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Special Education Teachers' Experiences in a Virtual Setting

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This is to certify that the doctoral study by

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has been found to be complete and satisfactory in all respects,
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Walden University
2024

Abstract

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Dissertation Submitted in Partial Fulfillment

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Abstract

The problem this study addressed was that K-12 special education teachers were challenged with using effective instructional and engagement practices in a virtual setting for students with disabilities. The purpose of this study was to explore K-12 special education teachers' experiences with using effective instructional and engagement practices in a virtual setting for students with disabilities. The conceptual framework that supported this study was Kearsley and Shneiderman's engagement theory: A framework for technology-based teaching and learning to improve students' learning and engagement in a virtual setting. The research question for this study focused on what are K-12 special education teachers' experiences using effective instructional and engagement practices in a virtual setting for students with disabilities in a midwestern state. A basic qualitative design was used for this study, and K-12 teachers participated in semistructured interviews. Data were analyzed using coding and thematic analysis procedures. The results produced the following themes: Special education teachers received limited training in a virtual setting, special education teachers needed training in a virtual setting, and special education teachers needed more resources in a virtual setting. This study may contribute to positive social change by increasing teachers' knowledge of using effective instructional and engagement practices in a virtual setting for students with disabilities.

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Dedication

I first give thanks and honor to God for being with me every step of the way during this journey. I dedicate this dissertation to my parents, Sylvia, and Richard Brown, for looking over me from up above and planting the seed early in life so that I have the power to do anything I put my mind to. I dedicate this study to my family and friends, who have supported me through this journey. My inspiration for my doctoral study was my husband Robert, my daughters Antawnette and RaNiyah, and my grandson Jamir. Thank you for being my inspiration and giving your unconditional support. I could not have done it without your encouragement.

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Table of Contents

List of Tables

Chapter 1: Introduction to the Study

The COVID-19 pandemic interrupted in-person learning for many teachers and students. The effects of the emergency school closures caused schools across the United States to transition to virtual learning. The change affected at least 50.8 million public school students (Zota & Granovskiy, 2021). Due to the transition to virtual learning, K-12 special education teachers were challenged to use effective instructional practices and engage students with disabilities (Abedi & Khan, 2022; Francom et al., 2021; Sparks, 2021).

K-12 special education teachers transitioned from face-to-face to virtual learning with limited technology training during the emergency school closures (Donnelly et al., 2022). Collaboration among the special education teachers was necessary to discover how to use effective instruction and engage students with disabilities, provide specialized instruction, and learn new technology in a virtual setting (Abedi & Khan, 2022; Francom et al., 2021; Sparks, 2021). Using effective instructional and engagement practices in a virtual setting was challenging for many K-12 special education teachers (Abedi & Khan, 2022; Skar et al., 2021; Tremmel et al., 2020). Many teachers relied on work packets, movies, and videos as the primary source of instruction in the virtual setting (Raghul et al., 2021).

The transition to virtual learning was also challenging for about 7 million special education students nationwide during the emergency school closure (Hurwitz et al., 2022; U.S. Department of Education, 2020). Virtual learning environments were available for some students with disabilities, and they received one-on-one specialized instruction, but

student engagement was low due to limited access to technology (Harkins et al., 2022; Kim & Fienup, 2022). Student engagement in a virtual setting actively involves learning activities and outcomes (Abedi & Khan, 2022). Engaging students in a virtual setting requires teachers to build relationships and understand students' cognitive levels to provide meaningful instruction (Moşteanu, 2021). Student engagement was a determining factor of the success of the student and the program in a virtual setting (Abedi & Khan, 2022).

Distance learning has existed since the early 1800s, but many view the structure as a new concept (Lease & Brown, 2009). In the 1920s, higher education used distance learning to accommodate students' schedules as they worked on postsecondary certifications (Lease & Brown, 2009). Students used the postal service to mail instructors completed assignments (Harting & Erthal, 2005). As early as 1971, multimedia was introduced in the distance learning setting, and teachers used technology as the main source to deliver instruction (Harting & Erthal, 2005). As a result of the new challenges that surfaced with the COVID-19 pandemic, virtual learning has become popular and is used more often in the public school setting (Harris, 2022). In some districts, virtual learning was used when inclement weather or school threats occurred. Instead of students attending in-person classes for safety reasons, virtual learning schedules were implemented (Johnson et al., 2023).

This study was necessary to understand K-12 special education teachers' experiences using effective instructional and engagement practices in a virtual setting for students with disabilities. During the COVID-19 pandemic, K-12 special education

teachers transitioned from face-to-face to virtual learning with limited guidance and resources. Teachers had to learn new technology, discover how to use effective instructional and engagement practices, and provide specialized instruction in a virtual setting for students with disabilities. This study was important to understand K-12 special education teachers' experiences so teachers could be prepared to deliver effective instruction and support students in a virtual setting (Trust & Whalen, 2020).

Many teachers are back to teaching students in a face-to-face setting. Teachers must be prepared when necessary to use effective instructional practices in a virtual setting to continue to meet the needs of students with disabilities (Trust & Whalen, 2020). The potential contributions of this study may lead to positive social change implications by increasing teacher preparation using effective instructional practices and engaging students in meaningful projects in a virtual setting. This chapter will present the background, the problem and purpose statements, the research questions, the conceptual framework, and the significance of the study.

Background

Virtual learning and traditional learning environments provide opportunities for student learning, but the delivery of the instruction was presented with different instructional models. Traditional schools employ teachers to instruct students face-to-face in a brick-and-mortar setting (Gherheș et al., 2021). Teachers and students were physically in the same space in a traditional in-person learning setting. Within traditional schools, special education teachers provide specially designed instruction to support students with disabilities in achieving academic success (Hallahan et al., 2020).

The use of technology to deliver instruction was new for K-12 special education teachers. Technology was the main device teachers used in a virtual setting to communicate and deliver instruction to students, including students with disabilities. In a virtual setting, teachers and students occupy separate learning spaces. Special education teachers were challenged to use effective instructional practices and engage students with disabilities virtually (Hallahan et al., 2020; Rivera, 2017).

On January 8, 2002, President George W. Bush signed the No Child Left Behind Act (NCLB, 2001). The law was enacted to allow students with disabilities to receive a quality education (Simpson et al., 2004). More than 7.5 million students with disabilities received special education services (IDEA, 2022; Yell & Bateman, 2016). Learning environments may change for multiple reasons, but students with disabilities must continue to receive specialized instruction. In a virtual or traditional setting, state education agencies are required to ensure that students with disabilities receive a free appropriate public education (FAPE), and educators must comply in all settings (IDEA, 2022; U.S. Department of Education, 2020). As early as the 1970s, teachers were challenged to provide students with disabilities an equitable education (Kretlow & Blatz, 2011; Scheeler et al., 2016; Yell & Bateman, 2016). Some school districts continued to use distance learning after the COVID-19 Pandemic for inclement weather or school threats (Johnson et al., 2023; National Center for Education Statistics, n.d.). K-12 special education teachers needed training in using technology in a virtual setting to effectively use instructional and engagement practices for students with disabilities.

This study addressed a gap in the literature and practice to understand the challenges K-12 special education teachers experienced when teaching students with disabilities in a virtual setting (Barbour et al., 2020; Johnson et al., 2023; Trust & Whalen, 2020). Special education teachers struggled to use instruction in a virtual setting. This study highlighted teachers' experiences with the challenges of using effective instructional practices in a virtual setting for students with disabilities (Trust & Whalen, 2020). The findings of this study may be helpful to educators and families in understanding special education teachers' needs to support and engage students in a virtual setting.

This study was necessary to understand the challenges K-12 special education teachers experienced when teaching in a virtual setting. Special education teachers support a population of students who were dependent on teachers to meet individualized goals (Pacer Center, 2021). The more that is known about challenges in special education, the more issues can be addressed to improve teachers' experiences. Therefore, K-12 special education teachers need training in using technology to effectively work with students with disabilities in a virtual setting (Barbour et al., 2020; Johnson et al., 2023). Special education teachers' perspectives were missing from the literature on preparation and support needed to effectively use instructional practices and engage students with disabilities in a virtual setting.

Problem Statement

The problem was that K-12 special education teachers were challenged to use effective instructional and engagement practices in a virtual setting for students with

disabilities. Schools in the United States transition to virtual learning for emergency school closures. Districts used virtual learning for K-12 students' coursework completion, credit recovery, homebound services, and inclement weather (Johnson et al., 2023). This study may build on findings from previous research that teachers had limited experience and preparation skills using technology in a virtual setting (Johnson et al., 2023). More research was needed to understand the support teachers needed in training and technology to use effective instructional and engagement practices in a virtual setting (Johnson et al., 2023). Due to the challenges of using effective instructional practices, there was a decrease in the quality of education students with disabilities received when they transitioned from face-to-face learning to virtual learning during the pandemic (Catalano et al., 2021; Jack et al., 2023; Jamieson, 2021; Timmons et al., 2021). Many K-12 special education teachers did not have the necessary training to instruct students virtually during the emergency school closures and needed more preparation time than colleagues who utilized technology daily (Francom et al., 2021; Glessner & Johnson, 2020). A special education teacher expressed being overwhelmed by the limited guidance received with instruction in a virtual setting (K. Kermit personal communication, April 7, 2021). The limited guidance with technology provided a negative experience for many special education teachers in a virtual setting (Sayman & Cornell, 2021). A meaningful gap in practice this study addressed and was supported by current research was needed for online teaching preparation. Teachers lack the skill to use technology, teach, and engage students virtually (Barbour et al., 2020). Natural disasters happen often, and schools

utilize virtual environments to continue learning, but teachers lack the skill sets needed to be effective in a virtual setting (Barbour et al., 2020).

Purpose of the Study

The purpose of this basic qualitative study aimed to explore K-12 special education teachers' experiences using effective instructional and engagement practices in a virtual setting for students with disabilities in a midwestern state of the United States. Exploring special education teachers' experiences provided insight into the support and preparation needed to engage students in learning in a virtual setting. The paradigm of this study was a qualitative approach. Epistemology consists of the beliefs and experiences that were investigated using a qualitative method. Participants' experiences were explored to understand the challenges in a virtual setting. The ontology of multiple realities provided factual data for this study. A constructivist approach guided this study, aligning with the qualitative method (MacLeod et al., 2022). Constructivism forms ideas that are constructed from knowledge, and reality was based on learned experiences (MacLeod et al., 2022). Special education teachers shared multiple realities of their lived experiences teaching in a virtual setting. The concept of interest for this study is Kearsley and Shneiderman's (1998) engagement theory, which was used to highlight collaboration, meaningful learning, and self-directed learning, aligning with constructivism components.

Research Question

RQ1: What are K-12 special education teachers' experiences using effective instructional and engagement practices in a virtual setting for students with disabilities in a midwestern state of the United States?

Conceptual Framework for this Study

The conceptual framework that grounded this study was Kearsley and Shneiderman's (1998) engagement theory. The framework has three principles: relate, create, and donate. These principles consisted of engaging in planning and collaboration, applying creative and meaningful instruction, and engaging in the outcome of authentic learning. This study was guided by all three principles and used a basic qualitative design. A basic qualitative study and the engagement theory's principles were used to understand special education teachers' experiences and students' learning outcomes in collaboration, applying meaningful instruction with technology, and engagement in authentic learning opportunities (Capone & Lepore, 2021; Kearsley & Shneiderman, 1998; Merriam, 2002). A deeper exploration of this theory is presented in Chapter 2. The framework relates to a basic qualitative design as both methods and the research question used the inductive approach when collecting data (Merriam, 2002). A basic qualitative approach was used, and this study may help capture special education teachers' experiences using instructional and engagement practices in a virtual setting, answer the main research question, and analyze data involving coding and thematic procedures (Saldana, 2016).

