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Elementary School Teachers' Perceptions of Digital Technology Integration into Instructional Curriculum

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This is to certify that the doctoral study by

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Walden University
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Abstract

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MA, Hamdan Bin Mohammed Smart University, 2011

BS, Higher Colleges of Technology, 2007

Dissertation Submitted in Partial Fulfillment

of the Requirements for the Degree of

Doctor of Education

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August 2023

Abstract

Digital technology is used in elementary classrooms; however, there is a gap in practice regarding elementary school teachers' perceptions of integration of digital technology into the instructional curriculum in the study district. The problem that was addressed through this study was elementary school teachers are reporting challenges with the integration of technology into the instructional curriculum. The purpose of this basic qualitative study was to explore elementary school teachers' perceptions regarding the integration of digital technology into the instructional curriculum. The analysis, design, development, implementation, and evaluation (ADDIE model) and Hallinger and Murphy's instructional leadership model, involving evaluation, supervision, and coordination of instruction and the school curriculum, were used as the conceptual framework. Using a basic qualitative design, elementary school teachers' perceptions regarding the integration of digital technology into the instructional curriculum were explored. Data were collected using semistructured interviews of 12 elementary school teachers who met the selection criteria of (a) holding a teaching degree, (b) having experience integrating technology into the curriculum, and (c) having a minimum 3 of years of teaching experience. Data were analyzed using a priori and open coding to identify codes, categories, and themes. Themes emerged on (a) vision and goal for technology integration, (b) technology integration, and (c) needed support for technology integration. The findings may inform district stakeholders about the needs of teachers to integrate digital technology into the instructional curriculum, thereby strengthening the delivery of instruction, resulting in improved student performance.

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Dedication

I dedicate this work to my beloved mother, the reason why I am here today. To my dear father, despite life's challenges, I have no doubt he will always stand as the proudest father. To Mama Sara, who is no longer with us, your presence is always felt through our accomplishments To my supportive husband and precious children, Saoud, Retaj, Alreem, Rayan, and little Almaha, you are my motivation and inspiration towards achieving my goals.

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Chapter 1: Introduction to the Study

Digital technology is used in elementary classrooms; however, little is known about elementary school teachers' perceptions regarding the integration of digital technology into the instructional curriculum. The purpose of this basic qualitative study was to explore elementary school teachers' perceptions regarding the integration of digital technology into the instructional curriculum. The instructional leadership model developed by Hallinger and Murphy (1985) is the conceptual framework because this study involves evaluation and supervision of instructions and coordinating the school curriculum. Elementary schools within the study location develop their school vision and goals to promote student academic achievement and engagement.

Digital technology is used to support teaching and learning in elementary classrooms (Emre, 2019). Moreover, technology has capacities to communicate, and educational institutions reach millions of students worldwide (Emre, 2019). Educational institutions automate their operations and digital transformation has not only become a requirement but also a need for all modern businesses (Anagün, 2018). Students have access to technology especially to digital media (Jannah et al., 2020). Moreover, students use laptops, notebooks, and Chrome book devices for academic reasons (Jannah et al., 2020). Furthermore, students keep in touch with teachers regarding course curriculum and academic progress (Jatileni & Jatileni, 2018). The research design used a basic qualitative method. I used the components of the instructional leadership model to develop the interview questions. The findings of this study may have implications for positive social change by providing teachers with strategies regarding the integration of

digital technology into the instructional curriculum. This chapter will provide the background of the study, the problem statement, the purpose of the study, the conceptual framework, the nature of the study, and the definitions, assumptions, limitations, scope, and significance of the study.

Background

Previous generations were not endowed with the privilege of having access to technology by using a handheld device (Jannah et al., 2020). Gradually, public communication methods started to transform from traditional print media to digital media during the early 2000s (Jannah et al., 2020). Embedded devices were launched, including the latest generation of laptops, notebooks, and the currently popular Chrome book devices that generally appear to meet the needs and requirements of academia (Jannah et al., 2020).

Despite the remarkable advancements in educational technology and the integration of information technology (IT) into various aspects of the curriculum, there exists a notable gap in understanding the optimal ways to leverage these digital tools for enhancing student engagement and participation. While Moodle dashboards and online platforms offer opportunities for interaction and resource access, there is a need for comprehensive strategies that effectively harness the potential of these tools to foster deeper collaboration, critical thinking, and meaningful social or group activities among students. The current literature falls short in providing clear guidelines and evidence-based practices for educators to fully exploit the benefits of digital learning environments and promote holistic student development (Jatileni & Jatileni, 2018; Alokluk, 2018).

Addressing this gap is crucial for educators and institutions striving to create more interactive and impactful learning experiences in today's technology-driven educational landscape.

Problem Statement

The problem that was addressed through this study is elementary school teachers are reporting challenges with the integration of technology into the instructional curriculum. Digital technology is used in elementary classrooms; however, little is known about elementary school teachers' perceptions regarding the integration of digital technology into the instructional curriculum. The current research literature provides some guidance on the matter, but there is still much room for improvement (Kundu & Bej, 2021). The problem of integrating digital technology into the curriculum of elementary teachers is current, relevant, and significant to the discipline (Jebur et al., 2022; Kundu & Bej, 2021; Leema & Saleem, 2017; Qaddumi et al., 2021). There is a consensus among teachers that this is an important issue that needs to be addressed (Kundu & Bej, 2021). Digital technology is becoming increasingly prevalent in society, and elementary teachers need to be able to use it effectively in their classrooms (Kundu & Bej, 2021).

There are many benefits to integrating digital technology into the curriculum, including the ability to engage students in learning, personalize instruction, and prepare students for the future (Kundu & Bej, 2021). Despite the benefits of digital technology, some challenges need to be considered when integrating it into the curriculum (Bader et al., 2022). These challenges include the need for teacher training and support, the

potential for technology to create a digital divide, and the need to balance the use of technology with other instructional methods (Kundu & Bej, 2021).

Despite the growing body of research on integrating digital technology into elementary education, there remain significant gaps in practice (Qaddumi et al., 2021). One such gap is the lack of clarity on the role of elementary teachers in digital technology integration (Qaddumi et al., 2021). Elementary teachers need support in understanding how to use digital technologies to support student learning (Leema & Saleem, 2017). Moreover, although elementary teachers are generally positive about the integration of digital technology, they lack confidence in their ability to effectively use digital technology in their classrooms (Jebur et al., 2022). Given the importance of digital technology in today's world, we must close these gaps in practice. Elementary teachers play a vital role in integrating digital technology, and society must do everything it can to support them in this endeavor. Thus, digital technology is used in elementary classrooms; however, little is known about elementary school teachers' perceptions regarding the integration of digital technology into the instructional curriculum. There is a gap in practice regarding elementary teachers' perceptions of the specific challenges of integrating digital technology into the instructional curriculum.

Purpose of the Study

The purpose of this basic qualitative study was to explore elementary school teachers' perceptions regarding the integration of digital technology into the instructional curriculum. The research paradigm for this study was interpretivism (Hsu et al., 2021). This is necessary because the paradigm explained elementary school teachers'

perceptions of digital innovation in their curriculum (Hsu et al., 2021). Significant considerations for teachers include the availability of the necessary infrastructure (computer laboratories and software), as well as the amount of time allocated for the incorporation of new technologies (Hsu et al., 2021). When teachers try to integrate new forms of digital media and technology into the classroom, they often run into the following challenge: students misuse the technologies that they have access to (Hsu et al., 2021). The education of teachers and continuing education for professionals are necessary steps toward protecting children online (Hsu et al., 2021). Learning becomes easier and more applicable as a result of this because learning orientation fosters not just academic but also autonomous learning skills (Hammack & Ivey, 2019). Findings may include strategies for teachers to use regarding the integration of technology into the curriculum. The findings of this study may have implications for positive social change by providing teachers with strategies regarding the integration of digital technology into the instructional curriculum.

Research Question

The research question was formed to define a process for the study regarding data collection and analysis. I have formulated one research question to explore elementary school teachers' perceptions regarding the integration of digital technology into the instructional curriculum. The research question that guided this qualitative study is as follows.

RQ: What are elementary school teachers' perceptions regarding the integration of digital technology into the instructional curriculum?

Conceptual Framework

The conceptual framework is Hallinger and Murphy's (1985) instructional leadership model and the Analysis, Design, Development, Implementation, and Evaluation (ADDIE) model. Hallinger and Murphy identified factors that influence learning such as educators' roles of school superintendents, teachers, and other stakeholders. The instructional leadership model developed by Hallinger and Murphy involves the evaluation and supervision of teachers and the coordination of the school curriculum. Schools define the school vision and include school goals to monitor students' progress by communicating and framing school goals. Technology integration involves a clear school vision and consistency and quality regarding its integration in classrooms. The instructional leadership model assisted in understanding elementary school teachers' perceptions regarding the integration of digital technology into the instructional curriculum. Moreover, the instructional leadership model is selected for this to explain the study's significance and relevance, design the interview questions, and analyze the interview responses and literature review. I discuss the conceptual framework in more detail in Chapter 2.

The conceptual framework of the ADDIE model supports the five phases of analysis, design, development, implementation, and evaluation, from which the creation of effective training and performance support systems can be created (Yeh & Tseng, 2019). The ADDIE model is a procedure used by instructional designers and training developers (Su, 2022). Training developers and instructional designers can create engaging training programs by using the ADDIE model framework for instructional

design. ADDIE is a fairly simple step-by-step process (Jebur et al., 2022) and is used by teachers for the integration of technology into the instructional curriculum (Ratminingsih et al., 2018). In this study, a systematic implementation of the ADDIE approach was used to develop the interview protocol. The participants of this study were asked about the integration of technology into the instructional curriculum. The responses were used in the design and development phase to provide insights into how technology is integrated at schools (Makawawa et al., 2021).

Nature of the Study

This basic qualitative study explored elementary school teachers' perceptions regarding the integration of digital technology into the instructional curriculum. I used qualitative research to ask the participants general questions about their lived experiences (see Yin, 2014). A basic qualitative study was selected for this study because I focused on elementary school teachers' perceptions, attitudes, or opinions. I interviewed elementary school teachers to identify their perceptions of the phenomenon based on their lived experiences and views. The phenomenon explored in this study is the perceptions of elementary school teachers regarding the integration of digital technology into the instructional curriculum. I used an interview protocol and semistructured interviews to elicit elementary school teachers' responses about their perceptions regarding the integration of digital technology into the instructional curriculum.

