & Dennen, V. P. (Eds.). (2020). *Social presence and identity in online learning* (1st ed.). Routledge. <https://doi.org/10.4324/9780429294235>

- Ma, S. (2024). Online learning issues, challenges, and trends in higher education: An instructional design perspective beyond pandemic. *The Journal of Applied Instructional Design*. <https://doi.org/10.59668/1269.15701>
- Maguire, M., & Delahunt, B. (2017). Doing a thematic analysis: A practical, step-by-step guide for learning and teaching scholars. *All Ireland Journal of Higher Education*, 9(3). <http://ojs.aishe.org/index.php/aishe-j/article/view/335>
- Mahoney, J., & Hall, C. A. (2019). Exploring online learning through synchronous and asynchronous instructional methods: In C. M. Sistik-Chandler (Ed.), *Advances in Mobile and Distance Learning* (pp. 52–76). IGI Global. <https://doi.org/10.4018/978-1-7998-1622-5.ch003>
- Mali, D., & Lim, H. (2021). How do students perceive face-to-face/blended learning as a result of the Covid-19 pandemic? *The International Journal of Management Education*, 19(3), 100552. <https://doi.org/10.1016/j.ijme.2021.100552>
- Marpa, E. P. (2021). Technology in the teaching of mathematics: An analysis of teachers' attitudes during the covid-19 pandemic. *International Journal on Studies in Education*, 3(2), 92–102. <https://doi.org/10.46328/ijonse.36>
- Marshall, D. T., & Bradley-Dorsey, M. (2020). Reopening america's schools: A descriptive look at how states and large school districts are navigating fall 2020. *Journal of School Choice*, 14(4), 534–566. <https://doi.org/10.1080/15582159.2020.1822731>
- Maxwell, J. A. (2021). Why qualitative methods are necessary for

generalization. *Qualitative Psychology*, 8(1), 111–118.

<https://doi.org/10.1037/qup0000173>

McMullin C. (2021). Transcription and Qualitative Methods: Implications for Third organizations, 1–14. Advanced online publication.

<https://doi.org/10.1007/s11266-021-00400-3>

Means, B., & Neisler, J. (2021). Teaching and learning in the time of COVID: The student perspective. *Online Learning*, 25(1).

<https://doi.org/10.24059/olj.v25i1.2496>

Melnick, H., & Darling-Hammond, L. (2020). Reopening Schools in the Context of COVID-19: Health and Safety Guidelines from Other Countries. Policy Brief. *Learning Policy Institute*.

Merriam, S. B., & Tisdell, E. J. (2016). *Qualitative research: A guide to design and implementation* (4th ed.). Jossey-Bass.

Mesghina, A., Wong, J. T., Davis, E. L., Lerner, B. S., Jackson-Green, B. J., & Richland, L. E. (2021). Distressed to Distracted: Examining Undergraduate Learning and Stress Regulation During the COVID-19 Pandemic. *AERA Open*, 7. <https://doi.org/10.1177/23328584211065721>

Mete Yesil, A., Sencan, B., Omercioglu, E., & Ozmert, E. N. (2022). The impact of the covid-19 pandemic on children with special needs: A descriptive study. *Clinical Pediatrics*, 61(2), 141–149. <https://doi.org/10.1177/00099228211050223>

Mills, G., & Gay, L. (2019). *Educational research: Competencies for analysis and*

applications. *Educational research: Competencies for analysis and applications*.

<https://www.pearson.com/content/one-dot-com/one-dot-com/us/en/higher-education/product.html>

Milne, G. J., & Xie, S. (2020). *The effectiveness of social distancing in mitigating covid-19 spread: A modeling analysis*. medRxiv.