Nature of the Study

A basic qualitative method was used for this study. The qualitative method supports an understanding of how participants determine the meaning of a situation (Ravitch & Carl, 2021). An inductive strategy was used to produce descriptive narratives (Merriam, 2002). A basic qualitative design supported the investigation of K-12 special education teachers' experiences in a virtual setting.

I conducted in-person and virtual interviews with K-12 special education teachers who taught students with disabilities in a virtual setting in a public school in a midwestern state of the United States during the COVID-19 pandemic and continued teaching in a virtual setting. Interviews were the planned data source for this study. All interviews were recorded so the data could be reviewed for accuracy and analyzed to identify themes and patterns. The data were saved on a computer's hard drive and password protected. Semistructured interview questions were used with participants, and the primary data collection for this study was their responses to open-ended questions. Data analysis involves coding to assign codes or phrases to identify topics and thematic procedures, including identifying repeated patterns to organize data for analysis (Saldana, 2016). The data were first analyzed manually, but then the process was changed to analyzing data using the Delve software program.

Definitions

The terms used throughout this study are listed for clarification:

Individualized Education Program (IEP): A written individualized plan that guides the student's special education services and access to the general education

curriculum. The IEP is prepared by the student's team, which includes the special education teacher, general education teacher, parents, and related services professionals such as speech clinicians and occupational therapists (Griffith, 2015; Pacer Center, 2018).

Engagement: Time and energy spent participating and interacting in meaningful learning with technology (Axelson & Flick, 2010; Meece et al., 1998).

Special education: An educational program specifically designed to meet the unique abilities of students with disabilities (Pacer, 2021).

Special education teacher: Special education teachers are certified teachers. The teachers support students with special needs and use the individualized education plan as a guide to provide services to students with special needs (Pacer, 2021).

Instructional practices: Information students receive to learn to increase academic skills (Klang et al., 2020).

Specially designed instruction: Content that is adapted or instruction delivered to meet students with disabilities' unique needs and to have access to the general education curriculum (Hallahan et al., 2020; Lightner, 2021).

Virtual learning: Learning happens using a technology platform. Lessons are delivered in a synchronous or asynchronous format. Learning is not in the traditional brick-and-mortar classroom with a face-to-face interactive environment. Technology is the main platform special education teachers and students with disabilities use to communicate with each other (Sadeghi, 2019).

Assumptions

Assumptions are situations out of the researcher's control (Burkholder et al., 2020). I assume all individuals who agree to participate in this study will remain involved throughout the process. Participants were a significant part of this study to explore and understand lived experiences. It was also assumed that participants would provide honest responses. Authentic responses were essential, so the data were accurate and allowed this study to be generalized to other learning environments (Nassaji, 2020).

Scope and Delimitations

The scope of this study was to explore K-12 special education teachers' experiences using effective instructional and engagement practices with students with disabilities in a virtual setting. The rationale for the study was that I observed teachers in the pullout, self-contained, and resource settings struggle to work with students with disabilities in a virtual setting. Teachers needed clarification on how to teach in a virtual setting and make the content meaningful. Special education teachers asked for training and guidance and were frustrated with the lack of resources to support students with special needs (K. Kermit personal communication, April 7, 2021). Teachers were unsure how to engage students in a virtual setting and felt they did not have the skills to meet students' specific needs (K. Kermit personal communication, April 7, 2021). As a special education teacher, I also had the same challenges with limited training in using effective instruction and engaging students with disabilities in a virtual setting (D. Duncan personal communication, August 12, 2023). Some special education teachers were not familiar with the technology. The team I worked on collaborated to figure out the

technology components. Sharing special education teachers' experiences supporting students in a virtual setting allowed others to learn about the challenges of teaching students with disabilities. (D. Duncan personal communication, August 12, 2023).

K-12 special education teachers who supported students in pullout, self-contained, and resource settings were selected for this study. Students in these settings are our most vulnerable and need the most support. This study did not include the experiences of general education or higher education teachers. General and higher education teachers have different responsibilities than K-12 special education teachers. K-12 special education teachers provide direct services and collect data on student goals and objectives (Tremmel et al., 2020).

Bandura's (1997) self-efficacy framework was considered to explore special education teachers' motivation in a virtual setting, but that concept was rejected (Schunk & Pajares, 2009). This study explored teachers' experiences and student engagement using Kearsley and Shneiderman's (1998) engagement theory. The potential of transferability to another setting or content area is possible by utilizing detailed descriptions (Lincoln & Guba, 1986). This study included detailed descriptions and may have the capacity to be generalized to other learning areas.

Limitations

A limitation of this study was the qualitative design. The design limits this study to a narrative format. Interviews and data collection were limited to a midwestern state. Interviews conducted in one state were a limitation of data, and it may be seen as a nondependable study. The questions may be a limitation if they were presented in a

different order with each participant, which may affect the study's validity. The questions were presented in the same order to protect the validity of this study. The transferability of the study's results may potentially be generalized to similar learning environments when reviewing the study's descriptions. Reflexivity was used to monitor biases and ensure my ideas were not reflective in the study.

Significance

This study has the potential to address the literature and the gap in practice that supported K-12 special education teachers when working in a virtual setting with students who have a disability. Teachers and students may learn skills to use in a virtual setting to be successful. Student engagement may improve, and this may support student achievement. The potential contribution of this study might be helpful for districts and administrators in a midwestern state. This study may provide a deeper understanding of K-12 special education teachers' experiences using effective instructional and engagement practices in a virtual setting for students with disabilities. The results of this study may increase teachers' knowledge in a virtual setting, which may increase student outcomes. Increasing student learning outcomes was supported using Kearsley and Shneiderman's (1998) engagement theory, and teachers may use engagement practices to improve student outcomes. The potential contributions of this study may lead to positive social change by providing insight into special education teachers' experiences with the challenges associated with using effective instruction in a virtual setting, which may translate into better academic outcomes (Brem et al., 2021). This study may benefit

teachers working with students with disabilities in a virtual setting and improve students' learning outcomes.

Summary

In Chapter 1, I introduced the study describing the need to explore K-12 special education teachers' experiences using effective instructional and engagement practices in a virtual setting for students with disabilities. I discussed the problem, the purpose, the research methodology, the design, and the data source related to this study of exploring K-12 special education teachers' experiences. Kearsley and Shneiderman's (1998) engagement theory guided this study to engage students and apply meaningful instruction using technology.

This study may inform stakeholders of special education teachers' needs to support students with disabilities in a virtual setting. The social implication of this study may change educational outcomes for teachers when teaching students with disabilities in a virtual setting. Chapter 2 will include the literature review, strategies for locating relevant literature, and the conceptual framework guiding this study.

Chapter 2: Literature Review

The problem for this study is that K-12 special education teachers are challenged to use effective instructional and engagement practices in a virtual setting for students with disabilities. The purpose of this qualitative study is to explore K-12 special education teachers' experiences using effective instructional and engagement practices in a virtual setting for students with disabilities. Due to the COVID-19 pandemic, school districts transitioned to educational settings that required virtual instruction. K-12 special education teachers across the United States were under-prepared to teach special education students virtually (Melloy & Murry, 2022). Special education teachers were challenged with limited resources and limited access to technology (Kaden, 2020; Nasr, 2020; Tremmel et al., 2020). Special education teachers collaborated to determine how to deliver effective instructional practices and engage students with disabilities in a virtual setting while learning to use new technology (Glessner & Johnson, 2020; Karasel et al., 2020; Lesh, 2020; Marsh et al., 2023). This study may add to the literature and practice to help educators understand that special education teachers support students with special needs to be successful in a virtual setting. Teachers transitioned in-person and specialized assignments into electronic lessons to support students' learning using technology. The curriculum teachers formatted to electronic lessons can be used when schools are closed for inclement weather and unexpected school closures. This chapter will present the literature Search strategy, the conceptual framework, and the literature review specific to key concepts and variables of this study.

Literature Search Strategy

The literature review search was conducted using the Walden Library databases. Google Scholar was also accessed to locate articles. The articles reviewed were accessed via electronic databases. The Walden Library databases included Thoreau, ERIC, Education Source, Complementary Index, Academic Search Complete, APA PsychInfo, SAGE, and ProQuest. Walden University's database and Google Scholar were used to search keywords and phrases between the years 2018 through 2022. The search terms included special education, special education teachers, elementary teachers, elementary school, primary school, grade school, instructional practices, pandemic, COVID-19, COVID-19 pandemic, teaching methods, teaching practices, virtual learning, virtual setting, virtual environment, virtual education, challenges, technology, effective instructional practices, emergency remote learning, remote learning, distance learning, emergency virtual learning, online instruction, online learning, school closures, emergency school closures, engagement, student engagement, engagement practices, and teaching strategies. An example of a search term combination for the literature review included special education listed in the first field, the COVID-19 pandemic recorded in the second field, and online learning or e-learning or distance learning recorded in the third field. The results were 682 peer-reviewed scholarly journal articles listed. After reviewing the journal articles, another search was conducted. The search terms included elementary or grade school or primary school. The second field term included COVID-19. The third field term included virtual learning or virtual education, or online learning. The fourth field term included instructional practices or teaching methods. The terms

generated 195 peer-reviewed scholarly journal articles. After each search using terms specific to the research, peer-reviewed articles were selected to complete a literature review. Not all journal articles from the search were used to complete this literature review. Reference pages from other studies were reviewed to determine if those articles fit this study's purpose. A literature review has been conducted several times throughout the months of searching for new literature. An exhaustive review is believed to have been done, as with each new search, no additional journal articles are added to the database. This literature review aims to gather information on special education teachers' perspectives on the challenges of delivering effective instructional practices in a virtual setting for students with disabilities.

Conceptual Framework

The conceptual framework that grounded this study was Kearsley and Shneiderman's (1998) engagement theory. This framework has three principles: relate, create, and donate. These principles consist of engaging in planning and collaboration, applying creative and meaningful instruction, and engaging in authentic learning. The engagement theory's principles of engaging students in technology will guide this study, and a basic qualitative design will be used to capture teachers' experiences engaging students in a virtual setting (Kearsley & Shneiderman, 1998). This framework focuses on planning and collaboration, engaging in creative and meaningful instruction, and authentic learning outcomes (Kearsley & Shneiderman, 1998). The engagement theory has been used in other studies to examine student engagement, blended classes, massive open online classes (MOOC), and online courses to explore the impact on student

learning (Echiverri & Lane, 2019; Gupta & Pandey, 2018; Hew et al., 2018; Machumu et al., 2018). Romaker (2019) used the engagement framework theory in a study to determine the level of engagement students presented in a developmental mathematics class. Beirnes (2022) used the engagement framework theory to focus on student engagement in a virtual elementary instrumental music program. The benefits of using Kearsley and Shneiderman's engagement theory provided the opportunity to investigate K-12 special education teachers' experiences using a framework that has proven successful in multiple studies that observed student engagement in several online classes and courses.