The study employed a qualitative research design (Siefert et al., 2019). Interviews were the main source of data collection for this study. Using semistructured interviews, the researcher gains a deep understanding of the conversations they have with the

participants (Carl & Ravitch, 2021). The goal of data collection using semistructured interviews is for the participants to provide deep insights to answer the research question (Brooks & Normore, 2015). I conducted semistructured interviews with 10-12 participants. During the interviews, the researcher studies a phenomenon (Brooks & Normore, 2015). The phenomenon that was explored in this study is the perceptions of elementary teachers regarding the integration of digital technology into the instructional curriculum.

A sample for research is the number of participants (Margot & Kettler, 2019). A researcher uses selection criteria to select the participants to answer the research question (Chang & Peterson, 2018). The sample included 10 to 12 elementary school teachers. Elementary school teachers met the selection criteria of (a) holding a teaching degree, (b) having experience integrating technology into the curriculum, and (c) having a minimum of 3 years of teaching experience. I interviewed teachers via semistructured one-to-one interviews using a self-developed interview protocol. A researcher develops an interview protocol that contains open-ended interview questions (Humble et al., 2020). I studied descriptions, phrases, themes, and commonalities after the interviews are conducted. Because the participants were interviewed, rich qualitative data cannot be evaluated through quantitative statistical research and number data (Yin, 2014). Quantitative researchers use structured data and experiments, and qualitative researchers use interviews for the researcher to ask the participants general questions about their lived experiences (Yin, 2014). The researcher should ensure the collection of reliable data through appropriate interaction with each participant (Carl & Ravitch, 2021). The

research phenomenon explored in this study is the perceptions of elementary teachers regarding the integration of digital technology into the instructional curriculum. Data were analyzed using a priori coding using deductive codes based on the conceptual framework, and open, descriptive coding (see Bengtsson, 2016; Saldaña, 2016). Thus, a basic qualitative study is an appropriate design to focus on teachers' perceptions, attitudes, or opinions.

Definitions of Terms

Digital technology: Devices such as personal computers, tablets, cameras, and calculators (Leema & Saleem, 2017).

Elementary school teachers: For this study, these are individuals who teach students in Grades K-6. Elementary teachers typically hold a bachelor's degree in elementary education (Bader et al., 2022). Some elementary teachers may also have a master's degree in elementary education or a related field (Menon et al., 2020).

Instructional curriculum: A set of materials and activities designed to promote learning in schools. It typically includes a syllabus, lesson plans, and assessment tools. The instructional curriculum is often developed by teachers or educational experts and is implemented in schools or other educational settings (Leema & Saleem, 2017). The instructional curriculum is designed to help students acquire specific skills and knowledge. It is often based on the standards set by the state or district.

Technology integration: A well-coordinated use of digital devices as tools for problem-solving, deeper learning, and understanding to facilitate access to the curriculum (Bader et al., 2022).

Assumptions

The following assumptions are necessary to conduct this study based on design and methodology (Carl & Ravitch, 2021). An assumption is that the participants who will be elementary teachers know digital technology to answer the interview questions. Another assumption is that these teachers have experience integrating digital technology into the curriculum. Moreover, another assumption is that the participants provided honest responses to the interview questions (Burkholder et al., 2016).

Scope and Delimitations

The scope of this study was one public school district located in United Arab Emirates (UAE). The delimitation of this study was that only elementary school teachers participated in semistructured interviews. Middle and high school teachers were excluded from this study. I collected rich and in-depth information via interviews and used a self-designed interview protocol (Ravitch & Carl, 2016). I maintained a journal throughout the interview process study (Ravitch & Carl, 2016). Findings from this study were specific to the study site where they were collected. The study findings about technology integration into the curriculum may not be transferable to other elementary teacher populations.

Limitations

Several biases could influence the outcomes of this study on elementary school teachers' perceptions of the integration of digital technology into the instructional curriculum. A limitation of this study may be the availability of the participants (see Ravitch & Carl, 2016). I supported participant participation in the interviews by including

multiple interview dates and times from which the participants may select their preferences (see Ravitch & Carl, 2016). I also overcame this limitation by focusing on a sample of 10-12 participants and aiming for depth and breadth of responses from the participants.

My experience as a teacher may cause researcher bias. Qualitative researchers examine their own positionality as a fundamental part of inquiry (see Reich, 2021). To address my researcher bias, I maintained a journal to collect and analyze data for reflection and to record my values and beliefs. In my role at the local study site, I do not supervise or evaluate elementary school teachers. Other methods of overcoming the limitation of my personal bias included the use of reflexive bracketing, an audit trail, and member checking (see Ravitch & Carl, 2016).

The main limitation of this study was the participants because elementary school teachers were interviewed from one public school system in an eastern region of the UAE. The second limitation is the sample size of participants. The third limitation is that the perspectives of the participants may not reflect those of teachers in other regions.

The fourth limitation is my personal biases in the use of digital learning in the elementary classroom. A further limitation of this study is the timeframe of the interviews and the location of the study site. One uncertainty is whether the participants provided honest responses to the interview questions on the challenges to and support for the integration of technology in the curriculum. I followed ethical procedures to protect the rights of the potential participants.

Significance

This study is significant because the results of this dissertation may inform district stakeholders on how to best support elementary school teachers with the integration of technology into the curriculum. In addition, the information obtained may also provide insights into the challenges elementary teachers are experiencing related to technology in the instructional curriculum, thus these findings may result in better supporting elementary teachers in technology integration in elementary classrooms. The findings of this basic qualitative study may include filling the gap in practice related to the perceptions of technology integration and the strategies to help teachers find more effective ways of integrating technology into the classroom (see Firat, 2020). The potential findings of this research may include suggestions for support for needed strategies for elementary school teachers to apply instructional practices to support students.

A study has the potential to contribute to both practice and policy in several ways (Nikolopoulou, 2020). First, the study findings may help to identify what teachers can do to integrate digital technology into the curriculum (see Gagnier et al., 2022). This information can then be used to create professional development programs and resources that better meet the needs of teachers. Additionally, the study findings may inform policy decisions on the integration of digital technology into the curriculum. For example, the findings from this study could contain implications for increased funding for professional development or for resources for integrating digital technology. Perhaps the results from

this study could inform stakeholders regarding teacher needs related to digital technology integration in elementary classrooms in the study district.

The goal of technology integration is to assist students in making connections so they can participate in activities that are meaningful to them, relevant to their lives, and applicable to their routines (Nikolopoulou, 2020). The goal of incorporating theory from the classroom with knowledge and experiences gained in the real world is to achieve the integrated curriculum's stated purpose (Gagnier et al., 2022). Students can acquire and apply foundational knowledge in all subject areas if the teaching and learning processes are integrated, and they can also develop positive attitudes that will support their academic success throughout elementary school if these processes are implemented (Firat, 2020). The interdependence of many aspects of reality is recognized and emphasized through integration (Bader et al., 2022). Technology integration is beneficial to one's understanding of the curriculum content. Integrated learning encourages participation in activities that are relevant to the real world (Bader et al., 2022). Technology integration serves as a connecting mechanism for a variety of academic subfields. It develops one’s capacity for critical thinking.

Summary

Digital technology is used in elementary classrooms; however, little is known about elementary school teachers’ perceptions regarding the integration of digital technology into the instructional curriculum. There is a gap in practice regarding elementary teachers’ perceptions of the specific challenges of integrating digital technology into instructional curriculum. The purpose of this basic qualitative study was

to explore elementary school teachers' perceptions regarding the integration of digital technology into the instructional curriculum. The conceptual framework is Hallinger and Murphy's (1985) instructional leadership model and the ADDIE model. Hallinger and Murphy identified factors that influence learning such as educators' roles of school superintendents, teachers, and other stakeholders. The instructional leadership model developed by Hallinger and Murphy involves the evaluation and supervision of teachers and the coordination of the school curriculum. Schools define the school vision and include school goals to monitor students' progress. The research design used a qualitative method. I used the components of the instructional leadership model to develop the interview questions. Data were collected using semistructured interviews via Zoom. The sample was 12 elementary teachers who were purposively selected for being teachers for at least 3 academic years and have integrated technology into the curriculum. Thematic analysis was used to analyze interview transcripts for emergent themes. Findings may include strategies for teachers to use regarding the integration of technology into the curriculum. The findings of this study may have implications for positive social change by providing teachers with strategies regarding the integration of digital technology into the instructional curriculum. In Chapter 2, I will synthesize the research and describe the current themes in the literature related to the phenomena that are the focus of this study.

Chapter 2: Literature Review

Researchers addressing the problem of integrating digital technology into the curriculum of elementary teachers is predominant in the literature (Jebur et al., 2022; Kundu & Bej, 2021; Leema & Saleem, 2017; Qaddumi et al., 2021). Teachers' continual assistance and support is necessary to integrate technology into the instructional curriculum (Kundu & Bej, 2021). Digital technology is used in elementary classrooms; however, little is known about elementary school teachers' perceptions regarding the integration of digital technology into the instructional curriculum. The problem that was addressed through this study is elementary school teachers are reporting challenges with the integration of technology into the instructional curriculum. The purpose of this basic qualitative study was to explore elementary school teachers' perceptions regarding the integration of digital technology into the instructional curriculum. For this reason, the literature search will be extensive. In addition, the present literature provides extensive information about digital technology and subsequent innovations in that field. The chapter includes the literature search strategy and the conceptual framework that emphasizes key concepts. The last section of the chapter provides a synopsis of the most significant aspects of the reviewed literature.

According to the self-efficacy perspective, the ability of a teacher to successfully acquire the learning objectives of their pupils is directly tied to their capacity to successfully integrate information and communications technology (ICT) into the classroom (Qaddumi et al., 2021). Given the significance of teachers' self-efficacy in the successful integration of ICT, numerous researchers have advocated for the development

of training programs to aid instructors in polishing their pedagogical and technical abilities (Noben et al., 2021). These programs have been shown to help instructors polish their abilities to integrate ICT into the classroom (Noben et al., 2021). During the COVID-19 phase, there was a paradigm shift away from face-to-face education and toward online learning (Maqsood et al., 2021). This was to the advantage of both instructors and students because online learning allowed teachers and students to develop their technical competency by using a variety of digital tools and platforms. Researchers found the use of a certification decision matrix was an effective means of ensuring the efficacy of both the online training and the preparation of teachers (Hsu et al., 2021). In addition, Hsu et al. (2021) found a substantial association between the technical, pedagogical, and content knowledge of teachers and their technological skills, demonstrating that the incorporation of ICT enhances the quality of the teaching and learning process. In addition, the researchers found a significant relationship between teachers' expertise and effective integration and use of technology with students. Instructors had positive attitudes about the use of technology in the classroom and that the degree to which teachers used technology was substantially connected with the level of technical expertise they had (Jannah et al., 2020**)**.