<https://doi.org/10.1101/2020.03.20.20040055>

Minkos, M. L., & Gelbar, N. W. (2021). Considerations for educators in supporting student learning in the midst of COVID-19. *Psychology in the Schools*, 58(2), 416–426. <https://doi.org/10.1002/pits.22454>

Misirli, O., & Ergulec, F. (2021). Emergency remote teaching during the COVID-19 pandemic: Parents experiences and perspectives. *Education and Information Technologies*, 26(6), 6699–6718. <https://doi.org/10.1007/s10639-021-10520-4>

Mourtzis, D., Panopoulos, N., Angelopoulos, J., Zygomalas, S., Dimitrakopoulos, G., & Stavropoulos, P. (2021). A hybrid teaching factory model for supporting the educational process in the COVID-19 era. *Procedia CIRP*, 104, 1626–1631. <https://doi.org/10.1016/j.procir.2021.11.274>

Munthe-Kaas, H., Nokleby, H., Lewin, S., Glenton, C. (2020). The transfer approach for assessing the transferability of systematic review findings. *BMC Med Res Methodol* 20, 11. <https://doi.org/10.1186/s12874-019-0834-5>

Murphy, L., Eduljee, N. B., & Croteau, K. (2020). College students transition to synchronous virtual classes during the COVID-19 pandemic in Northeastern United States. *Pedagogical Research*, 5(4).

- Mweshi, Geoffrey Kapasa, and Kwesi Sakyi. "Application of Sampling Methods for the Research Design." *Archives of Business Research*, vol. 8, no. 11, Nov. 2020, pp. 180–93. *DOI.org (Crossref)*, <https://doi.org/10.14738/abr.811.9042>.
- Nassaji, H. (2020). Good qualitative research. *Language Teaching Research*, 24(4), 427–431. <https://doi.org/10.1177/1362168820941288>
- Nelson, L. K., Burk, D., Knudsen, M., & McCall, L. (2021). The future of coding: A comparison of hand-coding and three types of computer-assisted text analysis methods. *Sociological Methods & Research*, 50(1), 202–237. <https://doi.org/10.1177/0049124118769114>
- Neuwirth, L. S., Jović, S., & Mukherji, B. R. (2021). Reimagining higher education during and post-COVID-19: Challenges and opportunities. *Journal of Adult and Continuing Education*, 27(2), 141–156. <https://doi.org/10.1177/1477971420947738>
- Nicholson, L. J., & Lander, V. (2022). Control beliefs of teacher educators regarding their research engagement. *Educational Review*, 74(4), 862–881. <https://doi.org/10.1080/00131911.2020.1816908>
- Noor, S., Isa, F. M., & Mazhar, F. F. (2020). Online teaching practices during the covid-19 pandemic. *Educational Process: International Journal*, 9(3), 169–184. <https://eric.ed.gov/?id=EJ1280329>
- Nurwahyuni, R. (2020, December). An Analysis of Students' Perception on

Synchronous and Asynchronous Learning in Speaking Skills During Pandemic Covid-19. In *Proceedings of International Conference on English Language Teaching (INACELT)* (Vol. 4, No. 1, pp. 189-201).

- Nyirenda, L., Kumar, M.B., Theobald, S., Sarker, M., Simwinga, M., Kumwenda, M., Johnson, C., Hatzold, K., Corbett, E., Sibanda, E., Taegtmeier, M. (2020). Using research networks to generate trustworthy qualitative public health research findings from multiple contexts. *BMC Med Res Methodol* 20, 13. <https://doi.org/10.1186/s12874-019-0895-5>
- Oliveira, G., Grenha Teixeira, J., Torres, A., & Morais, C. (2021). An exploratory study on the emergency remote education experience of higher education students and teachers during the COVID-19 pandemic. *British Journal of Educational Technology*, 52(4), 1357–1376. <https://doi.org/10.1111/bjet.13112>
- Onyema, E. M., Eucheria, N. C., Obafemi, F. A., Sen, S., Atonye, F. G., Sharma, A., & Alsayed, A. O. (2020). Impact of Coronavirus pandemic on education. *Journal of education and practice*, 11(13), 108-121.
- Owolabi, J. (2020). Virtualizing the school during COVID-19 and beyond in Africa: Infrastructure, pedagogy, resources, assessment, quality assurance, student support system, technology, culture, and best practices. *Advances in Medical Education and Practice*, 11, 755-759. <https://doi.org/10.2147/AMEP.S272205>
- Özdemir, T., Demirkol, M., & Polat, H. (2019). Teaching as a professional through teachers' perspective. *Turkish Online Journal of Qualitative Inquiry* 10 (3). 296- \ 320. <https://doi.org/10.17569/tojqi.498776>