Literature Review Related to Key Concepts and Variable

Instructional Challenges in a Virtual Setting

Emergency school closing is a concept that has been introduced in some school districts. In the past, schools have closed for natural disasters, school shootings, and terrorist attacks. In 1918, schools closed for weeks because of the influenza pandemic, and around 675,000 people died in the United States (Markel, 2020). Over 1 million deaths occurred in the United States during the COVID-19 pandemic (Donovan, 2022). Schools transitioned to distance learning to support mitigating the virus. Distance learning was not new, but virtual learning was a new concept for many special education teachers (Sadeghi, 2019). The COVID-19 pandemic caused schools nationwide to close. Special education teachers were expected to continue to serve students with individualized education plans, hold individualized team meetings, and modify instruction for students with disabilities (Hurwitz et al., 2022).

Teachers received minimal training with technology and were expected to teach students with disabilities in a virtual setting during the emergency school closures. The quality of effective instructional practices was limited, and the new teaching demands were challenging for teachers during the COVID-19 pandemic (Tremmel et al., 2020). Young and Donovan (2020) reported that over 55 million students were affected by the movement to online learning. Teachers experienced challenges transitioning special education students from face-to-face lessons to virtual learning. Many teachers had minimal experience with technology and found servicing special education students challenging when using an online platform. Teachers were not ready for the sudden shift to online learning.

Hurwitz et al. (2022) conducted a study to examine teachers' experiences during the COVID-19 pandemic emergency school closures. Hurwitz et al. reported data on how students with autism experience difficulties navigating unstructured environments. Students with autism need routine and structure, and changing school schedules is challenging (Hurwitz et al., 2022). One hundred and six participants completed a survey to report on the challenges special education teachers experienced adapting curriculum and delivering services to meet the educational needs of students with autism (Hurwitz et al., 2022). Teachers had to be creative and find ways to connect with students online. Online learning was not new, but it was new to many special education teachers during the emergency school closures (Kaden, 2020). Teachers transitioned quickly to online learning without adequate training, and teaching meaningful lessons in a virtual setting

was difficult (Kaden, 2020). Special education teachers were challenged with increased workloads, limited guidance, and limited access to technology (Kaden, 2020).

Sayman and Cornell (2021) conducted a study on teachers' experiences. They revealed that teachers learned that school districts must be prepared to pivot and be ready for virtual learning to provide adequate services for students with disabilities. Districts must prepare for emergency school closures by providing resources for teachers to use effective instructional practices in virtual settings. Interviews were conducted with 12 teachers, which included ten females and two males. A weakness identified in the study is that only two males provided perspectives, and the other 10 were females. An equal number of men's and women's perspectives could have provided a different outcome. Another weakness in the study is that data were collected from multiple sites, such as elementary, middle, and high school teachers (Sayman & Cornell, 2021). It might have been beneficial if data were only from one source, such as only elementary or high school teachers, to understand specific needs. Different data approaches were used in the studies. The studies concluded that practices need to be in place with the needed resources and training so that teachers can use effective instructional practices during emergency school closures (Hurwitz et al., 2022; Kaden, 2020).

Nasr (2020) reported on the impacts of delivering effective instructional practices to meet the needs of students with disabilities in a virtual setting. Nasr reported on the challenges of delivering effective instructional practices in a virtual setting from a personal experience. Delivering instruction and assessing students in a virtual setting during the COVID-19 pandemic was challenging (Sayman & Cornell, 2021). The

immediate shift to virtual learning caused teachers to adapt face-to-face lessons to fit the virtual format without having previous training (Nasr, 2020). A strength of the study is that personal challenges were shared about online teaching during the emergency school closures.

Phillips et al. (2021) revealed that teaching in a virtual setting and excessive workloads were challenging for teachers during emergency school closures. Special education teachers were challenged with limited access to digital devices and increased workloads, including working evenings and weekends and uploading videos and lessons on a virtual platform. Many teachers were overwhelmed with the demands of teaching in a virtual setting without training during the COVID-19 pandemic. Phillips et al. had 624 participants who completed a survey. The findings revealed that teachers needed opportunities to prepare and implement effective instructional practices in a virtual setting for students with disabilities (Phillips et al., 2021). Phillips et al. reported that teachers were overwhelmed with the increased workload and spent much time creating digital assignments. The challenges teachers experienced with limited access to technology and the increased workload of developing digital assignments were major stressors for many special education teachers. Teachers were stressed about transitioning to a virtual setting and learning new technology (Phillips et al., 2021). Teachers were faced with uncertainty during the emergency school closures (Steed et al., 2022). Many teachers were challenged without knowing what to expect or what to do with limited guidance and resources.

Hamilton et al. (2020) study revealed results from a survey for teachers and principals on the challenges teachers experienced during the COVID-19 pandemic. Teachers reported needing training using strategies in a virtual setting and guidance using assessment tools to support students' learning needs (Hamilton et al., 2020). Teachers needed digital teaching materials to support diverse learning needs (Hamilton et al., 2020). Special education teachers were not prepared for virtual learning during emergency school closures (Jenkins & Walker, 2021). Special education teachers needed adequate training to use technology to deliver instruction in a virtual setting. Some teachers were challenged to create digital lessons and used work packets and videos as the primary source of instruction in a virtual setting during emergency school closures (Catalano et al., 2020). The work packets were not specialized instruction and did not meet students' individualized needs (Jenkins & Walker, 2021). Jenkins and Walker (2021) revealed that teachers did not use evidence-based practices during the COVID-19 pandemic and could not provide the same quality of services virtually as they did in-person. Evidence-based practices are scientifically proven strategies to produce positive academic outcomes (IRIS Center, 2023).

Young and Donovan (2020) reported gaps in access to technology for students with disabilities during the COVID-19 pandemic. The study revealed a need for students to have access to technology devices for instruction (Young & Donovan, 2020). Students with disabilities need extra support accessing the curriculum, and not having the needed technology poses a learning disadvantage (Young & Donovan, 2020). Some students were not part of the learning community due to limited access to technology. During the

COVID-19 pandemic, students with disabilities received less support than in a brick-and-mortar setting (Young & Donovan, 2020).

Steed and Leech (2021) revealed inadequate resources for teachers during the COVID-19 pandemic. Teachers did not have internet access or receive training using technology to provide meaningful instruction. Teachers' limited access to technology for students became an equity issue (Steed & Leech, 2021). Some students could continue receiving instruction during the emergency school closures, while others did not (Steed & Leech, 2021). The findings are a critical sign that school districts must plan and improve access to resources before other emergency school closures occur.

An et al. (2021) found that teachers were challenged with students not participating in class activities and not completing assignments due to not having access to the needed technology during the COVID-19 pandemic. Students who did not have access to technology were excluded from the technology learning community (An et al., 2021). The digital divide is a disadvantage for students as they are not a part of the world of technology (Hall et al., 2020; Pew Research Center, 2020). Teachers were overwhelmed with students needing technology access, and many students were excluded from online activities. Students without technology had to receive a paper version of assignments (An et al., 2021). The study's strengths include the qualitative and quantitative data collection and the sample size of 107 participants (An et al., 2021). The study's findings revealed that technology was limited, and students could not participate in online activities due to the digital divide during the emergency school closures (An et al., 2021).

Pressley (2021) and Raghul et al. (2021) reported that teachers received minimal technology training during the COVID-19 pandemic. Teachers were challenged to deliver instruction in a virtual setting (Sayman & Cornell, 2021). These research results are consistent in that teachers needed more time and training to prepare for the instructional shift from face-to-face instruction to virtual learning instruction for students with disabilities (Pressley, 2021; Raghul et al., 2021). Many teachers relied on teaching packets, movies, and videos as the primary instruction (Raghul et al., 2021). A concluding factor among the studies was that teachers needed training using technology to deliver instruction in a virtual setting (Raghul et al., 2021).

Glessner and Johnson's (2020) study acknowledged that face-to-face and virtual instruction requires different teaching steps. Not all face-to-face instruction transfers smoothly to a virtual setting. Specific strategies require students to have a partner, which works well in a face-to-face learning environment but is difficult in a virtual setting. Glessner and Johnson reported the need for authentic learning experiences. Students will not receive that experience when teachers present xeroxed activity packets as the primary source of instruction in a virtual setting. The study revealed that teachers needed support and time during the COVID-19 pandemic emergency school closures (Glessner & Johnson, 2020). Special education teachers needed time to prepare virtual lessons for students with disabilities and needed support with training using technology (Glessner & Johnson, 2020). The small number of participants was a limitation in Glessner and Johnson's study. The study's strengths are the participants' personal experiences (Glessner & Johnson, 2020).

Steed et al. (2022) reported that special education teachers provided limited specialized instruction during the COVID-19 pandemic. Special education teachers had to modify students' specialized services due to the virtual platform. Teachers were concerned about not providing the same high levels of services in a virtual setting as when teaching in a face-to-face setting (Steed et al., 2022). Teachers had limited experience using technology in a virtual setting (Philippakos et al., 2022). Special education teachers received limited technological support in the virtual setting, and their confidence levels were low during the emergency school closures (Philippakos et al., 2022; Steed et al., 2022). A strength of this is that 221 participants completed a survey, and a weakness of this study is that the 221 participants were all women (Steed et al., 2022).

Donnelly et al. (2022) found that special education teachers did not have access to the needed resources for students with diverse needs during the emergency school closures. Remote learning was not accessible (Donnelly et al., 2022). Some special education teachers received resources during emergency school closures, while others did not. Teachers struggled to provide instruction in a virtual setting with limited training (Donnelly et al., 2022). Four hundred and twelve participants were recruited and completed a survey for this study (Donnelly et al., 2022). A strength of this study is that teachers who completed the survey taught students with disabilities from multiple disability categories and were able to provide responses that supported students from a range of disabilities.

Porter et al. (2021) revealed that teachers are challenged with meeting students' needs in a virtual setting due to the limited preparation and training. Students with disabilities services were limited, and some could not access the internet to attend virtual classes. Other students had access to technology but did not attend virtual sessions. Some teachers were challenged to provide high-quality instruction.

Impact on Student Learning in a Virtual Setting

Kuhfeld et al. (2020) reported on students' academic loss during the COVID-19 pandemic. School closures due to inclement weather are expected in certain regions. However, when students miss school in a virtual setting due to not having technology devices, such as during the COVID-19 pandemic, it can potentially impact students' skills and have a negative impact on the achievement gap (Kuhfeld et al., 2020; Smith, 2020). Virtual learning was a disadvantage for many students with disabilities, poverty, and the homeless, as they did not have the required technology or adequate instruction during the emergency school closures (Masonbrink & Hurley, 2020). The technology gap is a national issue, and many students were impacted during the emergency school closures (Kuhfeld et al., 2020). Archival data from the achievement database was used to compare different school closure scenarios and demonstrated how the achievement gap gets more prominent when students do not have technology devices in a virtual setting (Kuhfeld et al., 2020; Smith, 2020). The projected data is helpful for teachers to prepare and eliminate possible learning slides for emergency school closures (Masonbrink & Hurley, 2020).

Skar et al. (2021) revealed that students experience a loss of academic skills during the COVID-19 pandemic. Archival data revealed potential learning loss during emergency school closures (Skar et al., 2021). Some students with special needs did not have access to technology and were not required to attend virtual classes during the emergency school closures (Bruhn et al., 2022). Dorn et al. (2020) reported that the sudden transition to remote instruction has caused widespread concern that students experienced substantial "learning loss" without in-person instruction. Many students with special needs did not receive direct services, and some did not receive the same academic rigor during the emergency school closures, which may have resulted in a learning loss (Skar et al., 2021).