Literature Search Strategy

The literature search strategy was based on a multiple sources content search that included the use of online search engines and the Walden University Library. A variety of search phrases provided access to current articles that were related to the problem statement and the study purpose. Google Scholar, Sage Inc, and ProQuest were used to

access scholarly, peer-reviewed publications, and journals to identify recent literature. ProQuest searched for dissertation examples, which then served to find pertinent papers depending on the topic of the research (Margot & Kettler, 2019). The keywords related to the study topic used in search engines included: *elementary curriculum, digital technology in schools, teachers' role in digital technology*, and *prospects of technology integration.*

Conceptual Framework

The conceptual framework is Hallinger and Murphy's (1985) instructional leadership model and the ADDIE model. Hallinger and Murphy identified factors that influence learning such as educators' roles of school superintendents, teachers, and other stakeholders. The instructional leadership model proposed by Hallinger and Murphy emphasizes the role of the school leader in promoting effective teaching and learning practices. The model is based on four key dimensions of instructional leadership: establishing goals and expectations, resourcing strategically, ensuring quality teaching, and promoting and participating in teacher learning and development. The model suggests that school leaders should focus on these four dimensions to promote instructional effectiveness and improve student outcomes.

The instructional leadership model developed by Hallinger and Murphy (1985) involves the evaluation and supervision of teachers and the coordination of the school curriculum. I used the instructional leadership model developed by Hallinger and Murphy as the conceptual framework because this study involves the evaluation and supervision of instructions and coordinating the school curriculum. School leaders define the school

vision and include school goals to monitor students' progress by communicating and framing school goals (Richardson, 2022). Technology integration involves a clear school vision and consistency and quality regarding its integration in classrooms.

The conceptual framework supports the five phases of analysis, design, development, implementation, and evaluation (the ADDIE model), from which the creation of effective training and performance support systems can be created (Yeh & Tseng, 2019). The ADDIE model is a procedure used by instructional designers and training developers (Su, 2022). Training developers and instructional designers can create engaging training programs by using the ADDIE model framework for instructional design. ADDIE is a fairly simple step-by-step process (Jebur et al., 2022) and is used by teachers for the integration of technology into the instructional curriculum (Ratminingsih et al., 2018). The best possible teachers, ones who can implement cutting-edge pedagogical strategies, are required in today's classrooms (Sands et al., 2018). Technology plays an essential part in the process of bringing innovation into the way teachers teach, and when it is properly incorporated, it provides students with assistance in accomplishing the learning goals they have set for themselves (Sands et al., 2018). Because pedagogical perspectives have such a significant influence on the instructional practices of instructors, they choose technological tools that align with their pedagogical philosophies and their preconceived notions of effective teaching and learning strategies (Sands et al., 2018). In this respect, the present research aims to explore elementary school teachers' perceptions regarding the integration of digital technology into the instructional curriculum.

Over the previous 5 years, there has been a considerable rise in the number of researchers who discuss teaching-learning practices that integrate technology. The bulk of the studies that were identified were carried out at universities and colleges (Siefert et al., 2019). Education research that integrates technology has maintained its appeal among participants at the university level owing to its accessibility and widespread use; however, it is believed that integrating technology into the processes of teaching and learning will help to meet the expectations of pupils (Siefert et al., 2019). To have a better knowledge of how technology might be incorporated into teaching and learning practices, further research needs to be conducted both at the college and school levels (Li et al., 2018).

The concepts that support this study include using the five phases of the ADDIE model regarding effective training and performance support systems can be created (see Yeh & Tseng, 2019). The ADDIE model is the procedure used by instructional designers and training developers. Training developers and instructional designers created engaging training programs by using ADDIE model instructional design framework. Step-by-step, the ADDIE model represents an instructional design process in a concrete sequential manner and reflects a simple process that can be used to implement technology in the curriculum (Miranda & Pacho, 2022).

The ADDIE model is a systematic approach to instructional design that has been used in education for several decades. The model consists of five phases: analysis, design, development, implementation, and evaluation. The analysis phase involves identifying the instructional problem, the learners, and the learning objectives. The design

phase involves developing the instructional strategy, selecting the appropriate media and materials, and designing the evaluation plan. At this phase, learnings from the first step are applied to make decisions by including strategies, assessment, and feedback (Alodwan & Almosa, 2018). The development phase involves creating and producing instructional materials. The implementation phase involves delivering the instruction to the learners. Finally, the evaluation phase involves assessing the effectiveness of the instruction.

The logical connections between the framework presented and my study are exploring challenges and support for teachers regarding technology integration in the instructional curriculum. ADDIE is used by many professional instructional designers to develop technology-based courses (Hamizi Li et al., 2022). ADDIE has almost reached the status of a standard for professionally developed, high-quality distance learning programs that may be printed or completed online (Fessakis & Prantsoudi, 2019). In addition, it is often used in the e-learning and training offered by corporations.

I used the instructional design model of ADDIE to develop the interview protocol. Specifically, I developed open-ended interview questions to collect qualitative data from the potential participants. I also used the literature review and this conceptual framework to analyze the interview transcripts. The analysis of interview responses assisted my exploration of elementary school teachers' practices that successfully integrate the use of technology into the instructional curriculum (Emre, 2019).

In this study, a systematic implementation of the ADDIE approach was used. The participants in this study were asked about the integration of technology into the

instructional curriculum. The responses were used in the design and development phase to provide insights into how technology is integrated at schools (Makawawa et al., 2021).

Literature Review Related to Key Concepts

A review of the literature that relates to the key variables of the study on *Elementary School Teachers' Perceptions of Digital Technology Integration into Instructional Curriculum* was conducted. The following variables have been identified as important to the study: teacher beliefs about digital technology, teacher attitudes toward digital technology, teacher self-efficacy and digital technology, and teacher perceptions of the impact of digital technology on instruction (Gagnier et al., 2022).

Teaching and learning strategies that integrate ICT enable teachers and students to keep in contact with one another and help students overcome barriers in their academic careers. According to Liu et al. (2021), students should be encouraged to participate in online learning activities via the usage of social media platforms. As a result, teachers should provide a wide range of communicative and group discussion activities for students to do so that they may enhance their capacity to absorb new material, find solutions to challenges, and improve their communication skills with teachers and classmates.

The degree to which teachers can effectively incorporate ICT into their teaching practices is significantly influenced by the degree to which teachers believe in their ability to do so (Kundu & Bej, 2021). This is because of the relevance of the technical and professional abilities of instructors in the process that is being described. Publications that were examined by experts in the field provide support for the hypothesis that

improving instructors' capabilities in several ways may be accomplished by integrating ICT into learning and teaching activities. Technology-integrated educational practices, according to Watson and Rockinson-Szapkiw (2021), increase both the pedagogical and technical skills of teachers, as well as the quality of their teaching. According to the results of the study, the most often mentioned disadvantage, when contrasted with the benefits, was the teachers' lack of technical skill. Hassan (2021) discovered a situation quite similar to this one, in which faculty members had difficulty incorporating ICT into their instructional strategies due to a lack of technical skills. To address this, the responsible authorities must play a supportive role by offering training programs to strengthen the technical competence of instructors. In addition to taking specific actions to assure that ICT is appropriately integrated into educational institutions, the government should also give incentives or rewards to recognize the accomplishments of teachers (Hsu et al., 2021). It is necessary to have both sufficient resources and a contemporary infrastructure to successfully incorporate technological methods into educational practices (Ashraf et al., 2022). Inadequate infrastructure and inadequate resources are the second-most often cited difficulties in the studies that were found to inhibit teachers from successfully incorporating technology into their teaching practices.

García-Morales et al. (2021), who addressed similar challenges, claimed that effective teaching and learning methodologies need appropriate infrastructural and technological resources to be maintained. In this regard, the appropriate authorities should set aside sufficient resources and supply them with the required equipment and facilities to make it simpler for instructors and students to make use of ICT in the

classroom. For students to effectively learn, they need to actively participate in class and interact with both their teachers and their fellow students (Kim, 2020). However, according to the findings in the reviewed research, teachers do not consider face-to-face training to be more interactive than online education (Redmond & Lock, 2019). This is likely due to the apparent lack of connection with students and their active involvement in online education. As a result, teachers need to use activities such as computer-supported collaborative concept mapping in the classroom to increase students' level of comprehension and their level of interaction with both teachers and other students.

The primary responsibility for determining what the present needs are and determining educational aims and objectives in response to those requirements lies with governing bodies. This is necessary to attain the outcomes that are intended (Akram & Yang, 2021). On the other hand, the absence of predetermined educational policies has been identified as a significant barrier that prevents educational practices from effectively integrating technology. And these absences make it difficult to overcome the obstacles that were investigated in the publications that I reviewed. The concerned educational authorities should promptly implement rules that integrate ICT into instructional practices that fit the nation's existing needs and academic environments at all grade levels (Taghizadeh & Hasani, 2020).

Communication Technology

For instructors to successfully use information and communication technology in their teaching practices, they need adequate time to fulfill their obligations as teachers. According to the publications that were reviewed, teachers do not have enough time to

execute all the pedagogical tasks that are essential to incorporating ICT into their instructional practices. These pedagogical obligations include activities such as preparing lessons, taking notes, and speaking. According to the findings of Akram et al. (2021b), teachers do not have sufficient time to make appropriate use of ICT to render their instructional activities more effective. Both pre-service and in-service teachers must obtain training in professional development and time management to successfully overcome these potential challenges (Cheng, 2022).

The review of the literature revealed that there is a lack of consensus among researchers on the definition of digital technology and its potential benefits for instruction (O'Neal et al., 2017). However, the literature generally supports the idea that digital technology can be a valuable tool for enhancing instruction, if used effectively. The literature also suggests that teacher beliefs and attitudes toward digital technology are important predictors of integration into the instructional curriculum (Cook et al., 2020).

Teacher Beliefs About Digital Technology

Teaching, cognitive, and social presence all work together to set up a community of inquiry, which is crucial for engaging students in the subject matter being discussed. Online learning programs that can better serve a broader range of students regardless of their prior academic preparation or socioeconomic background can only be developed through regular and extended instructor interactions. To run a successful e-learning program, administrators need to have the proper training and infrastructure in place (Nikolopoulou, 2020). E-learning administrators need to find teachers who can engage

students' interests and support their long-term retention by supplying technology-based training and a well-equipped technological infrastructure (Zounek et al., 2022).

While the institution manages the success of online programs, administrators in schools, and campuses carry the burden of the daily operation of such programs. To succeed, online education needs more than just a devoted faculty; it needs administrators who are ready to make strategic judgments about how to build and administer infrastructure that supports online education (Firat, 2020). Among other things, faculty training, adequate staffing, and access to technology and technical aid are all included in this infrastructure. Administrators have a considerable influence in the hiring of part-time academics (Palvia et al., 2018).