- Özüdoğru, M. (2022). Understanding the experiences of teacher candidates related to online flipped learning in relation to Community of Inquiry framework. *Journal of Computer Assisted Learning*, 38(2), 338–349. <https://doi.org/10.1111/jcal.12609>
- Parker, C., Scott, S., & Geddes, A. (2019). *Snowball sampling*. SAGE Publications Ltd. <https://doi.org/10.4135/9781526421036831710>
- Peimani, N., & Kamalipour, H. (2021). Online education and the COVID-19 outbreak: A case study of online teaching during lockdown. *Education Sciences*, 11(2), 72. <https://doi.org/10.3390/educsci11020072>
- Pine, K. H., Lee, M., Whitman, S. A., Chen, Y., & Henne, K. (2021). Making sense of risk information amidst uncertainty: Individuals' perceived risks associated with the covid-19 pandemic. *Proceedings of the 2021 CHI Conference on Human Factors in Computing Systems*, 1–15. <https://doi.org/10.1145/3411764.3445051>
- Porter, S. G., Greene, K., & Esposito, M. C. K. (2021). Access and inclusion of students with disabilities in virtual learning environments: Implications for post-pandemic teaching. *International Journal of Multicultural Education*, 23(3), 43–61. <https://doi.org/10.18251/ijme.v23i3.3011>
- Pratama, H., Azman, M. N. A., Kassymova, G. K., & Duisenbayeva, S. S. (2020). The trend in using online meeting applications for learning during the period of pandemic COVID-19: A literature review. *Journal of Innovation in Educational and Cultural Research*, 1(2), 58-68. <https://doi.org/10.46843/jiecr.v1i2.15>
- Pressley, T., & Ha, C. (2021). Teaching during a pandemic: United States teachers' self-efficacy during COVID-19. *Teaching and Teacher Education*, 106, 103465.

- Pressley, T., Ha, C., & Learn, E. (2021). Teacher stress and anxiety during COVID-19: An empirical study. *School Psychology, 36*(5), 367.
- Pryor, J., Wilson, R. H., Chapman, M., & Bates, F. (2020). Elementary educators' experiences teaching during COVID-19 school closures: Understanding resources in impromptu distance education. *Online Journal of Distance Learning Administration, 23*(4), 1-12.
https://www.westga.edu/~distance/ojdla/winter234/pryor_young_chapman_bates234.html
- Qurotul Aini, Q. A., Mukti Budiarto, M. B., POH Putra, P. O. H., & Untung Rahardja, U. R. (2020). Exploring e-learning challenges during the global COVID-19 pandemic: A review. *Journal System Information (Journal of Information System), 16*(2), 47-65.
- Rana, S., Singh, A. K., Singhania, S., Verma, S., & Haque, M. M. (2021). Revisiting the factors influencing teaching choice framework: Exploring what fits with virtual teaching. *Global Business Review, 097215092110153*.
<https://doi.org/10.1177/09721509211015369>
- Raskind, I. G., Shelton, R. C., Comeau, D. L., Cooper, H. L. F., Griffith, D. M., & Kegler, M. C. (2019). A Review of Qualitative Data Analysis Practices in Health Education and Health Behavior Research. *Health education & behavior: the official publication of the Society for Public Health Education, 46*(1), 32–39.
<https://doi.org/10.1177/1090198118795019>
- Ravitch, S. M. & Carl, N. M. (2021). *Qualitative research: Bridging the conceptual,*

theoretical, and methodological (2nd ed.) Sage Publications.