Broege and Anderson (2020) reported on student learning loss. Due to school closures during the COVID-19 pandemic, the achievement gap is increasing between students with special needs and their general education peers (Broege & Anderson, 2020). Some students with disabilities did not have internet services to participate in academic learning sessions, which may have contributed to a learning loss (Broege & Anderson, 2020). Some students in the low socioeconomic class experienced learning loss. The students needed access to technology to participate in learning sessions (Porter et al., 2021). Limited resources hinder special education teachers' ability to provide a high-quality education for students with disabilities, and teachers are concerned with students' lack of progress (Hamilton et al., 2020). A strength of this study is the use of archival data.

Christakis et al. (2020) conducted a study using existing data from the US Centers for Disease Control and Prevention, the US Social Security Administration, and the US Census Bureau, analyzing the loss of academics due to the COVID-19 pandemic emergency school closures. Missing school plays a significant role in students' education. Students missing around 54 school days will likely affect learning outcomes (Christakis et al., 2020). Research shows that the loss of school days has a negative effect on a student's educational outcomes (Christakis et al., 2020).

Bendeck (2022) revealed that in-person services are most appropriate for all students. The limited in-person services students with disabilities received during the emergency school closures can impact students' learning. Some students with disabilities received limited in-person services, and other special education students could not access classrooms to receive accommodations (Bendeck, 2022). Teachers were concerned with the education disparities students with disabilities received that could lead to learning loss (Bendeck, 2022). Special education teachers were challenged to meet student needs, and most students did not get the necessary services required during the emergency school closures. Fifteen participants were interviewed for the study, and five were special education staff (Bendeck, 2022).

Student Engagement in a Virtual Setting

Marsh et al. (2023) discovered that more students with disabilities receive instruction in a virtual setting. Families gravitate toward virtual learning environments to meet students' behavioral and social-emotional needs (Marsh et al., 2023). Engaging parents in the virtual process is beneficial in supporting student engagement. Many

families need a virtual setting to improve student engagement for students with disabilities who struggle with behavioral and social-emotional needs.

Harkins et al. (2023) identified that a virtual learning environment changed how many students engaged socially and academically. Parents are concerned with the lack of engagement in a virtual setting and that academics will suffer due to limited engagement. In this same study, some parents are satisfied with virtual learning as there has been a reduction in some students' stress levels and medical episodes. Attending school in a virtual setting has been identified as beneficial for some students with disabilities.

Martin and Borup (2022) revealed a rise in the use of virtual learning for K-12 schools. Virtual learning student engagement is lower than in-person learning. Guidance is needed from teachers to demonstrate what engagement looks like in a virtual setting. Teacher-student interactions influence student engagement (Martin & Borup, 2022). Martin and Borup also discovered that many parents are new to virtual learning environments and need guidance on how to guide their children to improve engagement. Martin and Borup pointed out the importance of student engagement staying the same when learning in-person switches to online. Learning in a virtual setting requires a different way of engaging students and providing support. Virtual learning involves flexibility, choice, and self-regulation skills (Martin & Borup, 2022).

Lucas et al. (2020) reported concerns that students with disabilities have limited access to technology in a virtual setting. Limited access to technology is a disadvantage for students with disabilities and a challenge to provide specialized needs. Lucas et al. agree with other studies that students with disabilities also demonstrated low levels of

engagement in a virtual setting. Lack of engagement in a virtual setting may affect students' academic skills.

Hirsch et al. (2022) and Kim and Fienup (2022) revealed low student engagement in a virtual setting. Some students improve classroom engagement when interventions are implemented (Kim & Fienup, 2022). Teachers' effectiveness is critical to student success in a virtual setting. In a virtual setting, student engagement improves when students attend class with limited absences (Kim & Fienup, 2022).

Darling-Aduana et al. (2022) findings agree with previous research that increased absenteeism is a factor for limited learning and lack of engagement in a virtual setting. Researchers have discovered that student engagement predicts student success in academics and the effectiveness of a virtual program (Ayouni et al., 2021). Technology may be a main factor in low student engagement. Students need access to technology to attend virtual classes.

Recommended Online Practices for Students with Disabilities

Students with disabilities need specific strategies for specialized needs. Evidence-based strategies are instructional practices that increase student skills in specific areas. Effective online practices are recommended for the success of students with disabilities in a virtual setting. The recommended practices are professional development and teacher support, family engagement, accessibility, and instructional strategies to support personalization (Vislosky & Hunziker, n.d.). Professional development and teacher support require training and support in online learning platforms and professional development on new concepts (Vislosky & Hunziker, n.d.). Student success is dependent

on parent partnership with schools. Schools provide opportunities for families to engage in student education (Vislosky & Hunziker, n.d.). The importance of teachers using online learning tools with accessibility and the University Design is to reach all students at different levels (Vislosky & Hunziker, n.d.). They maximize students' access to appropriate curriculum, implement strategies for specific needs, encourage students to practice skills in all learning environments and engage students to use voice and choice in online learning environments (Vislosky & Hunziker, n.d.). Supporting teachers in virtual settings may increase student engagement and learning outcomes, and some of the same effective strategies that are used in-person may be used in a virtual setting to support students with disabilities (Lohmann et al., 2021).

High-leverage practices are recommended for students with disabilities. Teachers use high-leverage practices to teach students at different levels and teach different content (Brownell et al., 2021). High-leverage practices include explicit practices, breaking down learning tasks, providing opportunities for students to respond, modeling expectations, providing guided instruction, and engaging practices, and promoting student independence (Brownell et al., 2021). High-leverage practices are structured for collaboration, assessment, social/emotional/behavioral, and instructional needs.

Summary and Conclusions

The literature review revealed that teachers needed assistance using effective instruction and engaging students in a virtual setting. The themes identified in the literature review included challenges using instruction, limited access to technology, limited training, low student engagement, and student learning loss. Many special

education teachers were challenged to use effective instruction in a virtual setting and relied on activity packets and videos as the primary instruction. Students with disabilities had limited access to technology, and engagement levels were low in a virtual setting. Many students did not attend online classes due to limited access to technology. Some students did not have access to devices, and others needed internet service. It is not known how the issue of the digital divide will be solved so students can have access to technology to engage in online learning. This study will fill a gap in literature and practice by exploring special education teachers' experiences and highlighting the challenges of using effective instruction and engaging special education students in a virtual setting. This study may reveal the support teachers need in a virtual setting by using effective instruction and engaging students in a virtual setting. Chapter 3 will present the research design and rationale, the role of the researchers, and the methodology for this study.

Chapter 3: Research Method

The purpose of this basic qualitative study was to explore K-12 special education teachers' experiences using effective instructional and engagement practices in a virtual setting for students with disabilities. This study may add to the literature and practice and help understand special education teachers' experiences in a virtual setting. This chapter presents the research design and rationale, the researcher's role, and the study's methodology.

Research Design and Rationale

The research question for this study was: What are K-12 special education teachers' experiences using effective instructional and engagement practices in a virtual setting for students with disabilities in a midwestern state of the United States? The conceptual framework that grounded this study was Kearsley and Shneiderman's (1998) engagement theory. The framework has three principles: engaging in planning and collaboration, applying creative and meaningful instruction, and engaging in the outcome of authentic learning. K-12 special education teachers were challenged to use effective instructional and engagement practices for special education students in a virtual setting. Many special education teachers struggled with using technology to present authentic learning experiences and provided xeroxed activity packets as the primary source of instruction in a virtual setting. Special education teachers struggled to meet students with disabilities' needs in a virtual setting. A basic qualitative design supported understanding K-12 special education teachers' experiences and analyzed data to search for meaning. Data were collected from participants' interview responses to answer the research

question (Merriam, 2002). This study provided an in-depth understanding of teachers' experiences with effective instructional and engagement practices in a virtual setting for students with disabilities. A qualitative design was chosen for this study as it aligned with the problem and purpose statements, and the data collection method was appropriate to interpret individuals' experiences (Ravitch & Carl, 2021).

Role of the Researcher

As the sole researcher for this study, my responsibilities were interviewing participants and collecting and analyzing data. The primary data source was the participants' responses, which did not involve the researcher observing or participating in the process. I took handwritten notes and audio-recorded interviews to check for accuracy. Data were analyzed using coding and thematic analysis procedures. I used the Delve software program to analyze data. This study occurred in my previous district. I did not have a supervisory position or oversee any departments. All participants were former colleagues. I had a professional relationship with all participants. The plan was to address this research professionally and treat each person as a valued client. Potential biases may have included how comfortable a person was during the interview. A person unfamiliar with the researcher may feel uncomfortable during the process and may not have provided all necessary details as opposed to someone familiar and comfortable and may provide details believed that the researcher wanted to hear. An incentive of a $10 gift card was offered to recruited participants. A potential bias was whether the participants provided authentic information or were only interested in receiving a gift card. Another potential bias was the researcher inserting personal lived experiences about

the phenomena. Those biases were managed using reflexivity by examining my thinking, so my beliefs did not influence this research. An ethical issue to consider was conducting research in a previous district where many participants were former colleagues. I did not oversee the participants and did not have a supervisory position. Participants in the study were volunteers. Participants received informed consent that provided an overview of the study. The plan for addressing those ethical issues was to follow the Walden University IRB ethical procedures and CITI ethical training.

Methodology

Participant Selection

The study's population was K-12 special education teachers. A purposeful sampling strategy was used to select participants with knowledge and lived experience teaching students with disabilities in a virtual setting (Palinkas et al., 2015).

Only K-12 special education teachers in public schools who taught students with disabilities in a virtual setting were candidates for this study. Special education teachers supported students in multiple learning environments such as pullout, self-contained, or resource settings. K-12 special education teachers were selected for this study to understand teachers' experiences at multiple learning levels. This study allowed a deeper understanding of how teachers from multiple grade levels provided instructional and engagement practices in a virtual setting for special education students. The criteria for this study were licensed K-12 special education teachers in public schools who taught students with disabilities in a virtual setting. A demographic questionnaire was used to confirm that participants met inclusionary criteria to eliminate potential imposters (Roehl

& Harland, 2022). Participants completed the questionnaire once the IRB approval was received for this study. A basic qualitative study was conducted with 10 interviews. A sample of 10 K-12 special education teachers were recruited to provide their perspectives on the challenges of using effective instructional and engagement practices in a virtual setting for students with disabilities.

Each school in the district had a team of special education teachers. I contacted potential participants using individuals' professional email addresses. I emailed each person the flyer and provided an overview of the research. I also emailed individuals to respond with their interest in participating in this study. Individuals interested in participating received the demographic criteria questionnaire to complete to confirm they met this study's criteria. Participants returned the completed questionnaire by email. Individuals who met the criteria received a consent form, and a meeting was scheduled to answer interview questions.

Instrumentation

The data collection instruments for this study were research-developed interviewing questions, a journal for handwritten notes, and an audio device to record participants' interviews. The audio device was used along with handwritten notes to compare the data for accuracy. The bias for the instrument presented was that the protocol was designed for special education teachers. The questions were developed specifically for special education teachers with experience in a virtual setting. The content validity was established by ensuring the questions were relevant to the study and measuring what they were supposed to measure, such as teachers' challenges in using

effective instructional and engagement practices in a virtual setting. The research question was reviewed multiple times to establish sufficiency, making sure it represented the expected target.

Procedures for Recruitment, Participation, and Data Collection

The recruitment process began when approval was requested from the Institutional Review Board (IRB) at Walden University. I secured potential participants' email addresses from the district website in a midwestern state in the United States. Potential participants received an initial email that included an overview of the study, and they expressed interest in the study or a willingness to participate by responding to the initial email. Participants who responded with an interest in the study received a demographic questionnaire by email from the researcher to confirm they met the criteria for this study. Participants emailed the questionnaire back to the researcher once it was completed. The researcher reviewed the questionnaires to determine the participants for this study using specific criteria. Participants selected for this study were informed by email. They received an overview of the study; it was explained that the interview would take 30-60 minutes, and interviews were set up. The IRB approved the study 11-21-23-0343598, and the researcher sent a consent form to each participant.