Teacher Attitudes Toward Digital Technology

Geographically dispersed faculty must be given time and opportunity to form highly qualified support programs, and administrators must offer these opportunities in various formats, such as online, throughout, via an instantaneous message queue, and so on, to make it easier for faculty with varying levels of technological ability to participate in learning activities (Li et al., 2018). For both online teachers and college course administrators, a recent study found that technology may have a major influence on these factors. There are specialized departments that teach faculty how to design their courses, use a learning platform (LMS), or even encourage faculty to "get their feet wet" by taking online courses before they become teachers (Martin et al., 2020).

Teacher Self-Efficacy and Digital Technology

There are several determining factors for teachers' motivations for using digital learning material, encompassing self-efficacy, the subjective norm, and attitude. Teachers and students also perceive learning needs should include social interaction and communication rather than technological assistance. Principals announce professional development opportunities and support teachers' applications for those opportunities (Kılınç & Gümüş, 2021). According to Börnert-Ringleb et al. (2021) the strongest predictors of the intention to use digital learning were specific self-efficacy in digital learning and perceived support.

E-learning teachers must be computer-literate as an added stipulation for employment. Several researchers found that teaching and digital competency self-efficacy had a substantial impact on teaching effectiveness, students' social life, and faculty satisfaction with online learning, among other outcomes (Seaman et al., 2018). Greater teacher participation in online learning was attributed to teachers' belief that they were technologically competent (Seaman et al., 2018). Faculty members may face added challenges, such as frequently changing faculty duties, migrating from in-person to remote learning, and teaching approaches that seem incompatible with e-learning (Seaman et al., 2018).

Teacher Perceptions of the Impact of Digital Technology on the Curriculum

Pedagogical and technological aid is crucial, but online learning instructors also need administrative help and recognition from their colleagues for the work they have done successfully. It is well known that the manager's role cannot be ignored. In addition

to aiding in the choice and hiring of online instructors, the administrator serves as a bridge between teachers and students, fostering a sense of community and mutual respect for all parties involved in online education (Yılmaz & Malone, 2020). One responsibility of a school administrator is to make strategic decisions that will make it easier for students enrolled in distant learning programs. Various authors have supplied their findings on the best ways to deliver online learning programs (Hatlevik & Hatlevik, 2018).

The Pakistani Educational System and Technology Integration

The Pakistani educational system has not yet seen the introduction of the technology-integrated teaching and learning strategies that were originally planned. The research studies under evaluation here illustrate several advantages associated with the integration of ICT into our instructional methods. The academic advancement of students, which is often noted as a positive element and may be related to a dynamic learning environment that keeps students involved in active learning activities, is often mentioned as a benefit (Anagün, 2018). Additionally, technology-enhanced learning makes it easier for students to have access to essential learning materials, which in turn boosts academic accomplishment and clarifies new concepts. Therefore, to increase student performance, instructors are strongly encouraged to engage students in activities that are focused on inquiry and open debate that are relevant to the learning materials.

Summary and Conclusions

Digital technology has become increasingly prevalent in elementary classrooms, and teachers must be prepared to integrate it into their instruction. Studies have shown

that school teachers' perceptions of digital technology can impact their instructional practices. This literature review summarized major themes in the research on elementary school teachers' perceptions of the integration of digital technology into the instructional curriculum (Spiteri & Chang, 2020). Overall, researchers indicated that teachers generally have positive perceptions of digital technology and believe that it can enhance instruction; however, some challenges need to be addressed, such as the lack of training and the lack of access to technology. With proper support, teachers can overcome these challenges and successfully integrate digital technology into their instruction (Siefert et al., 2019).

Chapter 3: Research Method

The purpose of this basic qualitative study was to explore elementary school teachers' perceptions regarding the integration of digital technology into the instructional curriculum. Scholars reported issues with the integration of digital technology into the curriculum by elementary teachers (Jebur et al., 2022; Kundu & Bej, 2021; Leema & Saleem, 2017; Qaddumi et al., 2021). According to Kundu and Bej (2021), digital technology is important for elementary teachers to use in the classroom. However, they lack confidence in the use of digital technology in the classroom (Jebur et al., 2022). In Chapter 3, I discuss the research design and rationale and the role of the researcher, which includes the researcher's proximity and positionality with the participants. Additionally, I present an overview of participant recruitment procedures, inclusion criteria for participants, instrumentation, data collection, data analysis, trustworthiness, and ethical considerations, The section concludes with a summary, which provides a synopsis of the chapter's contents.

Research Design and Rationale

I conducted this basic qualitative study to gather more in-depth data to answer the research question without framing the inquiry within an explicit theoretical, philosophical, epistemological, or ontological tradition (see Carl & Ravitch, 2021). I used the interpretation of the data from 12 interviews to understand elementary teachers' perceptions regarding the integration of digital technology into the instructional curriculum. The research question that directed this basic qualitative study was developed to shed light on elementary school teachers' perceptions regarding the integration of

digital technology into the instructional curriculum. Researchers may use a basic design to answer the research questions (see Ratminingsih et al., 2018).

RQ 1: What are elementary school teachers' perceptions regarding the integration of digital technology into the instructional curriculum?

This research applied a traditional qualitative method to gather data from primary sources through interviews, which provided deep insights into the development of instructional curriculums that use digital technology (see Brooks & Normore, 2015). The basic rationale for choosing this traditional research method was the perception of teachers and the benefits derived by students from the integration of technology into the elementary curriculum.

A basic qualitative study was chosen because exploring perceptions cannot be evaluated through quantitative statistical research and number crunching (Yin, 2014). Qualitative research uses open-ended approaches, in which participants are asked broad questions about their lived experiences (see Yin, 2014). Ethnography is used to explore phenomena over an extended time (see Yin, 2014). This study did not concentrate on any one cultural group. Phenomenological studies concentrate on individuals' lived perceptions of experiences with the phenomenon (see Carl & Ravitch, 2021). This study did not focus on individual experiences. Grounded theory differs from ethnography and phenomenology (see Carl & Ravitch, 2021).

Role of the Researcher

I am a novice researcher who works in a public school district as a school administrator. I do not supervise teachers who were participating in the study. I have over

15 years of teaching and administrating experience in the educational field. I am currently serving as an administrator at a primary school within the vicinity of the district. Before my current position, I worked as a language teacher for 10 years within the same district. In my current capacity as a researcher, I recruited participants for this study. While some participants may be aware of my administrative role, I clarified that my research activities are distinct from my administrative duties. This aligns with the ethical guidelines, which recommend that researchers disclose their roles and any potential conflicts of interest to participants (American Educational Research Association, 2019).

My role as a researcher was to conduct interviews with elementary school teachers who were the participants in this study. The participants responded to my interview questions (see Qaddumi et al., 2021). Moreover, there were several ethical issues to consider when conducting a study (see Ratminingsih et al., 2018). Research issues include conducting a study within one's work environment, conflicts of interest or power differentials, and the justification for the use of incentives (see Carl & Ravitch, 2021). When conducting a study within one's work environment there is a potential for researcher bias (see Carl & Ravitch, 2021). To address this issue, the researcher should take care to be as objective as possible and to avoid any potential conflicts of interest (see Jatileni & Jatileni, 2018). The most common and documented bias occurs when researchers interpret data is confirmation bias (see Shah, 2019). I diligently revisited and maintained a journal to address researcher bias. Confirmation bias refers to the researcher interpreting information or data per their personal opinions (see Casad, 2019).

Methodology

I used a basic qualitative research design to conduct this study. The research site was a set of government-operated elementary schools in an Eastern region of the UAE. At the research site, there are about 2,500 elementary students, 135 self-contained and subject-area elementary teachers, and 30 school administrators of which 15 are elementary school principals and 15 elementary school vice principals.

I used purposeful sampling to identify elementary school teachers. I invited elementary school teachers to participate in semistructured one-to-one interviews. I used a videoconferencing platform to conduct the interviews. I transcribed the interview data. I then used codes, phrases, and categories to identify themes. Finally, I analyzed the interview data using a priori and open descriptive coding by identifying codes, categories, and themes (see Bengtsson, 2016; Saldaña, 2016). I conducted member checking with the participants to check the accuracy of the interview transcripts for this study.

Participant Selection

The research site is located in UAE and is a school district serving about 2,500 elementary students, 135 self-contained and subject-area teachers, and 30 administrators (i.e., 15 elementary school principals and 15 elementary school vice principals). A research site is selected to collect qualitative data regarding a central phenomenon (Creswell & Poth, 2017). The recruitment population is composed of approximately 135 elementary school teachers who were invited to participate in this research study to examine a predetermined phenomenon. Potential participants were employed at the 15 elementary schools in the study district. Sample size varies and is important to have data

saturation, meaning no new information is obtained (see Humble et al., 2020). In qualitative research, a sample size of over six participants is sufficient to answer the research questions (Ravitch & Carl, 2016). The sample for this research was 12 elementary school teachers.

Purposeful sampling was used to recruit elementary teachers. Purposive sampling is used when participants are selected for a specific reason (Ravitch & Carl, 2016). Data were collected from 12 elementary school teachers who meet the selection criteria of (a) holding a teaching degree, (b) having experience integrating technology into the curriculum, and (c) having a minimum 3 of years of teaching experience. Upon institutional review board (IRB) approval from Walden University (IRB # 05-16-23-1085383), I started the data collection process.

I used the school district's email addresses to locate and copy the email addresses of the potential participants. The website provides information such as names and the number of years serving the school district and is considered open records information. To determine if teachers have experience integrating technology into the curriculum, I screened potential participants by including these criteria in the letter of invitation, and participants were self-selected for the study. The first 12 participants who self-selected into the study by submitting their consent forms were invited to participate in the study. At the outset of the scheduled interview, I confirmed the participant meets the inclusion criteria again. The letter of invitation included the criteria for participants, time commitment, compensation, and my contact information.

Saturation is important in qualitative studies. Saunders et al. (2018) noted that the researcher may discontinue data collection once they have reached saturation. In this study, I used purposeful sampling to identify potential participants who meet inclusion criteria and who were provided information regarding the phenomenon that is the focus of this proposed study, the integration of technology into the curriculum. By using participants who know about the research topic, I was supporting the integrity of the qualitative process and the potential to obtain responses from participants who were able to inform the purpose of the study (see Morse et al., 2002). Saturation is reached when no new data arise from the information collected (Saunders et al., 2018). Morse and Marshall (1996) contended that an adequate sample size is obtained when the researcher can answer the research questions. The depth and breadth of the participants' responses were central to the issue of saturation versus sample sizes (Fossey et al., 2002; Morse et al., 2002).