- Redinger, J. W., Cornia, P. B., & Albert, T. J. (2020). Teaching during a pandemic. *Journal of Graduate Medical Education, 12*(4), 403–405.
<https://doi.org/10.4300/JGME-D-20-00241.1>
- Rehman, R., & Fatima, S. S. (2021). An innovation in Flipped Classroom: A teaching model to facilitate synchronous and asynchronous learning during a pandemic. *Pakistan Journal of Medical Sciences, 37*(1), 131.
- Rahayu, R. P., & Wirza, Y. (2020). Teachers' perception of online learning during pandemic covid-19. *Jurnal penelitian pendidikan, 20*(3), 392-406.
- Ross, P. T., & Bibler Zaidi, N. L. (2019). Limited by our limitations. *Perspectives on medical education, 8*(4), 261–264. <https://doi.org/10.1007/s40037-019-00530-x>
- Rotteau, L., Albert, M., Bhattacharyya, O., Berta, W., & Webster, F. (2021). When all else fails: The (mis)use of qualitative research in the evaluation of complex interventions. *Journal of Evaluation in Clinical Practice, 27*(2), 264–271.
<https://doi.org/10.1111/jep.13396>
- Sadaf, A., Wu, T., & Martin, F. (2021). Cognitive presence in online learning: A A systematic review of empirical research from 2000 to 2019. *Computers and Education Open, 2*, 100050. <https://doi.org/10.1016/j.caeo.2021.100050>
- Sadeghi, M. (2019). A shift from classroom to distance learning: Advantages and limitations. *International Journal of Research in English Education, 4*(1), 80–88.
<https://doi.org/10.29252/ijree.4.1.80>
- Sah, L. K., Singh, D. R., & Sah, R. K. (2020). Conducting Qualitative Interviews using

- Virtual Communication Tools amid COVID-19 Pandemic: A Learning Opportunity for Future Research. *JNMA; Journal of the Nepal Medical Association*, 58(232), 1103–1106. <https://doi.org/10.31729/jnma.5738>
- Sahlberg, P. (2020). Will the pandemic change schools? *Journal of Professional Capital and Community*, 5(3/4), 359–365. <https://doi.org/10.1108/JPCCC-05-2020-0026>
- Selvaraj, A., Radhin, V., Ka, N., Benson, N., & Mathew, A. J. (2021). Effect of pandemic based online education on teaching and learning system. *International Journal of Educational Development*, 85, 102444. <https://doi.org/10.1016/j.ijedudev.2021.102444>
- Severino, L., Petrovich, M., Mercanti-Anthony, S., & Fischer, S. (2021). Using a design thinking approach for an asynchronous learning platform during COVID-19. *IAFOR Journal of Education*, 9(2), 145-162.
- Shea, P., Richardson, J., & Swan, K. (2022). Building bridges to advance the Community of Inquiry framework for online learning. *Educational Psychologist*, 57(3), 148–161. <https://doi.org/10.1080/00461520.2022.2089989>
- Shaw, A., Williams, R., Hux, A., Henley, J., McBride, J., & Nichols, J. (2021). *Educator perceptions of the impact of covid-19 on education*. 1316–1322. <https://www.learntechlib.org/primary/p/219288/>
- Sheikh, A., Sheikh, A., Sheikh, Z., & Dhimi, S. (2020). Reopening schools after the COVID-19 lockdown. *Journal of Global Health*, 10(1), 010376. <https://doi.org/10.7189/jogh.10.010376>
- Shi, Y., Tong, M., & Long, T. (2021). Investigating relationships among blended

synchronous learning environments, students' motivation, and cognitive engagement: A mixed methods study. *Computers & Education*, 168, 104193. <https://doi.org/10.1016/j.compedu.2021.104193>

Short, C. R., Graham, C. R., Holmes, T., Oviatt, L., & Bateman, H. (2021). Preparing Teachers to Teach in K-12 Blended Environments: A Systematic Mapping Review of Research Trends, Impact, and Themes. *TechTrends: Linking Research & Practice to Improve Learning*, 65(6), 993–1009. <https://doi.org/10.1007/s11528-021-00626-4>

Shuja, A., Qureshi, I. A., Schaeffer, D. M., & Zareen, M. (2019). Effect of M-Learning on Students' Academic Performance Mediated by Facilitation Discourse and Flexibility. *Knowledge Management & E-Learning*, 11(2), 158-200. <https://doi.org/10.34105/j.kmel.2019.11.009>