The data collection occurred in person or virtually. The interviews averaged 37 minutes per interview, and the meetings were audio-recorded to help maintain accuracy and eliminate biases. At the end of the interviews, participants were provided with an exit overview, which included iterating the purpose of the study. The researcher answered any clarifying questions that developed during the interviews. The next step was to analyze

notes and summarize them in a narrative format. A member check was used to ensure the interpretation of the data was captured accurately. Each participant received a $10 Starbucks gift card for interviewing. The incentive was given to each participant after the interview was completed.

Data Analysis Plan

Data analysis is the process of collecting and organizing data to produce the findings of a study (Mezmir, 2020). Data were collected to support the research question of what K-12 special education teachers' experiences were using effective instructional and engagement practices in a virtual setting for students with disabilities. Open and axial coding were used to label and categorize the data collected from the interviews. Coding is the process of grouping common terms and phrases (Ravitch & Carl, 2021). The first step is starting with open coding. The coding process began with labeling and developing categories, then moving toward axial coding, which included organizing codes into categories. Thematic analysis guided this study to identify themes and patterns, and this process was implemented after open and axial coding (Majumdar, 2022; Ravitch & Carl, 2021). The Delve software program supported open and axial coding and the identification of themes. The coding process was completed several times to review the outcomes. The manner of treatment for discrepant cases was an opportunity to review the data and identify possible coding changes or outliers.

Trustworthiness

Trustworthiness is the degree of confidence in the data collection, interpretation, methods used, and findings of this study (Connelly, 2016). Trustworthiness criteria

include dependability, credibility, transferability, and confirmability. Adhering to the criterion was necessary to establish a reliable study with rigor and quality (Ravitch & Carl, 2021). Checking the trustworthiness of this study was necessary to produce a quality study.

Dependability

Dependability is the consistency of the study's data collection, analysis, and reporting (Connelly, 2016). The researcher conducted an audit trail to account for all steps during the data collection and analysis. The interview questions were presented in the same format to all participants to maintain consistency. This study presented detailed findings so other researchers could arrive at similar interpretations (Nassaji, 2020). Qualitative data collection techniques were followed to ensure consistency throughout the study. This study was conducted as intended and followed standard procedures. No variations occurred in this study (Connelly, 2016; Stahl & King, 2020).

Credibility

Credibility is confidence that the data is truthful and produces credible findings for a study (Connelly, 2016; Stahl & King, 2020). The researchers used the member's check process. Participants reviewed the main themes generated and checked that the interpretation accurately captured what was shared (Burkholder et al., 2020; Stahl & King, 2020).

Transferability

Transferability is the capacity of a study's findings to be applied to other settings and locations. The results of this study are transferable to similar settings and populations

(Connelly, 2016; Stahl & King, 2020). The findings derived from this study included detailed descriptions of the settings and locations to utilize this study in another research.

Confirmability

Confirmability is the interpretation of the findings and conclusions that others can confirm (Nassaji, 2020). An audit trail was used to monitor and reflect on my research procedures. Reflexivity was used to examine my thinking to ensure my opinions were not influencing the data (Connelly, 2016; Dodgson, 2020; Stahl & King, 2020). A reflexive journal was used to record my steps and thinking to ensure my perceptions did not influence the study.

Ethical Procedures

Conducting research is vital to the field of education. Respecting participants and being clear about the process was essential to keeping the practice respectful while following ethical procedures and keeping each participant safe from harm (Surmiak, 2018). It was essential to convey clear guidelines and allow individuals to make a clear, informed decision to participate in this voluntary study. The researcher had direct contact with adults only to understand their experiences. Participants had the option to drop out of the study at any time. I addressed the concern of needing more participants to collect the data. I reviewed the list of potential participants, and a second invitation was sent by email to those who had not responded to the initial email. All participants' names, emails, and locations remain confidential to protect the rights of participants. Participants' names and locations were identified using alphanumeric codes, such as P1, P2, and P3. All handwritten data are stored in a locked file cabinet, and electronic data are stored on a

password-protected computer. Data will be retained for five years after my graduation and then destroyed as Walden University requires. The data will not be used for any purpose other than this study. Consent forms were retrieved from IRB and provided to participants. This study followed IRB guidelines and continued with IRB approval. This study was conducted in my previous workplace. I had no supervisory position, which does not create a conflict of interest.

Summary

This basic qualitative study explored K-12 special education teachers' challenges using effective instructional and engagement practices in a virtual setting for students with disabilities. Purposeful sampling was used to select participants. Participants included K-12 special education teachers who taught in a virtual setting. Interviews were the data source for this study. Coding and thematic analysis were used to analyze the data. Trustworthiness elements support the quality and rigor of the study. Ethical procedures were presented, and IRB guidelines were followed throughout this study. Chapter 4 includes the setting, data collection, data analysis, and results of this study.

Chapter 4: Results

The purpose of this basic qualitative study was to explore K-12 special education teachers' experiences using effective instructional and engagement practices in a virtual setting for students with disabilities. The research question developed for this study was to support and collect data to answer the following question: What are K-12 special education teachers' experiences using effective instructional and engagement practices in a virtual setting for students with disabilities? This chapter presents the setting, data collection, data analysis, results, evidence of trustworthiness, and the summary of this study.

Setting

The participants in this study worked in the same district. No personal or organizational conditions influenced participants or their experiences that may affect the interpretation of the results. All 10 participants taught in a K-12 special education setting in a public school, taught in a virtual setting and had a current teaching license. All 10 participants taught in an elementary or secondary setting. Participants 5 and 9 taught virtually year-round. One special education teacher taught in an elementary virtual setting, the other in a secondary virtual setting, and all teachers taught for several years in a special education setting (see Tables 1 and 2).

Table 1

Participants' Teaching Setting

Participants	Elementary	Secondary
Women	7	1
Men	1	1
Total	8	2

Table 2

Participants' Number and Years of Teaching

Participant	Years of Teaching
1	6 Years
2	15 Years
3	11 Years
4	22 Years
5	17 Years
6	8 Years
7	8 Years
8	40 Years
9	20 Years
10	8 Years

Data Collection

Ten participants were interviewed using semistructured interview questions (see Appendix B). The special education teachers taught in various settings and supported students with multiple disabilities. Three teachers taught in a resource setting, five in a pullout setting, one in a pullout and an inclusion setting, and one in a self-contained setting (see Table 3). The participants also represented various racial backgrounds (see Table 4).

Table 3

Teaching Setting

Setting	Elementary	Secondary
Resource	2	1
Pullout	4	1
Self-Contained	1	0
Pullout & Inclusion	1	0

Table 4

Participants Demographic

Participants	Caucasian	Asian Pacific Islander	African American
Women	6	1	1
Men	1	0	1
Total	7	1	2

The interviews conducted for this study averaged 37 minutes. All interviews were conducted virtually or in person at the discretion of each participant. Six participants, 1, 2, 4, 5, 9, and 10, were interviewed virtually. Virtual interviews worked well for participants who taught in a virtual setting and those who lived 30 miles or more from the school district.

Four participants were interviewed in person. Participants 3, 7, and 8 met at the public library on different days. The library conference room had tables, chairs, a projector, and two whiteboards. The projector and whiteboard were not utilized during the interviews. The participants and I sat across from each other. The interviews were audio recorded, and the voice recorder and Otter AI recorders were on the table.

Participant 6 was interviewed in person after school hours in a classroom. The participant's classroom was a small learning environment with a small group table and four chairs. No students were in the classroom when the interview was conducted after

school hours. Participant 6 and I sat at the small group table across from each other. The handheld and Otter AI recorders were placed on the table. I had to adjust and use my personal hotspot so that recordings were not interrupted.

All participants received a copy of the consent form before interviews were conducted. The purpose of this study was reiterated for each participant, and I received permission to record interviews. All interviews were recorded using two voice recorders: a handheld voice recorder and an Otter AI recorder. No unusual circumstances were encountered in the data collection. Each session seemed similar and did not pose any concerns or problems.

Data Analysis

I used an open and axial coding approach during the analysis (Byrne, 2022). I followed the six-step analytical process based on Braun and Clarke's (2006) thematic analysis: Step 1: familiarizing yourself with your data; Step 2: generating initial codes; Step 3: searching for themes; Step 4: reviewing themes; Step 5: defining and naming themes; and Step 6: writing the report (Byrne, 2022).

The data were analyzed and manually coded to larger representations of categories and themes. The data relevant to the research question were highlighted and color-coded. In the second step, I generated initial codes, reviewed the color-coded data, and added more codes utilizing the margins of a Word document. I reviewed the data again. I read the data line by line and added codes to sentences and paragraphs using the right-hand margins of the Word document. More space was needed, and another column was added to record additional codes.

I added more codes, and I needed more space when using the Word document, so I created an Excel spreadsheet and transferred the highlighted data into columns based on the color codes. For example, all yellow highlighted data were placed in a column; all orange highlighted data were placed in another column; all blue highlighted data were placed in the next column, and so on. After using the spreadsheet and recording data, the document was getting larger than expected, and it felt unorganized, so I decided to change from the manual process to Delve analysis software.

I started the analysis process manually, working with a Word document to record codes. I changed from using a Word document to an Excel spreadsheet to be organized and have more working space. The Excel spreadsheet was also increasing in size, which also felt unorganized. I changed from manual coding to Delve analyzing software for a better analysis system. I started the coding process with the Delve analysis software.

I analyzed the data using Delve analysis software and created initial codes that were relevant to the research question. I coded using a single word, NVivo, and process coding. Examples of a single word were pulled from the data, such as manipulatives, curriculum, positive praises, resources, and cameras-off. The second coding process was NVivo, which used direct quotes from the data set. Codes created using NVivo coding were common statements from participants, such as no training received, frustrating, I managed, no curriculum, and figuring it out. Process coding included identifying the verb or action in a sentence and coding based on participants' experiences. A code was created to represent the sentence or paragraph. The examples from the interviews are as follows: Participant 9 stated: "I was using a lot of visuals." The code was labeled as using a lot of

visuals. Participant 2 stated: “I received no training using Zoom,” and that was coded as no training.

The codes were analyzed, searching for themes. Categories were created based on the open codes. Axial codes were created and included: in-person, virtual setting, resources, no support in a virtual setting, no curriculum, success with curriculum, training that would have helped student engagement, and technology challenges. The codes and categories were analyzed for a second time to determine if data could be combined or moved into a different category. The categories in person and virtual settings were combined as both categories had similar data, such as videos during instruction, and used differentiated instruction. Resources and success with curriculum were combined and recategorized under the category of successful resources in a virtual setting. In the categories, no curriculum and virtual setting were combined under the category virtual setting. I analyzed the categories for a third time, and they were revised. The axial codes were instructional approach, limited training and guidance, expected training, successful resources in a virtual setting, engagement practices in-person, and engagement practices virtually.

Axial codes were revised and adjusted to challenges in a virtual setting, what would have been helpful in a virtual setting, and success in a virtual setting. The axial codes were reviewed and revised again for alignment. I analyzed for a final review, and three themes were discovered (see Table 5): Special education teachers received limited training in a virtual setting, special education teachers needed more training in a virtual setting, and special education teachers needed more resources in a virtual setting.