Instrumentation

It is important to establish content validity when conducting research with any population, but it is especially important to do so with elementary school teachers. This is because elementary teachers are responsible for teaching young children, and their perceptions about the integration of digital technology into the instructional curriculum must be accurate (see Chang & Peterson, 2018). There are several ways to establish content validity. One way is to ask a panel of experts to review the research instrument and determine whether it measures what it is supposed to measure. Another way is to conduct a pilot study with a small group of elementary teachers and judge whether the

results seem logical. Context- and culture-specific issues can also impact content validity. For example, if the research is conducted in a country where digital technology is not widely used, it may be difficult to find experts who are familiar with the topic (see Sands et al., 2018). Additionally, elementary teachers in different parts of the world may have different opinions about the integration of digital technology into the instructional curriculum.

Regarding instrumentation, data were collected using interviews and an interview protocol (Creswell & Poth, 2017). I created the interview protocol containing interview questions aligned to the research question and reflecting the conceptual framework. I used the interview protocol to ask the same interview questions to each participant.

Procedures for Recruitment, Participation, and Data Collection

Upon IRB approval I recruited the participants by using the district's email addresses to locate and copy the email addresses of the potential participants. The website provides information such as names and the number of years serving the school district. I invited all elementary school teachers who met the selection criteria via email to participate in interviews with me. In the emails, I included the purpose and significance of the research, the participant selection criteria, and information about the interviews, such as the duration of the interviews. I also informed the participants that their participation in this study is voluntary. I conducted semistructured one-to-one interviews using an interview protocol containing open-ended interview questions. I explained the purpose of this study, the time for each interview, and confidentiality, and developed a professional novice researcher–participant working relationship with each participant.

Each interview was scheduled on a date and time convenient for each participant and each participant received an email invitation for the scheduled day and time of the scheduled interview via Zoom. I informed each participant that their participation in the interviews is voluntary, that their responses were kept confidential, and that each participant had the right to withdraw from this study at any time. Each participant's identity including the name of the school district will not be revealed. Each interview did not exceed 1 hour and was audio-taped per the consent form. The audio-taped interviews were stored on my home computer. As per IRB requirements, I intend to keep the interview audio tapes, transcriptions, and all related data collection materials for 5 years. I assigned a numeric pseudonym to each participant, such as P1, P2, and so on for each participant. Member checking, a process used to allow participants to provide input for the researcher's interpretation of the draft findings, was used to confirm that I accurately interpreted and analyzed their responses (see Creswell & Poth, 2017). After each interview, I transcribed the interview and saved the interview transcripts on my personal computer for thematic analysis.

Data Analysis Plan

It is essential that ethical procedures were followed in my study on elementary school teachers' perceptions of the integration of digital technology into the instructional curriculum. This is a sensitive topic, as it potentially impacts the participating teachers' careers and livelihoods. As such, the utmost care must be taken to ensure that the teachers' rights and privacy are protected. Informed consent was obtained from all

interviewed participants, and they were informed of the purpose of the study and what their involvement entailed.

There are ethical concerns that were considered when recruiting teachers for research for this basic qualitative study. One ethical concern was that some teachers may feel pressured to use digital technology in their instruction if they participate in a study on this topic (see Chen et al., 2018). To address this concern, I stated clearly in the recruitment materials that participation is voluntary and that teachers can decline to participate at any time. The participants were also informed of their right to withdraw from the study at any time without any negative repercussions. Additionally, I did not ask teachers to use digital technology in their instruction as part of the study.

Another ethical concern was that some teachers may feel uncomfortable discussing their use of digital technology in instruction if they are being interviewed by researchers. To address this concern, I created a safe and comfortable environment for interviews, where teachers can feel free to share their thoughts and experiences (see Manrique et al., 2019).

I used semistructured interviews to collect qualitative data. Qualitative interviews are used for identifying emergent themes (see Creswell & Poth, 2017). As a qualitative researcher, I used inductive data analysis to review the interview transcripts and to code the data for emergent themes (see Creswell & Poth, 2017). I transcribed the interviews and saved the interview transcripts on my personal computer. I used NVivo to organize the interview transcripts. I also read multiple times each interview transcript to understand the participants' responses (see Creswell & Poth, 2017).

I used a priori and descriptive open coding to analyze the information obtained from the participants. I identified codes, categories, and themes leading to the identification of themes that emerged from the data; hence, I used thematic analysis to identify themes by using open and a priori coding (see Ravitch & Carl, 2016). I identified key thematic words, phrases, and sentences from the interviews and recorded them on a chart (see Saldaña, 2016). A coding process is used to chart similar phrases and keywords (Saldaña, 2016). During the a priori coding, I identified common words and phrases by highlighting sections of the interview transcripts and used labels (see Ravitch & Carl, 2016). Qualitative researchers group the open codes into categories to identify themes (Ravitch & Carl, 2016). According to Saldaña (2016), when reviewing and rereviewing common words and phrases, categories and subcategories emerge, and from the subcategories and categories, themes emerge.

I conducted member checking with each participant for the participants to acknowledge that the interview transcripts were accurate (see Ravitch & Carl, 2016). During member checking, if the participants requested revisions, then I made all necessary revisions (see Creswell & Poth, 2017). I considered all interview transcripts and looked for discrepant cases (see Yin et al., 2018).

Trustworthiness

I created a consent form for the participants and an interview protocol, and an invitation letter. Data was collected using semistructured interviews and an interview protocol. The conceptual framework was used to develop the open-ended interview questions. Three retired elementary school principals reviewed the interview questions

for clarity and ambiguity and provided feedback. Those retired principals did not participate in this research and knew about technology integration.

The trustworthiness of this qualitative research was based on the responses recorded by the participants. The interview scripts contained all the primary data. The participants were directly involved, and the data was secured. To establish dependability, various strategies can be employed, such as audit trails and triangulation. An audit trail is a record of all the steps that have been taken in a particular process (Göçen et al., 2020). This is useful for tracking the use of digital resources in the classroom and ensuring that they are being used as intended. Triangulation is another strategy that can be used to establish dependability. This means using multiple sources of information to corroborate findings. This can help to ensure that the data collected are accurate and reliable. Thus, I followed ethical research standards and obtained IRB approval from Walden University and the senior school district administrators from the study site (see Merriam & Tisdell, 2016). I kept a reflexivity journal to minimize researcher biases and reactivity (see Ravitch & Carl, 2016). Concerning internal validity, three retired principals reviewed the findings to ensure credibility (see Ravitch & Carl, 2016).

Ethical Procedures

Ethical procedures were followed in my study on the integration of digital technology into the instructional curriculum. This is a sensitive topic, as it potentially impacts the participating teachers' careers and livelihoods. As such, the utmost care must be taken to ensure that the teachers' rights and privacy are protected. The study was conducted confidentially, with the participants' identities kept strictly anonymous (see Li

et al., 2018). Informed consent was obtained from all interviewed participants, and they were informed of the purpose of the study and of what their involvement would entail.

There were ethical concerns that need to be considered when recruiting teachers for research on my topic. One ethical concern was that some teachers may have felt pressured to use digital technology in their instruction if they participated in a study on this topic. To address this concern, I stated clearly in the recruitment materials that participation was voluntary and that teachers could decline to participate at any time (see Nikolopoulou, 2020). They were also informed of their right to withdraw from the study at any time without any negative repercussions. Additionally, I did not ask teachers to use digital technology in their instruction as part of the study.

Another ethical concern was that some teachers may have felt uncomfortable discussing their use of digital technology in instruction if they were interviewed by researchers. To address this concern, researchers should create a safe and comfortable environment for interviews, where teachers could feel free to share their thoughts and experiences (see Roussinos & Jimoyiannis, 2019).

Summary

The purpose of this basic qualitative study was to explore elementary school teachers' perceptions regarding the integration of digital technology into the instructional curriculum. In Chapter 3, I presented the role of the researcher and a discussion of the research, methodology, and participant selection. I also provided an overview of ethical considerations, data collection, and analysis plans.

A basic qualitative study was chosen to explore the participants' perceptions that cannot be evaluated through quantitative statistical research and number calculations (see Yin, 2014). I used purposeful sampling to identify the participants and invited them to participate in semistructured one-to-one interviews. I transcribed the interview data and identified codes and categories to identify themes by engaging in an iterative data analysis process. I analyzed the interview data using thematic analysis and conducted member checking with the participants to check my interpretation of the draft findings for this study. I obtained consent from each participant and followed a consistent protocol while conducting the semistructured interviews with participants in the study district. I used semistructured interviews to collect qualitative data. I transcribed the interviews and saved the interview transcripts on my personal computer for coding, categorizing, and theming the data. I used thematic analysis to identify themes. In regard to the member checking process, no participant requested that any changes be made to the draft findings sent to them for their review.

Chapter 4: Results

This chapter presents the results of a qualitative research study that aims to explore elementary school teachers' perceptions regarding the integration of digital technology into the instructional curriculum. The research question that guided this basic qualitative study is as follows:

RQ: What are elementary school teachers' perceptions regarding the integration of digital technology into the instructional curriculum?

To provide a comprehensive understanding of the findings, I begin this chapter with a brief review of the study's purpose and research question. I then proceed to describe the study setting, including relevant details about the participants and the school environment. I outline the data collection procedures and analysis methods employed, along with strategies to ensure the trustworthiness of the findings. Also, an overview of the findings is presented, followed by a summary. In essence, this chapter serves as a bridge to Chapter 5, where a detailed exploration of the results, their implications, and the ensuing discussion will be extensively addressed.

Setting

This qualitative research study was conducted in a public school district in the UAE, specifically focusing on elementary school teachers. The district was selected based on its relevance to the research objectives and the availability of elementary school teachers for interviews. During the study, no significant personal or organizational conditions directly affected the participants or their experiences in the district. However, potential changes in personnel, budgetary constraints, or other traumatic events within the

district may have indirectly affected the participants' experiences and perceptions of technology integration into the curriculum.

Demographics

The study included a purposive sample of 12 elementary school teachers who were interviewed using a semistructured interview protocol. Participant demographics, such as teaching degree and total years of teaching experience, were documented to provide a comprehensive understanding of their backgrounds. To ensure confidentiality, all participants consented to the study and completed their interviews, as outlined in the consent form. Each participant was assigned a unique identifier (P1-P12) to maintain confidentiality and protect their privacy. Table 1 in the study contains participant demographics, including their teaching degree, their students' grade levels, total years at current school, and school size-number of students served. Gender and race were not included to safeguard participants' identities.