Sidiropoulou, Z., & Mavroidis, I. (2019). The relation between the three dimensions of the community of inquiry and the learning styles of students in a distance education program. *International Journal of Emerging Technologies in Learning*, 14(23), 180-192. <https://doi.org/10.3991/ijet.v14i23.11564>

Sim, J., Waterfield, J. (2019). Focus group methodology: some ethical challenges. *Qual Quant* 53, 3003–3022. <https://doi.org/10.1007/s11135-019-00914-5>

Singh, J., Evans, E., Reed, A., Karch, L., Qualey, K., Singh, L., & Wiersma, H. (2022). Online, hybrid, and face-to-face learning through the eyes of faculty, students, administrators, and instructional designers: Lessons learned and directions for the post-vaccine and post-pandemic/COVID-19 world. *Journal of Educational*

Technology Systems, 50(3), 301–326.

<https://doi.org/10.1177/00472395211063754>

Singhal, T. (2020, March 13). A review of Coronavirus Disease-2019 (COVID-19).

National Center for Biotechnology Information.

<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7090728/>

Sirghea, A., & Brezuleanu, C. O. (2021). A View of Online Teaching and

Learning during the Pandemic. *Agronomy Series of Scientific Research / Lucrări Științifice Seria Agronomie*, 64(2), 181–186.

Smit, B., & Onwuegbuzie, A. J. (2018). Observations in Qualitative Inquiry: When What

You See Is Not What You See. *International Journal of Qualitative*

Methods, 17(1). <https://doi.org/10.1177/1609406918816766>

Smith, C. (2021). Challenges and opportunities for teaching students with disabilities

during the COVID-19 pandemic. *International Journal of Multidisciplinary*

Perspectives in Higher Education, 5(1), 167–173.

<https://doi.org/10.32674/jimphe.v5i1.2619>

Snyder, H. (2019). Literature review as a research methodology: An overview and

guidelines. *Journal of Business Research*, 104, 333–339.

<https://doi.org/10.1016/j.jbusres.2019.07.039>

Stark, E. (2019). Examining the role of motivation and learning strategies in student

success in online versus face-to-face courses. *Online Learning*, 23(3), 234-251.

Sudharsan, B., Sundaram, D., Patel, P., Breslin, J. G., & Ali, M. I. (2021). Edge2guard:

- Botnet attacks detecting offline models for resource-constrained iot devices. *2021 IEEE International Conference on Pervasive Computing and Communications Workshops and Other Affiliated Events (PerCom Workshops)*, 680–685.
<https://doi.org/10.1109/PerComWorkshops51409.2021.9431086>
- Susilowati, E., & Azzasyofia, M. (2020). The parent's stress level in facing children's study from home in the early of covid-19 pandemic in Indonesia. *International Journal of Science and Society*, 2(3), 1–12.
<https://doi.org/10.54783/ij soc.v2i3.117>
- Sweetman, D. S. (2021). Making virtual learning engaging and interactive. *FASEB BioAdvances*, 3(1), 11–19. <https://doi.org/10.1096/fba.2020-00084>
- Tarkar, P. (2020). Impact of the COVID-19 pandemic on the education system. *International Journal of Advanced Science and Technology*, 29(9), 3812-3814
- Tan, H. R., Chng, W. H., Chonardo, C., Ng, M. T. T., & Fung, F. M. (2020). How chemists achieve active learning online during the COVID-19 pandemic: Using the community of inquiry (CoI) framework to support remote teaching. *Journal of Chemical Education*, 97(9), 2512–2518.
<https://doi.org/10.1021/acs.jchemed.0c00541>
- Timmons, K., Cooper, A., Bozek, E. *et al.* The Impacts of COVID-19 on Early Childhood Education: Capturing the Unique Challenges Associated with Remote Teaching and Learning in K-2. *Early Childhood Educ J* **49**, 887–901 (2021).
<https://doi.org/10.1007/s10643-021-01207-z>