Table 5

Special Education Teachers' Experiences in a Virtual Setting (Open, Axial Codes, and Themes)

Themes		
Theme 1: Special Education Teachers Received Limited Training in a Virtual setting	Theme 2: Special Education Teachers Needed More Training in a Virtual Setting	Theme 3: Special Education Teachers Needed More Resources in a Virtual Setting
Axial Codes		
Challenges in a virtual setting	What would have been helpful in a virtual setting	Resources used in a virtual setting
Open Codes		
Curriculum	Training	News2You
Technology	Technology	Newsela
Student engagement	Google Meet	SIPs
Manipulative	Zoom	Teachers Pay Teachers
In-person curriculum	Teaching a lesson	Reading A-Z
Cameras off	Using engagement	Raz Kids
Engagement Practices	practices	Math 180
Home Distractions	Instructional practice	
Zoom	Technology features	
Not Having Resources	Games	
Interact with students	Groups	
Breakout rooms	Breakout Room	
No curriculum	Students' Voices	
	Interactive	

Discrepant Cases

All data are important for a study's credibility, even when it provides different information. Discrepant data provides credibility and strength to a study (Rose & Johnson, 2020). No discrepant cases were identified in this study. All data were included to capture accuracy and meaning.

Results

The research question addressed in this study was: What are K-12 special education teachers' experiences using effective instructional and engagement practices in a virtual setting for students with disabilities in a midwestern state of the United States? Thematic analysis and coding were used to analyze data and identify themes for this study. This section was structured by themes that emerged from the data analysis. One topic that emerged from the data analysis was that all participants stated that no training was received in a virtual setting.

Theme 1: Special Education Teachers Received Limited Training in a Virtual Setting.

The number one challenge experienced by special education teachers was that they needed to receive training in a virtual setting. Teachers collaborated with colleagues when they needed help using technology, finding curriculum, and engaging students. Participants shared that in a virtual setting, the challenges they experienced were as followed: I had to figure out how to make those resources more interactive, trial and error, figured it out on my own, no training, there was not really a lot of curriculum, technology issues, hard to give incentives, and kids wouldn't turn on their cameras.

Special education teachers had different years of experience teaching in a virtual setting. Most teachers needed help learning new technology and finding ways to engage students virtually. Teachers adapted in-person materials and searched for ways to make learning interactive. All participants shared that they had to learn how to work in a virtual setting, and they leaned on colleagues for assistance.

Participant 1 stated:

that no training was received to teach in a virtual setting. I relied heavenly on my prior knowledge I have with technology and that was very helpful. Student engagement was limited. It was hard to transition students to technology devices. You don't have as much control unless you have their family support.

My students viewed iPads as a tool to play games rather than an academic tool. It was a challenge to keep students engaged. I had to use what students like such as picking books they like and using stuff they enjoy. We're obligated to provide the services, and when students cannot get on, and our families don't know how, it's detrimental.

Participant 3 shared:

kids would just get bored, or they would not participate, or they would be giving me tours of their house or showing me every toy or every book or every animal in their house. Kids would get way more squirrely; they would be more off-task. It was harder to keep them focused. One kid would not be on camera. One kid would be playing with his toys. It was just harder to keep them on task when I was working with them.

Participant 6 stated:

it was challenging that some students were very distracted at their house. Some had multiple siblings, all learning at the same time and listening to different things. So, being able to focus on getting kids just to sit at the table or by their iPads was very difficult.

Participant 5 stated:

> One of the challenges is when you're in like a resource room as a teacher, you can see everything going on. I can see all these little, teeny, teachable things. I could see your son's getting off track. I can't do that online plus the fact they don't always show their cameras, so you always have to try to figure out ways to engage them. I just tried to be really animated. Try to get them engaged. Try to use humor. Try to praise a lot. I gotta make it worth their while to come to me. It's just a constant dance of trying to motivate them, engage them, build a relationship, and learn about their families.

Participant 8 shared that it was challenging when students did not stay seated when online. Participant 7 shared that: "I also had situations where kids wouldn't turn on their cameras. I wasn't sure if kids were there."

Participant 2 revealed that:

> I never really made my students go on camera, but I needed them to like somehow someway show me you're engaged, whether that's like clicking the little raise your hand button or typing your answer into the chat box to show me that you're engaged. My sweet girl used to sit in her closet and do class virtually. That was the only time she could get her only space away from the cat and the dog and brothers, and sister, and grandma on the phone and the TV and everything else that was going on in the background.

Participant 8 also shared that it was challenging to teach in a virtual setting with background noise. Participant 8 asked students: “do you have another place in the house that you could go and set up a desk?”

Participants 8 and 10 shared that student-to-student collaboration was a challenge. It was difficult for students to complete the pair-share strategies in a virtual setting, and it was challenging to navigate breakout rooms.

Special education teachers received limited training and had to learn to navigate in a virtual setting. Some teachers needed to become familiar with technology, and it was essential to collaborate to learn from each other. Special education teachers were exposed to a different type of learning environment. Teachers had to adjust from what was normal of seeing students in person to navigating how to engage students with their cameras off.

Theme 2: Special Education Teachers Needed More Training in a Virtual Setting.

Another topic identified was training that would have been helpful in a virtual setting. The findings include training on curriculum and how to stream lessons, how to use technology and its features, and learning engagement strategies designed for the virtual environment. Teachers discovered that talking to students in a virtual setting differed significantly from talking to them in person and needed training on how to talk to students in a virtual setting.

> Participants 1, 2, 7, 8, and 9 pointed out that Zoom was difficult to use. No training was provided to use Zoom or Google Meet, and Google Meet was the preferred platform for a virtual setting. Participant 8 shared that I would say I liked Google Meet better than the Zoom platform.

Participant 2 stated:

> that just knowing how to navigate Google Meet or Microsoft Teams for sharing a screen or recording. I remember when I first started, I didn't know how to mute. I did not know how to turn my camera off. I didn't know anything. Training that would have been helpful to know is this is how you mute; this is how you schedule a meeting. That was another thing like just figuring out how to schedule the meeting and send the link and start meeting, and that made it so other people could start the meeting and that I could share the hosts with other people or that other people could share their screen, just the ins and outs of Google Meet and Microsoft Teams or Zoom or whatever platform. I also think that districts need to pick a platform because I had someone on Zoom, someone used Teams, and someone used Google Meet, all within the same district. It was three, four, or five different platforms.

Participant 6 stated:

> I needed to know how to use the virtual tools so I could have the kids interact more and be more part of the lesson, especially with my kids, who were nonverbal and pretty much me showing the parents what to do at home. And just figuring out how to record lessons and how to best make it so parents were able to get involved with their kids.

Participant 8 stated: that training would have been helpful, taking the reading curriculum that we're using with special needs kids and having someone do a lesson and say here, this is what you show a picture or something.

Participant 1 also shared: that there was a need for training using the curriculum, which would have been helpful. Also, Participant 1 asked how can I get my students engaged. Are there games out there that can help or things they would enjoy?

Participant 3 shared:

> a need for some strategies on how to talk to the kids in the setting and how to set the boundaries and expectations. I tried to set those first by letting them show me their house, letting them show me their cats and animals, and then just setting those boundaries. It was hard, but then it was also the parents would be like, well, we're not feeling it today. So, we're not going to meet you today. You know, so just having that buy-in from parents how important it still is for us to meet virtually.

Teachers hoped to receive training to be better prepared in a virtual setting. Engagement strategies include best practices for engaging students in a virtual setting, such as when students are not paying attention and do not have their computer cameras on, and strategies for using chat features to engage students in responding to questions in a virtual setting. All participants identified training as a need.

Theme 3: Special Education Teachers Needed More Resources in a Virtual Setting.

Special education teachers were challenged to use instructional resources in a virtual setting. It was revealed that teachers needed a curriculum that could be used in a virtual setting and wanted more materials that could be streamed. Special education teachers used materials that were for an in-person learning setting.

Participant 3 stated: I use a lot of hands-on strategies and it is very hard to do in a virtual setting.

Participant 5 had similar experiences as Participant 3 and stated:

> it's really hard to do any type of hands-on learning or any type of experiential. It's harder to use manipulatives. I think the biggest challenge is there's not really a lot of curriculum that I know about, so a lot of times, I'm reinventing things or making things. It's different because every year, you get different kids with different needs, and it's hard to use what you used before.

Participant 10 share: that Read 180 math curriculum was challenging to use in a virtual setting.

Participant 7 stated: I would literally pull curriculum from Teachers Pay Teachers, and those materials were not approved by the district. I did have to modify a lot, but I didn't really feel confident.

Participants in this study needed more resources to use in a virtual setting. Special education teachers used in-person materials and teacher-made materials to meet students' individualized needs. The findings revealed that teachers needed more resources specifically designed for the virtual setting to engage students.

Evidence of Trustworthiness

Trustworthiness presents confidence in a study's data collection, interpretation, methods, and findings of a study (Connelly, 2016). The procedures in place were created to establish a credible study. Trustworthiness criteria used in this study included dependability, credibility, transferability, and confirmability to ensure credibility. The

procedures were necessary to establish a reliable study with rigor and quality (Ravitch & Carl, 2021). Monitoring the trustworthiness of this study was necessary to produce a quality study.

Credibility

Credibility is confidence that the data is truthful and produces credible findings for a study (Connelly, 2016; Stahl & King, 2020). Member checking was used to support the credibility of this study (McKim 2023; Ravitch & Carl, 2021). The themes were shared with participants to review and provide their feedback to ensure their experiences were accurately captured. Participants reviewed the themes and agreed that the themes represented their experiences in a virtual setting. Clarifying questions were asked during the interviews to ensure accurate interpretations were captured and helped eliminate biases. There were no adjustments to the credibility strategies stated in Chapter 3.

Transferability

The findings derived from this study may be transferred and applied to other similar settings and people (Stahl & King, 2020). Thick descriptions were used to describe teachers' experiences and settings, so results might be applicable to similar settings or teachers. Excerpts and quotes from the transcript were provided to include clear and detailed descriptions of participants' experiences, support the interpretation, and explain the findings. There were no adjustments to the transferability strategies stated in Chapter 3.

Dependability

The dependability of a qualitative study is ensuring the consistency of the data collection, analysis, and reporting of the findings (Connelly, 2016; Ravitch & Carl, 2021). I used an audit trail and recorded all steps for the method, data collection, and data analysis process, as well as when I presented the interviewing questions. The questions were presented in the same order to maintain consistency. I took notes and reviewed the audio recordings for accuracy to ensure consistency throughout this study. This study was conducted as intended with no variations. There were no adjustments to consistency strategies, as stated in Chapter 3.

Confirmability

An audit trail was used to monitor and reflect on the research procedures (Stahl & King, 2020). I used a reflexivity journal to support the confirmability of this study and record my steps. I examined my thinking to ensure my perceptions did not influence this study (Burkholder et al., 2020; Stahl & King, 2020), and this aligns with the plan that is recorded in Chapter 3. There were no adjustments to consistency strategies, as stated in Chapter 3.

Summary

The key findings revealed in this study were the challenges K-12 special education teachers experienced in a virtual setting using instructional and engagement practices. One common challenge that all participants experienced was that more training was needed in a virtual setting. Teachers navigated technology and relied on colleagues

for assistance. Three themes were identified that captured teachers' experiences. Chapter 5 includes the discussion, conclusion, and recommendations for this study.