Table 1

Participants' Teaching Degree, Students' Grade Level, Years at Current School, and School /Size

Participants' teaching degree	Students' grade level	Years in current school	School size-number of students served
Bachelor	Grade3	8 years	712 students
Bachelor	Grade3	5 years	650 students
Bachelor	Grade3	7 years	313 students
Bachelor	Grade2	5 years	341 students
High diploma	Grade3	14 years	904 students

Bachelor	Grade3	4 years	904 students
Masters	Grade4	4 years	205 students
Bachelor	Grade3	4 years	712 students
Bachelor	Grade4	4 years	650 students
Masters	Grade4	6 years	313 students
Bachelor	Grade2	6 years	204 students
High diploma	Grade2	10 years	904 students

Data Collection

Once I obtained approval from the Walden IRB, I emailed potential participants a consent form to request their voluntary participation in the study. Participants agreed to be interviewed after receiving an email invitation explaining the study's purpose, procedures, and confidentiality measures. My contact information was provided for inquiries. Participants were informed of their right to withdraw from the interview or the study at any time. While conducting the interviews, I created a supportive and non-judgmental environment, ensuring that the teachers felt comfortable sharing their thoughts and experiences. Ethical considerations regarding participant rights and privacy were thoroughly addressed, emphasizing voluntary participation and the right to withdraw from the study at any time without negative consequences. No unusual situations occurred while collecting data. The data collection process for this study involved the selection of 12 elementary school teachers who met specific criteria. These criteria included possessing a teaching degree, having experience integrating technology into the curriculum and having a minimum of 3 years of teaching experience. The

participants were selected through purposive sampling, ensuring that they were chosen for specific reasons relevant to the research.

Data were gathered through semistructured one-to-one semistructured interviews using an interview protocol. The semistructured interview approach allows for a combination of open-ended questions and predetermined prompts, providing flexibility for participants to express their thoughts while ensuring key topics are covered (Smith, 2018). The use of semistructured interviews with prompts, as well as the implementation of best practices in conducting practice interviews and seeking input from experts, strengthened the rigor and validity of the data collection process (Johnson et al., 2020). The frequency of data collection depended on the availability of the participants and was scheduled individually. Each interview lasted approximately 1 hour (see Table 2). During the interview process, I aimed to establish rapport by expressing gratitude and introducing myself, creating a comfortable and engaging environment. I actively listened to the participants, asking open-ended questions and showing empathy, which fostered trust and openness (Johnson et al., 2020). Throughout the interview, I provided non-verbal and verbal cues to signal attentiveness and understanding. To conclude the process, I thanked the participants, summarized the main points, and indicated that I would send them a draft of the findings for their input, ensuring accuracy and collaboration. By involving participants in the interpretation of findings, I followed a participatory approach, promoting trust, transparency, and validity of the research (Polit & Beck, 2021).

During the interviews, audio recordings were made with the participants' consent. The recordings were securely stored on a personal computer. To maintain confidentiality, each participant was assigned a numeric pseudonym, such as P1, or in sequential order through P12. The interview recordings were transcribed verbatim, and the resulting transcripts were used for content analysis. The transcripts were also stored securely on a personal computer. All acquired data are securely stored on a password-protected hard drive located at my residence for 5 years, adhering to the protocols established by Walden University IRB. Following this timeframe, I will assume personal responsibility for the secure disposal of any physical documents, ensuring their destruction. Moreover, I will undertake the permanent deletion of all electronically stored data, strictly in accordance with the Walden University IRB policy.

Table 2

Length of Interview by Participant

Participant	Length of interview
P1	50 minutes
P2	40 minutes
P3	40 minutes
P4	45 minutes
P5	30 minutes
P6	30 minutes
P7	30 minutes
P8	50 minutes
P9	48 minutes
P10	40 minutes
P11	45 minutes
P12	45 minutes

Data Analysis

The data analysis process in this basic qualitative study on elementary school teachers' perceptions of the integration of digital technology into instructional curriculum followed an inductive process, allowing for the exploration of emergent themes and patterns derived from the interview transcripts (Chen et al., 2018; Manrique et al., 2019; Siefert et al., 2019). The first step in the analysis involved transcribing the interviews and organizing the transcripts. Thorough readings of the transcripts were conducted to develop a comprehensive understanding of the participants' responses (Creswell & Poth, 2017). This initial immersion in the data set the foundation for subsequent coding and analysis. A combination of a priori and descriptive open coding techniques were used (Ravitch & Carl, 2016). A priori coding involved identifying predetermined concepts and themes based on relevant literature and research questions (Fereday & Muir-Cochrane, 2006). On the other hand, descriptive open coding allowed for identifying new and emerging themes directly from the data. Codes were assigned to relevant segments of the transcripts, and these codes were then organized into categories to discern patterns and relationships within the data. I employed a combination of a priori and descriptive open coding to analyze the information gathered from the participants. Through this process, I identified various codes, categories, and themes, allowing for the emergence of key themes from the collected data. Thematic analysis was used to identify these themes, employing both open and a priori coding techniques (Ravitch & Carl, 2016). To capture relevant information from the interviews, I documented significant thematic words, phrases, and sentences onto a chart (Saldaña, 2016). The coding process involved

organizing similar phrases and keywords for further analysis (Saldaña, 2016). In the process of qualitative research, researchers classify the open codes into different categories to discern themes (Ravitch & Carl, 2016).

A Priori Coding

Drawing from this framework of instructional leadership and the ADDIE model, a priori codes were assigned to align with the key elements of these models. These a priori codes were based on the following dimensions: (a) instructional leadership, encompassing the need for strategic planning, guidance, and support in educational settings; (b) the ADDIE model, emphasizing the systematic approach to training, including analysis, design, development, implementation. By using these codes, the data presented in Table 3 shows how I determined a priori codes based on the transcriptions from the interviews.

Table 3

Sample a Priori Coding

Participant	Interview text excerpt	A priori code
Participant 2	I don’t have any experience in creating the mission and vision, but the vision and mission were always shared with all of us. If I had the opportunity, I would focus on widening the awareness of the importance of integrating technology for students' future lives.	Instructional leadership
Participant 7	I don't have personal experiences in being involved in creating the school mission and vision. However, the process typically should involve collaboration among educators and administrators to define objectives, develop strategies, and implement technology in the curriculum.	Instructional leadership
Participant 1	Based on my personal encounters with the training provided for technology integration, I observed that the aspects of design and content proved to be highly advantageous. The frequency of the training sessions was adequate and appropriate, considering the challenges faced by busy teachers in managing their schedules. Nevertheless, the evaluation of these training sessions was not consistently implemented, and there was a lack of follow-up after the training took place.	Systematic approach to training
Participant 3	The majority of the training sessions were satisfactory; however, there was a deficiency in follow-up and evaluation for those sessions	Systematic approach to training
Participant 4	Most of the training PowerPoints were well designed and prepared to help us understand the content, but, to be honest, sometimes the content was repeated.	Systematic approach to training

Open Coding

After identifying a priori codes based on the framework of instructional leadership, and the ADDIE model conceptual framework, I continued to iteratively disassemble the data and used open coding to further analyze the data inductively. I analyzed the information obtained from the participants using a combination of a priori and descriptive open coding techniques. By identifying codes, categories, and themes, I

examined the data and employed thematic analysis to uncover emerging themes. Through the coding process, I organized similar phrases and keywords. During a priori coding, I highlighted sections of the interview transcripts and labeled common words and phrases.

Table 4

Research Question: Elementary School Perceptions- Open Codes

RQ1	A priori code	Open codes
What are elementary school teachers' perceptions regarding the integration of digital technology into the instructional curriculum?	Instructional leadership	Teachers' experiences Awareness of mission Awareness of vision
	Systematic approach to training	Technology integration plan Training Collaboration Resources
	Professional development	Participation in training Application of training

Categorizing

Categorizing these data during the analysis process was a crucial step in organizing the vast amount of information obtained from the semistructured interviews. As I examined the coded segments and text related to the research question, distinct categories started to emerge, representing recurring patterns and themes within the data. This stage marked a significant turning point, as it required an active evaluation of the collected data and the categories I had established. To ensure objectivity and minimize bias, a reflective approach was employed, involving meticulous comparisons and

examinations of the data. In line with best practices in qualitative research (Miles et al., 2020; Saldaña, 2016), I diligently searched for similarities and differences within the data, looking for responses that shared commonalities and identifying any outliers that deviated from the established patterns. By engaging in such rigorous analysis, I aimed to capture the richness and nuances of the participants' perspectives on technology integration, ultimately contributing to a comprehensive understanding of the research question.

Themes

As a result of the comprehensive qualitative data analysis, which included coding and categorization, three emergent themes were identified. These themes encompassed the key ideas and concepts that emerged from the participant's responses. The compilation of codes, categories, and themes extracted from the semistructured interviews is presented below in Table 5. This table provides a concise overview of the overarching themes that emerged from the data analysis, allowing for a clear visualization of the patterns and insights that emerged from the participants' perspectives. The themes serve as a foundation for understanding the teachers' perceptions of support needed for the successful integration of digital technology into the instructional curriculum, providing valuable insights for further exploration and discussion in the field.

Table 5

Codes, Categories, and Themes Used in Data Analysis

Codes	Categories	Themes
• Teachers' experiences • Awareness of mission	Leadership practices	Awareness, vision, and goal alignment

• Awareness of vision • Awareness of campus goals	Organizational culture	
• Participation in training • Application of training • Integration technology • Students Skills • Training design, content, analysis, design, development, implementation • Teachers' confidence and comfort	Training Professional development:	Perception of training and confidence
• Technology integration plan • Training collaboration • Availability of resources	Systematic approach to technology Resources	Supports for successful Integration of technology

The process of coding and categorization was iterative, with regular revisions and refinements made to ensure accuracy and consistency (Ravitch & Carl, 2016). Key thematic words, phrases, and sentences were identified within each category, forming the basis for the emergent themes (Saldaña, 2016). Throughout the analysis, ethical considerations were maintained, including ensuring confidentiality, obtaining informed consent, and providing opportunities for member checking to validate the accuracy of the findings (Creswell & Poth, 2017; Ravitch & Carl, 2016). By employing inductive reasoning and a combination of coding techniques, this data analysis approach revealed important themes and elements in elementary school teachers' perceptions regarding the integration of digital technology into the instructional curriculum (Ravitch & Carl, 2016). The findings derived from this process contribute to a deeper understanding of the topic

and provide valuable insights for further research and practical implications. Three themes emerged from the data:

1. Elementary School Teachers' Awareness and Perceptions of the School's Vision and Goal for Digital Technology Integration
2. Elementary School Teachers' Perceptions of Technology Integration Training
3. Elementary School Teachers' Perceptions of Support Needed for Successful Integration of Digital Technology

Discrepant Cases

Discrepant cases play a vital role in qualitative research by examining codes and emergent themes to reveal contradictions or deviations from initial assumptions or predictions, as highlighted by Maxwell (2013). This systematic approach enables identification of data that challenges prevailing conceptual frameworks. For example, participant P5's response indicated that inadequate follow-up activities from the administration resulted in incomplete implementation of training courses. Analyzing the data revealed that Participant P5's experiences aligned with the overarching theme, emphasizing the lack of evaluation following the training.