- Tinubu Ali, T., & Herrera, M. (2020). Distance Learning During COVID-19: 7 Equity Considerations for Schools and Districts. Issue Brief. *Southern Education Foundation*.
- Torres Martín, C., Acal, C., El Homrani, M., & Mingorance Estrada, Á. (2021). Impact on the virtual learning environment due to covid-19. *Sustainability*, 13(2), 582. <https://doi.org/10.3390/su13020582>
- Trainor, L. R., & Bundon, A. (2021). Developing the craft: Reflexive accounts of doing reflexive thematic analysis. *Qualitative Research in Sport, Exercise and Health*, 13(5), 705–726. <https://doi.org/10.1080/2159676X.2020.1840423>
- 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. <https://www.learntechlib.org/primary/p/215995/>
- Unicef. (2020). *COVID-19: Are children able to continue learning during school closures?* UNICEF.
- Vargo, D., Zhu, L., Benwell, B., & Yan, Z. (2021). Digital technology use during COVID-19 pandemic: A rapid review. *Human Behavior and Emerging Technologies*, 3(1), 13–24. <https://doi.org/10.1002/hbe2.242>
- Vilchez, J. A., Kruse, J., Puffer, M., & Dudovitz, R. N. (2021). Teachers and school health leaders' perspectives on distance learning physical education during the COVID-19 pandemic. *Journal of School Health*, 91(7), 541–549. <https://doi.org/10.1111/josh.13030>

- Viner, R. M., Russell, S. J., Croker, H., Packer, J., Ward, J., Stansfield, C., ... & Booy, R. (2020). School closure and management practices during coronavirus outbreaks including COVID-19: a rapid systematic review. *The Lancet Child & Adolescent Health*, 4(5), 397-404.
- Viner, R. M., Bonell, C., Drake, L., Jourdan, D., Davies, N., Baltag, V., Jerrim, J., Proimos, J., & Darzi, A. (2021). Reopening schools during the COVID-19 pandemic: Governments must balance the uncertainty and risks of reopening schools against the clear harms associated with prolonged closure. *Archives of Disease in Childhood*, 106(2), 111–113. <https://doi.org/10.1136/archdischild-2020-319963>
- Vladova, G., Ullrich, A., Bender, B., & Gronau, N. (2021). Students' acceptance of technology-mediated teaching – how it was influenced during the COVID-19 pandemic in 2020: A study from Germany. *Frontiers in Psychology*, 12. <https://www.frontiersin.org/articles/10.3389/fpsyg.2021.636086>
- Wang, Y., Stein, D., & Shen, S. (2021). Students' and teachers' perceived teaching presence in online courses. *Distance Education*, 42(3), 373–390. <https://doi.org/10.1080/01587919.2021.1956304>
- Webb, A., McQuaid, R. W., & Webster, C. W. R. (2021). Moving learning online and the COVID-19 pandemic: A university response. *World Journal of Science, Technology and Sustainable Development*, 18(1), 1-19.
- Webster, C. A., D'Agostino, E., Urtel, M., McMullen, J., Culp, B., Loiacono, C. A. E., &

- Killian, C. (2021). Physical education in the covid era: Considerations for online program delivery using the comprehensive school physical activity program framework. *Journal of Teaching in Physical Education*, 40(2), 327–336.
<https://doi.org/10.1123/jtpe.2020-0182>
- Wiggins, J. B., Fahid, F. M., Emerson, A., Hinckle, M., Smith, A., Boyer, K. E., Mott, B., Wiebe, E., & Lester, J. (2021). Exploring novice programmers' hint requests in an intelligent block-based coding environment. *Proceedings of the 52nd ACM Technical Symposium on Computer Science Education*, 52–58.
<https://doi.org/10.1145/3408877.3432538>
- Wilcha, R.-J. (2020). Effectiveness of virtual medical teaching during the covid-19 crisis: Systematic review. *JMIR Medical Education*, 6(2), e20963.
<https://doi.org/10.2196/20963>
- Williams, M., & Moser, T. (2019). The art of coding and thematic exploration in qualitative research. *International Management Review*, 15(1), 45-55.
- Xie, Zhuodan & Yang, Jiani, (2020). Autonomous Learning of Elementary Students at Home During the COVID-19 Epidemic: A Case Study of the Second Elementary School in Daxie, Ningbo, Zhejiang Province, China. *Best Evidence in Chinese Education*, 4(2), 535–541.<http://dx.doi.org/10.2139/ssrn.3555537>
- Xie, X., Siau, K., & Nah, F. F.-H. (2020). COVID-19 pandemic – online education in the new normal and the next normal. *Journal of Information Technology Case and Application Research*, 22(3), 175–187.
<https://doi.org/10.1080/15228053.2020.1824884>