Chapter 5: Discussion, Conclusions, and Recommendations

This basic qualitative study aimed to explore K-12 special education teachers' experiences using effective instructional and engagement practices in a virtual setting for students with disabilities. The nature of this qualitative study was based on a qualitative method that involved gaining an understanding of K-12 special education teachers' experiences using effective instructional and engagement practices in a virtual setting for students with disabilities. I conducted interviews and analyzed data using coding and thematic analysis procedures. Qualitative data analysis involves reading data, creating open and axial codes, and identifying patterns and emergent themes (Braun & Clarke, 2021; Xu & Zammit, 2020).

The results of this study were guided by the research question: What are K-12 special education teachers' experiences using effective instructional and engagement practices in a virtual setting for students with disabilities? The results show that each teacher had different skills using technology, and all teachers had similar experiences in a virtual setting. Special education teachers needed more training in a virtual setting and had to problem-solve issues with technology, instructional, and engagement practices. Chapter 5 of this study will present the interpretations and findings, the study limitations, recommendations, implications, and conclusion.

Interpretation of the Findings

This study addressed the problem of investigating K-12 special education teachers' experiences using effective instructional and engagement practices in a virtual setting for students with disabilities. This basic qualitative study aimed to explore K-12

special education teachers' experiences using effective instructional and engagement practices in a virtual setting for students with disabilities. The research question, the themes from the analysis, and the conceptual framework allowed me to understand K-12 special education teachers' experiences in a virtual setting.

The findings were analyzed based on the research question, the themes, and the conceptual framework. The conceptual framework of this study was Kearsley and Shneiderman's (1998) engagement theory. Kearsley and Shneiderman argued that the framework promotes meaningful engagement and learning in an interactive setting. This framework helped confirm and provided insights into K-12 special education teachers' experiences in a virtual setting.

Participants provided data that addressed the research question, and the results confirmed that the findings are consistent with existing literature. Participants had similar experiences and stated they received no training in a virtual setting. Teachers were challenged with instructional practices, and training was needed to use technology. The findings are consistent with Donnelly et al. (2022) and Steed and Leech (2021) studies that teachers had limited training.

The district provided a curriculum that was designed for in-person learning, and participants needed time to adapt the curriculum and collaborate with colleagues. The virtual setting was a new format, and teachers wanted training to learn how to adapt the curriculum and see examples of how lessons were taught in a virtual setting. Participant 1 stated: "No training was received to teach in a virtual setting. I relied heavenly on my

prior knowledge I had with technology." Those findings are consistent with Porter et al. (2021), who found that teachers had limited preparation and training.

Participants requested digital resources to eliminate time spent creating activities. Teachers used Seesaw or Schoology and still needed training. Participants needed time and training to learn how to use the resources in a virtual setting, and the data is consistent with Porter et al. (2021) and Hamilton et al. (2020) studies. Participant 2 created authentic learning opportunities for students during math. Students located objects around the house to solve math problems. That was a different way of teaching, and teachers made learning fun and authentic. Special education teachers created meaningful activities that can be used in multiple classes. The data aligns with Kearsley and Shneiderman's (1998) engagement theory of engaging in meaningful activities. The data suggests that teachers wanted training on using technology and digital curriculum in a virtual setting but had to learn those resources independently. Also, the data indicated that teachers needed time to learn all aspects of a virtual setting to use instructional and engagement practices. Data also suggests that special education teachers needed evidence-based web-based activities to ensure effective curricula were used in a virtual setting for students with disabilities.

Training was necessary using technology in a virtual setting. Special education teachers were challenged to use technology and navigate its features. Participant 2 stated: that training was needed "just knowing how to navigate Microsoft Teams for sharing a screen or recording. I remember when I first started, I didn't know how to mute. I did not know how to turn my camera off." Teachers spent time learning how to navigate

technology and required support from colleagues. The data is consistent with Pressley's (2021) study that teachers received minimal training and aligns with Kearsley and Schneiderman's (1998) framework. The data suggests that special education teachers spent considerable time learning how to use technology to be confident in a virtual setting.

Special education teachers learned that engagement practices in a virtual setting differed from those in person. Participant 6 shared that there was a need for planning to create meaningful lessons, and the data aligns with Kearsley and Schneiderman's (1998) framework of engaging in creative and meaningful instruction, which involves making learning purposeful. Based on the data, participants made learning fun by creating meaningful activities. Although participants received minimal training in a virtual setting, the data suggests that special education teachers embraced the online setting and provided authentic experiences.

Limitations of the Study

A qualitative design may be a limitation because this study only consisted of interviews and was produced in a narrative format. Interviews and data collected from one school district may also be a limitation because data were collected only from one setting to understand teachers' experiences in a virtual setting. Another limitation was that the interview questions were presented in the same order to protect the study's validity. This study was limited to K-12 special education teachers, and their experiences in a virtual setting varied. The transferability of the study's results may potentially generalize to similar learning environments due to the detailed descriptions (Stahl &

King, 2020). I used a reflexivity journal to monitor biases and ensure my ideas were not reflective in this study (Dodgson, 2020; Stahl & King, 2020).

The credibility of this study was the confidence that the data were truthful and credible findings were produced (Stahl & King, 2020). K-12 special education teachers participated in this study and taught virtually. The teachers taught in special education settings, including resource rooms, pullout, inclusion, and self-contained classrooms.

The speech-language pathologists, adaptative physical education teachers, transition programs, and early childhood special education professionals should be included in this study. More information about their perspectives on using instructional and engagement practices with students with disabilities in a virtual setting is needed (Johnson et al., 2023). Special education professionals need to understand how to serve individuals with disabilities.

Recommendations

The key findings from this study yielded several recommendations. This study was limited to K-12 special education teachers, and it is recommended that early childhood special education teachers' perspectives be investigated on using instructional and engagement practices in a virtual setting. This research was conducted in one district, and more research is recommended, expanding to multiple districts, and exploring special education teachers' perspectives. Further research is needed to investigate the technology's capacity to support educators in a virtual setting, and this aligns with Philippakos et al.'s (2022) study, which found that teachers had limited experience using technology in a virtual setting. Future research is needed to investigate web-based

curricula for elementary and secondary settings that may improve academic outcomes for students with disabilities. Research is recommended to conduct a quantitative study to compare general education and special education teachers' experiences in a virtual setting in multiple regions. This study also recommends conducting a study with higher education to understand teachers' experiences in a virtual setting. Another recommendation is to replicate this topic and conduct a comparison analysis with special education, general education, and early childhood teachers' experiences.

Implications

This basic qualitative study aimed to explore K-12 special education teachers' experiences using effective instructional and engagement practices in a virtual setting for students with disabilities. The data collected and the research question supported the understanding of teachers' experiences in a virtual setting that can contribute to existing literature and practice (Barbour et al., 2020; Johnson et al., 2023; Trust & Whalen, 2020). The potential positive impact may improve K-12 special education teachers' knowledge of effective instructional and engagement practices in a virtual setting and improve academic outcomes.

The social implications may enhance teacher's knowledge and improve positive educational outcomes for students with disabilities in a virtual setting. Another contribution to social change includes the findings of this study, which may lead to future studies and inform practices using instructional and engagement practices in a virtual setting. The social implications of this study can inform stakeholders and help them understand special education challenges in a virtual setting.

It is recommended that special education teachers be prepared for virtual settings through ongoing professional development. Training is needed to navigate technology and its features to support teacher preparation. Engagement practices are different in virtual settings for K-12 learning environments, and special education teachers would benefit from research identifying different levels of practices that support students with disabilities in a virtual setting. Teachers may use the results from this study as a guide when using instructional and engagement practices in a virtual setting.

Conclusion

The purpose of this basic qualitative study was to explore K-12 special education teachers' experiences using effective instructional and engagement practices in a virtual setting for students with disabilities in a midwestern state of the United States. The results revealed the current challenges of K-12 special education teachers' experiences in a virtual setting. The findings revealed three main themes: special education teachers received limited training in a virtual setting, special education teachers needed more training in a virtual setting, and special education teachers needed more resources in a virtual setting.

The problem in this basic qualitative study was that K-12 special education teachers were challenged to use effective instructional and engagement practices in a virtual setting for students with disabilities. In understanding the problem, the results revealed that K-12 special education teachers received minimal training in a virtual setting. All teachers had different levels of technology skills and were willing to learn all aspects of a virtual setting. However, teachers needed training and resources to

effectively use instructional and engagement practices in a virtual setting for students with disabilities.

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Appendix A: Participant Demographic Questionnaire

1. Participant's name Preferred email address
2. Grade level taught or are teaching in a virtual setting.
    a. Kindergarten - 5th
    b. 6th - 8th
    c. 9th - 12th
3. Virtual setting classroom platform.
    a. Resource setting
    b. Pullout setting
    c. Inclusion setting
    d. Self-contained
4. Number of students in the setting.
    a. 1 - 5
    b. 6 - 10
    c. 11 - 15
    d. 16 - 20
    e. 20+
5. Licensed Teacher
    a. Yes
        i. Specialized License Area
            1. ASD – Autism Spectrum Disorder
            2. SLD – Specific Learning Disability

3. EBD – Emotional/Behavior Disability
4. SMI – Severely Multiple Impaired Disability
5. Other

b. No

6. Number of years teaching experience.

a. Less than 1 Year
b. 1 – 3 Years
c. 4 – 6 Years
d. 7 – 9 Years
e. 10 – 12
f. 13 – 15
g. 16+ Years

Thank you for taking time to complete the questionnaire. You will be informed of your participation status for this research.

Appendix B: Interview Questions

How was your day? Thank you for volunteering and taking time to answer questions about your experience. For this study, you are invited to describe your experiences using effective instructional and engagement practices in a virtual setting with students with disabilities. This interview will take about 30-60 minutes. You will receive a $10 Starbucks gift card at the end of the interviewing process. The criterion for this study is having a teaching license; you must be a K-12 special education teacher and teach or taught students with disabilities in a virtual setting. Do you have any questions before we start? Do I have permission to audio-record this interview? The interview will begin.

Interview Questions (IQ)

1. How long have you been teaching special education?
2. What grades have you taught/teaching?
3. What are some instructional practices you used during in-person learning?
4. Are those the same instructional practices used in a virtual setting?
5. Were the instructional practices used the same way in a virtual setting or modified?
    a. What is a good example of a modified instructional practice?
6. What challenges did you encounter using instructional practices in a virtual setting?
7. How did you overcome the difficulties you encountered in a virtual setting?
8. Share your experience with a successful instructional practice online.

9. What made the instructional practice successful?
10. Would you use the instructional practice again in the same way, or would you modify it? Why?
11. What training did you receive to teach online?
12. Which instructional practices were used in the online training?
13. What training might be helpful to teach online?
14. What support did you have during in-person learning?
15. What support do you have in-person and use in a virtual setting?
16. Were the supports you had in an in-person setting used the same way in a virtual setting? What was the same, and what was different?
17. What challenges did you encounter with support in a virtual setting?
18. How did you overcome the difficulties with support in a virtual setting?
19. Share your experience with success with support received online.
20. What made the support successful?
21. What are some resources you used during in-person learning?
22. Are those the same resources used in a virtual setting?
23. Were the resources used the same way in a virtual setting or modified?
    a. What is a good example of a resource that was modified?
24. What challenges did you encounter using resources in a virtual setting?
25. How did you overcome the difficulties you encountered using resources in a virtual setting?
26. Share your experience with a successful resource online.