Some teachers expressed overall satisfaction with the training, emphasizing its relevance and effectiveness. However, there were also mentions of training not aligning with grade-level needs, lack of follow-up and evaluation, and challenges related to internet connectivity and technical issues. While some teachers expressed overall satisfaction with the training for technology integration, there were instances where the training did not align with grade-level needs and lacked follow-up and evaluation,

leading to challenges related to internet connectivity and technical issues. Some teachers found that the training primarily focused on older students, requiring them to adapt the content for their younger students. The absence of follow-up and evaluations limited ongoing support and feedback for teachers.

Results

The findings of this qualitative case study were obtained from the analysis of data gathered through interviews conducted with a group of 12 elementary school teachers. The research study aimed to explore elementary school teachers' perceptions regarding the integration of digital technology into instructional curricula. The research question that guided this study was:

RQ: What are elementary school teachers' perceptions regarding the integration of digital technology into the instructional curriculum?

To collect data and gain insights into the participants' perceptions, semi-structured interviews were conducted with elementary school teachers. The interviews consisted of a set of questions designed to elicit responses related to the research question. The interview guide, which included the screener questions and the main interview questions, can be found in Appendix B.

In this section, the results of the study will be presented, focusing on the themes that emerged from the analysis of the interview data. Each theme will be described, supported by relevant excerpts from the participants' responses. Additionally, notable variations or contrasting viewpoints among the participants' perceptions will be

highlighted. The subsequent sections will elaborate on each theme, presenting a comprehensive analysis of the participant's perceptions and experiences.

Theme 1: Elementary School Teachers' Awareness and Perceptions of the School's Vision and Goal for Digital Technology Integration

Participants' responses varied regarding their personal experiences in creating the mission, vision, and goals for technology integration. Some teachers acknowledged limited personal involvement in the creation process. For example, P1 stated, "I don't have personal experiences, I have never been involved in creating the school mission and vision." Similarly, P3 mentioned, "I don’t have any experience in creating the mission and vision, but the vision and mission were always shared with all of us. If I had the opportunity I would focus on widening the awareness of the importance of integration technology for students' future life.."

Participants shared their experiences in implementing the mission, vision, and goals for technology integration. They highlighted the collaboration between technology coordinators, leaders, and teachers. Participant 1 stated, "This coordination involves collaboration between technology coordinators, leaders, and teachers. Coordination of the technology integration plan involved aligning the use of technology with the school's overall goals and ensuring the integration opportunities are in place to support effective implementation." P2 mentioned, "As a teacher, I always seek to implement new techniques and strategies in my classes. For instance, I have used the independent learning classes with my students where I upload for them the subject on the LMS (Learning Management System) alongside activities to ensure their understanding."

Participant 3 highlighted the facilitation of learning through technology and the implementation of the mission and goals as a requirement. Participant 4 acknowledged the collective efforts from all stakeholders, including teachers, to implement the goals of the mission and vision.

Participant P5, who teaches grade one and two students, expressed challenges in integrating technology due to the need for individual observation, mentoring, and assistance. P3 stated, "As a grade one and two teachers, I find it a bit difficult to ask all my students to bring or use their tablets in the classroom as it takes time to observe, mentor, and assist each kid in the learning process. However, with the presence of smart board in the classroom, it has eased the integration of using technology in the campus." This discrepancy suggested the integration of technology may pose challenges in early grades due to the need for individual observation, mentoring, and assistance for each student.

These findings provide insights into elementary school teachers' perceptions regarding the integration of digital technology into the instructional curriculum. While some teachers had limited personal involvement in creating the mission, vision, and goals, efforts were made to implement technology integration, albeit with challenges in certain contexts. The data from the interview transcripts align with the study's focus on teachers' perceptions and shed light on the nuances and varying experiences related to technology integration.

Theme 2: Elementary School Teachers' Perceptions of Technology Integration Training

The teacher participants highlighted that the training sessions they attended primarily focused on integrating technology into the curriculum. However, they expressed concerns about the relevance of the training to their specific needs and grade levels. One teacher stated, "Sometimes, the training doesn't really address our needs because it mostly focuses on integrating technology for older students in higher grades" (P8). This indicates a discrepancy between the training content and the teachers' requirements. Teachers mentioned that they relied on personal engagement in online training and searching for new strategies to integrate technology into their lessons effectively. They emphasized the importance of self-directed learning and the use of online resources to enhance their pedagogical practices. For instance, P3 stated, 'I integrated technology in my lessons mostly through personal engagement in online training or searching for new strategies.

Participants described how they used the training to integrate technology into the curriculum. They mentioned exploring new digital tools, designing technology-rich lessons, and adapting the technology to suit their students' level and age. However, they also mentioned the challenge of finding technology resources specifically tailored to the needs of their young students in grades 1 and 2. P2 mentioned, "I make a conscious effort to select strategies and websites that are suitable for my students' level to facilitate the integration of technology into my classroom".

All participants perceived that integrating technology into the curriculum had a positive impact on students' skills, including the development of digital literacy, critical thinking, problem-solving, collaboration, creativity, information literacy, and technological proficiency. P9 stated, "Students develop various skills through the integration of technology into the curriculum".

Furthermore, participants discussed the challenges they encountered in implementing technology into the curriculum. These challenges included limited access to technology on the school campus, a lack of training and support for teachers, time constraints, technical issues, and concerns about equity and privacy. P9 added, "Implementing technology into the curriculum comes with various challenges".

Teacher participants shared their perceptions of the training they received for integrating technology into the curriculum. They highlighted both positive and negative aspects. While they acknowledged that the training equipped them with the necessary knowledge and skills, they also felt that the training should address both the technical aspects of using technology tools and platforms, as well as the pedagogical strategies for leveraging technology effectively. They emphasized the importance of ongoing support and follow-up sessions to enhance teachers' implementation of technology in the curriculum. One teacher stated, "The training for integrating technology into the curriculum was successful in some ways where most teachers were engaging. It equipped me with some necessary knowledge and skills to effectively incorporate technology into the teaching practices" (P1).

Theme 3: Elementary School Teachers' Perceptions of Support Needed for Successful Integration of Digital Technology

Based on the data gathered for this qualitative study several key findings emerged regarding teachers' recommendations and perceptions of support needed for successful integration of digital technology. Firstly, in terms of recommendations to improve training for technology integration, teachers expressed a need for more practical, hands-on practice. P11 stated, "I recommend offering more hands-on practice and providing ongoing support and coaching, connecting training to specific curriculum goals, offering opportunities for collaboration and sharing best practices, and ensuring training aligns with educators' needs and skill levels". Another participant emphasized the importance of interactive websites and programs, stating, "Training should include more interactive websites and programs that ease the teaching process for the teacher, indicating a better learning environment for students. Teachers should be questioned on their needs and challenges before scheduling training" (P.5). Regarding improvements to the technology integration plan, teachers provided valuable insights. Clear goals and expectations were emphasized, along with the provision of sufficient resources. P11 explained, "Establish clear goals and expectations, provide sufficient resources, foster a supportive school culture, and involve all stakeholders in the planning process". P4 suggested allocating an extra class for technology integration to ensure adequate time for incorporating technology into classroom activities. Additionally, the importance of teamwork and continuous research in enhancing technology integration plans was highlighted by P4, stating, "Teamwork and continuous research are the basis for technology development as

it contributes to improving plans". These recommendations emphasize the need for a comprehensive and collaborative approach to technology integration, involving all stakeholders and fostering a supportive environment.

Furthermore, participants identified additional supports that would help support their integration of technology into the curriculum. P9 mentioned the need for specialized training for specific programs, stating, "Additional supports that can help support technology integration [are] more specialized training for specific programs". P4 emphasized the importance of having an assistant teacher in the classroom and access to facilities like interactive whiteboards, stating, "Having an assistant teacher in the classroom with me will support me alongside facilities like interactive whiteboards in all classes, timing, and resources". Participants also highlighted the importance of encouraging student independence in seeking information and providing lectures and training workshops as beneficial supports (P.3, P.4) Additionally, P5 suggested organizing conferences to collaborate with different experts in supporting the integration of technology into the curriculum. These recommendations underscore the need for comprehensive support systems, including training, resources, and opportunities for collaboration and professional development.

In examining the findings, it is important to acknowledge discrepant cases or nonconforming data. While the majority of responses emphasize the importance of hands-on practice, ongoing support, and specific training aligned with educators' needs, there is a discrepancy between the desired support and the resources currently provided. Some teachers mentioned the need for assistant teachers, interactive whiteboards, and

facilities, which may not be readily available in all contexts. Additionally, involving experts and organizing conferences may present challenges in terms of accessibility and availability. These nonconforming data highlight the potential resource limitations and practical feasibility concerns that need to be addressed while implementing support systems for successful technology integration.

Evidence of Trustworthiness

In this section, the implementation of credibility, transferability, dependability, and confirmability strategies will be described to ensure the trustworthiness of the qualitative research conducted about elementary school teachers' perceptions regarding the integration of digital technology into the instructional curriculum. These strategies aim to enhance the validity, applicability, consistency, and neutrality of the research findings. By employing these strategies, the study ensures that the collected data accurately represents the teachers' perspectives and can be potentially applicable to similar educational settings.

Credibility

To establish credibility, several strategies were employed. First, a panel of experts, in the form of retired elementary school principals, reviewed the interview questions for clarity and ambiguity (Creswell & Poth, 2017). Their feedback ensured that the questions measured what they were intended to measure. Additionally, member checking was conducted with the participants to confirm the accuracy of the interview transcripts and reduce researcher bias (Nowell et al., 2017). The participants were provided with their interview transcripts and invited to add any additional information or

make revisions. This process enhanced the credibility of the research by involving the participants in validating the data.

Transferability

Transferability, which refers to the applicability of the study to other settings or contexts, was addressed through various strategies. The use of a pre-designed interview protocol ensured that each participant was asked the same questions, increasing the consistency of data collection (Patton, 2015). The design alignment tool and dissertation rubrics were used to provide a framework for other researchers to replicate the research phenomenon (Creswell & Poth, 2017). By adhering to these formats, the transferability of the research findings can be enhanced, allowing for broader application.