- Yakut, A. D. (2021). Educators' experiences in special education institutions during the COVID-19 outbreak. *Journal of Research in Special Educational Needs*, 21(4), 345–354. <https://doi.org/10.1111/1471-3802.12533>
- Yorkovsky, Y. (2022). Distance learning in science and mathematics—Advantages and disadvantages based on pre-service teachers' experience. *Teaching and Teacher Education*, 103883–103883. <https://doi.org/10.1016/j.tate.2022.103883>
- Young, J., & Donovan, W. (2020). Shifting to Online Learning in the COVID-19 Spring. Policy Brief. *Pioneer Institute for Public Policy Research*.

Appendix A: Interview Protocol and Questions

Participant's Name:

Date:

Time:

Introduction: Before beginning the interview, the researcher will state:

Script

Welcome. My name is Jennifer Sample and I appreciate you meeting with me today. I am a doctoral student at Walden University and am conducting a study on the perspectives of the challenges of teaching primary grades remotely. As a requirement of the degree completion, I will be conducting a basic qualitative study with interviews to collect data for my study. This study today will take approximately 30 minutes and will include several questions regarding your experience and knowledge of teaching remotely as a primary grade teacher. I would like your permission to record this interview, so I may accurately document the information you share. If you feel uncomfortable at any time, please let me know. You will be able to leave at any time you want to with no hesitation. Withdrawing from the study will not impact your current relationship with Walden or any other University.

Please confirm you meet the criteria to participate in this research study by answering the following questions:

- Are you a teacher at a primary grade school?
- Have you taught fully remotely in a primary grade class?

The data collected from the interviews will be used to develop a better understanding of primary grade teacher perspectives about the challenges of teaching remotely. I am the sole researcher and interviewer for this study. As stated in the written consent form, your responses to the questions will remain confidential in the study. We have both signed and dated the form, certifying that we agree to continue this interview. I will keep this on a password-protected computer. Your participation in this interview is completely voluntary. You have the right to stop, take a break, or quit at any time. Do you have any questions before we begin? If not, we will begin the interview.

Interview Questions for Primary Grade Teachers Who Taught Completely Remotely

IQ1: Please tell me about your remote teaching experience. Prompts: Please give me an example

IQ2: What practices did you use to keep the students engaged when you were teaching remotely? Prompts: I heard you say. Please tell me more about.

IQ3: Did you have to change anything about your teaching strategies when you went from teaching face-to-face to teaching remotely? Prompts: Please elaborate on successful approaches. r

IQ4: What were some of the challenges of teaching remotely? Prompts: Please give me an example.

IQ5: What were some of the benefits of teaching remotely? Prompts: I heard you say.

IQ6: What programs or platforms did you use to teach remotely? Prompts: Please give me an example.

IQ7: Are there any further points you would like to make regarding teaching remotely?

Prompt: I heard you say... Please explain.

Possible follow-up prompt that I will keep visible as I interview each participant:

1. What do you mean by...?
2. What happened when...?
3. Help me understand...?

Conclusion: I want to thank you for taking the time to meet with me today. You have provided me with some important perspectives. I will be transcribing this interview and will email you a summary. You will member-check to ensure your thoughts are adequately recorded. I may also need to contact you via email for clarity of your responses if any confusion should arise during transcription. Thank you again and please contact me for any questions or concerns.

If you have any questions after the interview, my email is Jennifer.sample@waldenu.edu.

Thank you again for your time.