27. What made the resource successful?
28. Would you use the resource again in the same way, or would you modify it? Why?
29. What training did you receive to use resources in a virtual setting?
30. Which resources were used in the online training?
31. What training might be helpful to use resources online?
32. What are some engagement practices you used during in-person learning?
33. Are those the same engagement practices used in a virtual setting?
34. Were the engagement practices used in the same way in a virtual setting or modified?
35. What challenges did you encounter using engagement practices in a virtual setting?
36. How did you overcome the difficulties you encountered in a virtual setting?
37. Share your experience with a successful engagement practice online.
38. What made the engagement practice successful?
39. Would you use the engagement practice again in the same way, or would you modify it? Why?
40. What training did you receive to use the engagement practice online?
41. Which engagement practices were used in the online training?
42. What training might be helpful to use engagement practices online?
43. What other information would you like to share?

Appendix C: Participants' Email

There is a new study about instructional and engagement practices in a virtual setting that could support K-12 special education teachers and educational leaders better understand the challenges in a virtual setting for students with disabilities. For this study, you are invited to describe your experiences using effective instructional and engagement practices in a virtual setting.

About the study:

- One 30-60 minute phone interview that will be audio recorded (no videorecording).
- You would receive a $10 Starbucks gift card as a thank you.
- To protect your privacy, the published study will not share any names or details that identify you.

Volunteers must meet these requirements:

- K-12 License Special Education Teacher
- Taught or currently teaching in a virtual setting.

This interview is part of the doctoral study for Angela Taylor, a doctoral student at Walden University. Interviews will take place during November 2023, December 2023, March 2024.

Please reach out Angela Taylor at angela.taylor17@waldenu.edu to let the researcher know of your interest. You are welcome to forward it to others who might be interested.

Appendix D: Research Ethics Approval Form A

Response Summary:

Research Ethics Approval Form A

This form is the first step of the required ethics approval process for doctoral studies, dissertations, and all other student/staff research projects that would be linked to Walden University in any way (i.e., published with a Walden affiliation, funded by Walden). All doctoral program studies require ethics approval from the IRB, even those that might be considered exempt from IRB oversight at other institutions.

Based on the responses you give, this branched form will skip the sections that do not apply for your study. FORM PURPOSE:

Your responses to this form will allow Walden's department of Research Ethics, Compliance, and Partnerships (RECP) to determine which ethics form(s), partner approvals, and Institutional Review Board (IRB) review steps your project would require in order to be in compliance with federal regulations and university policies, which include the following:

-protection of human subjects
-ethical partnerships with partner organizations -alignment with the University's social change mission -appropriate usage of scholarly tools

DIRECTIONS:

After reviewing the applicant's responses within this form, the IRB will email the applicant one of the following within 10 business days:

(a) a list of the documents that will be required for ethics approval of the proposed project; or
(b) a request for more information in order to determine which forms and documentation are needed for ethics approval of the project.
(c) a confirmation of when preliminary ethics feedback can be expected

NOTES FOR DOCTORAL STUDENTS:

Students should identify willing partner organizations/sites at the prospectus phase but hold off on obtaining

written site approval until the methodology chapter has been approved by the entire faculty committee.
Students should aim to turn in all of their ethics materials for Preliminary Ethics Feedback (PEF) before the proposal is

defended. Allow 2 weeks for each round of feedback. Two to three rounds of feedback is typical.

Please note that ethics approval cannot be finalized until after the proposal is fully defended and approved. (The IRB will be automatically notified when this occurs and will reach out to you within 2 business days to ask you to update your IRB documents with any changes that were made as a result of the proposal approval process).

Data collection that is begun prior to receiving explicit IRB approval from IRB@mail.waldenu.edu does not qualify for academic credit toward degree requirements. Researchers may NOT begin recruiting interviewees, survey respondents, or other individual participants prior to IRB approval. However, researchers are permitted to communicate with partner organizations about the logistics of the partnership prior to IRB approval.

Student researchers must remain enrolled in a course with their faculty supervisor during data collection.

GENERAL STUDY INFO

. 1a. Enter your official Walden email address. angela.taylor17@waldenu.edu

. 1b. Provide the title of the project.
Special Education Teachers' Experiences in a Virtual Setting

. 1c. Will any aspect of the study occur outside the USA? No.

RESEARCHER AFFILIATION

. 2a: Indicate your role at Walden University

Student

. 2b: Provide the Walden email address of your supervising faculty member.
jo.desoto@mail.waldenu.edu

. 2c: Provide your student number. A00343598

. 2d. Select which of the following describes your study. EdD dissertation/doctoral study

. 2e. EdD students: Do either of these apply to you? None of the above apply to me.

. 2f. The formal ethics review can only occur after proposal approval but students are encouraged to submit their ethics application for feedback any time after the proposal's methodology chapter has been approved by both committee members. Please confirm where you are in the process of incorporating your two committee members' feedback into your proposal's methodology chapter.

I have addressed both committee members' feedback on my methodology chapter.

DATA SOURCES

. 3a. Please copy in the research question(s) that this study will address.
What are K-12 special education teachers' experiences using effective instructional and engagement practices in a virtual setting for students with disabilities in a midwestern state of the United States?

Sample responses for 3b:
-Thematic coding will be applied to staff interview data. -Regression will be used to examine the degree to which student

engagement predicts student test scores.

. 3b. Please briefly describe the analyses that will be performed for this study.
The data analysis will include open, axial, and thematic coding to identify themes and patterns.

Notes for 3c:
-Observations require use of an approved observation coding sheet. -Taking notes during interviews doesn't count as observation data. -Screening questions do not count as a survey or assessment; they are

just for screening purposes, not for analysis.

. 3c. Mark all of the data types that will be analyzed in this study. Interviews

. 3d. (For interviews) Provide the inclusion criteria for the interviewees.
K-12 special education teachers in public schools who taught students with disabilities in a virtual setting.

. 3e. (For interviews) Regarding your interview content, mark all that apply. Work experiences only
Yes

Non-sensitive perspectives

No

PILOTING AND VALIDATION

Notes for section 4:

Piloting steps include practice interviews and survey roadtests to yield logistic and feasibility insights.
Validation steps include expert panels and psychometric/item analysis of questionnaires for reliability and validity.

. 4a. Will you do any type of piloting or instrument validation prior to the main part of your study? No.

DATA FROM ORGANIZATIONAL OPERATIONS (OPTIONAL SECTION)

Notes:

. 5a. Could conducting this study be considered part of the researcher's job or consultant responsibilities? (Yes, for DPA consultants.)

No.

PARTNER ORGANIZATIONS

Section 5 will screen whether the desired study dataset can be obtained from the researcher's employer or other partner organization.

Notes for 6a:
-A researcher might not need a partner organization if the participants can be reached using contact info from public websites, public directories, LinkedIn, social media, the researcher's professional network, or snowball sampling.
-Regarding the use of professional networks and snowball sampling: neither researchers nor their contacts/participants are permitted to recruit their own subordinates into the study (with the exception of anonymous surveys).

. 6a. Partner organizations can support a study in any of the following ways. Please mark all that apply. Not applicable: there will be no partner organization providing any of the support roles listed below. My

data/participants are accessible without permissions or help from an organization.

ONLY FOR STUDIES RELATED TO LICENSED, ACCREDITED, OR REGULATED ACTIVITIES

. 7a. Is this study about a specific organization's service or product that is overseen by a licensing board, accreditation body, or regulator? (e.g., education, psychotherapy, health care, medical devices, dietary supplements, etc.)

No, my study is not about any specific organization's delivery of education, psychotherapy, nursing, or any other licensed, accredited, or regulated activity.

RECRUITMENT STRATEGIES

. 8a. Indicate which recruitment procedure(s) will be used. (Mark all that apply). Recruiting through my own professional network
Direct calling/emailing/mailing using publically available contact info

Notes for 8b:
-Walden's Participant Pool is a public, virtual bulletin board that Walden students and alumni are encouraged to view if they are interested
in volunteering for studies. At the start of each month, an announcement of new studies is sent to several hundred members of the Walden community who have opted into the pool. This Participant Pool option is meant to supplement other recruitment strategies, not serve as the sole method of study recruitment.
-The participant pool website is not appropriate for the following:

-studies seeking participants in a particular geographic area (such as a city or state)
-studies seeking participants who work for a particular employer -studies with sensitive topics or more than minimal risk

-The pool is appropriate for recruiting students and alumni in the following categories:

-educators
-military/veterans
-online students/alums
-healthcare workers
-mental health workers
-general population (e.g., caregivers, consumers, patients, etc).

. 8b. Do you want to post your study invitation Walden's Participant Pool web site to recruit Walden students/alumni?

No, I do not perceive that there are likely to be Walden students/alumni who meet my inclusion criteria.

. 8c. I agree to only recruit participants using the Walden templates for email, social media, and flyer communications posted here.

I agree.

MINORS AND VULNERABLE POPULATIONS

Notes for 9a (Examples of reasonable measures to ensure participants are adults):
-stating in recruitment materials that participants must be at least 18 to volunteer

-relying on population parameters to limit the sample to adults only (for example, recruiting school principals provides reasonable assurance that only adults will be in the sample, since it is extremely unlikely that a minor would be a school principal)

. 9a. Select the response that describes the role of minors in your study.

I understand that minors (people 17 and under) may not be unknowingly recruited into an adult research study so I will take reasonable measures* to ensure that I don't accidentally recruit minors into my sample.

Notes for 9b:
-There is an important difference between targeting vulnerable categories of adults versus just including them. Deliberate, targeted recruitment of individuals in these categories can be approved when the ethical justification and protective measures are sufficiently documented via the ethics review process. The purpose of this part of the form is to find out whether recruitment of vulnerable adults is required by your research design. For example, a study about people with depression does require recruitment of individuals with an emotional disability. In contrast, a study about educators might happen to include some individuals with depression but the study design does not require recruitment of people with depression.
-A common misunderstanding is that vulnerable individuals should be screened and excluded. Exclusion of individuals in these categories cannot be approved without a compelling reason. It is necessary to weigh the ethical principles of beneficence against justice. In most social science studies, inclusion wins out over exclusion because the harms of exclusion greatly outweigh the minimal risks presented by questionnaires and interviews.
-Social scientists should include vulnerable adults in the sample when they are part of the population impacted by the research problem, as long as sufficient protections are in place. In addition, asking questions to screen for all possible vulnerable statuses would be unnecessarily invasive, while yielding minimal protections. Thus, it is acceptable in most social science studies to rely on the informed consent process to permit each vulnerable adult (or their guardian) to determine whether participation is in their best interest. The IRB will provide further tailored guidance based on your responses.

. 9b. So that we can provide guidance on how to protect vulnerable populations, please mark whether your research design specifically requires the recruitment of vulnerable adults in any of the categories below.

none of the above-- My sample might happen to include vulnerable adults (without my knowledge) but I will not be specifically seeking any individuals in these vulnerable categories to provide data for my study.

. FOR NON-VULNERABLE PARTICIPANT RECRUITMENT: This is the last page to complete on this form.

NEXT STEPS: The IRB will be in touch within 10 business days with tailored directions regarding how to secure ethical approvals. In the meantime, you can start working on your next ethics form if you would like. Your responses indicate that your study does not require data collection from vulnerable individuals. If the IRB confirms that this is appropriate, you would be using Form C. You will receive confirmation of which additional forms and documentation are needed after the IRB reviews your responses in this form. If you have questions as you are working on these forms, please visit IRB office hours or email IRB@waldenu.edu.

Your responses to the previous questions indicate that you are seeking approval for data collection that does NOT require recruitment of one or more vulnerable populations. To submit this application, please confirm.

Yes, I confirm that my study does not require recruitment of vulnerable individuals (though they might happen to be in the sample if they otherwise meet the inclusion criteria). I hereby submit this application.

Embedded Data:

N/A