Dependability

To ensure dependability, strategies were implemented to maintain consistency and alignment with the research question. The interviews were recorded and transcribed immediately after data collection to mitigate potential researcher bias and inaccuracies (Morrow, 2020). This process helped in establishing a clear audit trail, ensuring that all steps taken in the research process were recorded and could be traced. Furthermore, the absence of discrepant cases indicates the consistency of the data collected (Creswell & Poth, 2017).

Confirmability

To ensure the confirmability of this study, measures were taken to minimize biases and enhance objectivity. As an administrator within the district, I diligently worked to dissociate any bias toward the teachers based on my role. During the data

analysis, I carefully considered my personal biases and any implicit biases that may have influenced my perceptions of certain teachers due to professional interactions. Multiple sessions of peer debriefing were conducted to review the transcripts and analyze the data, ensuring a comprehensive examination of the conclusions. These strategies, aligned with best practices in qualitative research for minimizing bias and ensuring confirmability (Smith et al., 2019), contributed to the robustness of the findings

Ethical Procedures

Ethical considerations were carefully addressed throughout the research process. Informed consent was obtained from all participants, and their identities were kept strictly anonymous to protect their privacy. The participants were informed about the purpose and significance of the research, and their voluntary participation was emphasized. The study followed the ethical guidelines outlined by the IRB and local school IRB procedures. The IRB approval was obtained before participant recruitment and data collection. Measures were taken to store and protect the data, ensuring its confidentiality. The use of pseudonyms further safeguarded the participants' identities.

By implementing these credibility, transferability, dependability, and confirmability strategies and adhering to ethical procedures, the trustworthiness of the qualitative research was ensured. These measures enhance the credibility of the findings, facilitate the applicability of the research to other contexts, maintain consistency and alignment with the research question, and ensure the fairness and accuracy of the data analysis and interpretations (Larkin et al., 2021).

Summary

This chapter provides a summary of the qualitative research findings, highlighting the diverse perceptions of elementary school teachers regarding the integration of digital technology into the instructional curriculum. Three themes emerged from the data analysis and were discussed: (a) Elementary School Teachers' Awareness and Perceptions of the School's Vision and Goal for Digital Technology Integration. (b) Elementary School Teachers' Perceptions of Technology Integration Training. (c) Elementary School Teachers' Perceptions of Support Needed for Successful Integration of Digital Technology. Overall, elementary school teachers share similar perceptions regarding the integration of digital technology into the instructional curriculum. However, they emphasized the importance of addressing their specific needs, providing ongoing support and training, and fostering a collaborative and supportive environment to ensure successful integration.

The insights gained from this study contribute to a deeper understanding of the opportunities and challenges associated with technology integration in elementary education. These findings serve as a foundation for further analysis and discussion in Chapter 5, where implications, recommendations, and future research directions will be explored in detail.

Chapter 5: Discussion, Conclusions, and Recommendations

Chapter 5 will provide a comprehensive discussion, draw meaningful conclusions, and offer recommendations based on the findings of the qualitative study exploring elementary school teachers' perceptions of the integration of digital technology into the instructional curriculum. This study aimed to understand how teachers perceive the use of digital technology in their classrooms and identify strategies for successful implementation.

In this study, a basic qualitative research design was employed, aligning with the interpretive research paradigm. This approach allows for a deep understanding of teachers' perceptions and experiences regarding the integration of digital technology (Hsu et al., 2021). Through semistructured interviews, data were collected to explore the lived experiences and views of elementary school teachers in relation to the integration of digital technology into their instructional curriculum. The qualitative nature of this research allows for a nuanced exploration of teachers' perceptions and attitudes, going beyond mere quantitative data (Yin, 2014).

The sample for this study consisted of 12 elementary school teachers who met specific selection criteria, including holding a teaching degree, having experience integrating technology into the curriculum, and having a minimum of 3 years of teaching experience. Semistructured face-to-face interviews were conducted using a self-developed interview protocol to elicit rich qualitative data. The data collected from these interviews were analyzed through a combination of a priori coding based on the conceptual framework and open, descriptive coding (Bengtsson, 2016; Saldaña, 2016).

Interpretation of the Findings

The purpose of this study was to explore elementary school teachers' perceptions regarding the integration of digital technology into the instructional curriculum. In this section, the findings of the qualitative research study are analyzed and interpreted based on the themes that emerged from the data analysis. The themes include Elementary School Teachers' Awareness and Perceptions of the School's Vision and Goal for Digital Technology Integration, Elementary School Teachers' Perceptions of Technology Integration Training, and Elementary School Teachers' Perceptions of Support Needed for Successful Integration of Digital Technology.

Theme 1: Elementary School Teachers' Awareness and Perceptions of the School's Vision and Goal for Digital Technology Integration

The findings indicate that there is variation among the participants regarding their personal experiences in creating the mission, vision, and goals for technology integration. Some teachers in the study acknowledged limited personal involvement in creating the mission, vision, and goals for technology integration, which confirm existing knowledge that teachers' involvement in the creation process can vary and aligns with previous research findings (Jebur et al., 2022). However, the findings extend knowledge by highlighting the collaborative efforts between technology coordinators, leaders, and teachers in implementing the goals of the mission and vision. This emphasizes the importance of coordination and aligning the use of technology with overall school goals, which may not have been extensively discussed in previous literature. This aligns with the instructional leadership model proposed by Hallinger and Murphy (1985), which

emphasizes the importance of collaboration and coordination in implementing educational goals. However, the findings also reveal challenges in integrating technology in early grades due to the need for individual observation, mentoring, and assistance for each student. This highlights the importance of providing adequate support for teachers in addressing these challenges.

Theme 2: Elementary School Teachers' Perceptions of Technology Integration Training

The findings indicate that the training sessions attended by the teachers primarily focused on integrating technology into the curriculum which corresponds to the "Design" and "Development" stages of the ADDIE model. However, the teachers expressed concerns about the relevance of the training to their specific needs and grade levels. the findings confirm the existing knowledge that teachers express concerns about the relevance of the training to their specific needs and grade levels (Kundu & Bej, 2021). The participants in this study mentioned the need for more practical, hands-on practice and training that addresses their specific curriculum goals and challenges which aligns with the "Implementation" phase of the ADDIE model. Also, this aligns with previous research suggesting the importance of tailored training programs that address teachers' needs and skill levels (Noben et al., 2021). However, the findings also extend knowledge by emphasizing the importance of self-directed learning and the use of online resources, as mentioned by the participants. This highlights the teachers' agency in seeking out additional training and strategies to effectively integrate technology into their lessons.

Theme 3: Elementary School Teachers' Perceptions of Support Needed for Successful Integration of Digital Technology

The participants' recommendations for improving training, establishing clear goals and expectations, providing sufficient resources, fostering a supportive school culture, and involving all stakeholders align with previous literature on the importance of comprehensive support systems for technology integration (Gagnier et al., 2022). These recommendations align with the ADDIE model, which emphasizes the importance of continuous support and feedback in the instructional design process. The participants also highlighted the importance of clear goals and expectations, sufficient resources, a supportive school culture, and involving all stakeholders in the planning process. These recommendations align with the instructional leadership model proposed by Hallinger and Murphy (1985), which emphasizes the importance of goal setting, resource allocation, and collaboration among stakeholders. The findings extend knowledge by highlighting additional supports that teachers identified as helpful, such as specialized training for specific programs and the presence of an assistant teacher in the classroom. These recommendations emphasize the need for ongoing support, collaboration, and professional development opportunities, which have been discussed in previous literature (Watson & Rockinson-Szapkiw, 2021).

This study's findings provide a valuable contribution to the existing body of knowledge on teachers' perceptions of digital technology integration. While affirming many established understandings, the study expands our insights by uncovering nuanced aspects, identifying challenges, and offering specific recommendations based on the

participants' perspectives. The results underscore the significance of collaborative endeavors, customized training initiatives, and comprehensive support systems in fostering successful technology integration. Consequently, these findings enrich the current literature on this subject matter, enhancing our understanding of effective strategies and practices in educational contexts.

Findings Related to the Conceptual Framework

The findings of the research align with the conceptual framework of the study. The findings contribute to our understanding by emphasizing the collaborative endeavors among technology coordinators, leaders, and teachers in effectively implementing the school's mission and vision. This underscores the criticality of coordination and aligning technology usage with overarching school objectives. These findings are in line with the instructional leadership model proposed by Hallinger and Murphy (1985), which underscores the significance of collaboration and coordination in achieving educational goals.

The findings indicated the attended training sessions primarily focused on integrating technology into the curriculum, aligning with the “Design” and “Development” stages of the ADDIE model, which serves as the study's conceptual framework. However, the findings also highlight the need for more practical, hands-on training that specifically addresses the curriculum’s specific goals and challenges, aligning with the subsequent “Implementation” phase of the ADDIE model. Furthermore, the study participants’ recommendations for enhancing the training process, such as establishing clear goals and expectations, providing sufficient resources, fostering a

supportive school culture, and involving all stakeholders, align with the conceptual framework of the ADDIE model. This model emphasizes the importance of continuous support and feedback in the instructional design process. Additionally, the participants emphasized the significance of clear goals and expectations, ample resources, a supportive school culture, and involving all stakeholders in the planning process. These recommendations align with the instructional leadership model proposed by Hallinger and Murphy (1985), which highlights the importance of goal setting, resource allocation, and collaboration among stakeholders.

Limitations of the Study

Despite the significant insights generated by this research study on elementary school teachers' perceptions of the integration of digital technology into the instructional curriculum, it is important to acknowledge certain limitations that emerged during its execution. These limitations are essential to consider when evaluating the trustworthiness and generalizability of the study findings, and they provide valuable insights for future research and practice in the field.

One noteworthy limitation pertains to the availability of participants. Due to practical constraints and time limitations, the study was conducted with elementary school teachers from a single public school district in an eastern region of the UAE (Ravitch & Carl, 2016). While efforts were made to ensure diversity among the participants, it is crucial to recognize that the perspectives and experiences of teachers in other regions or school districts may differ. Consequently, caution should be exercised when generalizing the findings beyond the specific context of the studied region and

school district. A second limitation revolves around the sample size of participants. Although the study included a sample of 12 participants, which is reasonable for qualitative research, it is important to acknowledge that a larger sample size could have provided a more comprehensive and representative understanding of elementary school teachers' perceptions regarding the integration of digital technology (Ravitch & Carl, 2016).

Recommendations

Recommendations for future research stemming from *Elementary School Teachers' Perceptions of Digital Technology Integration into Instructional Curriculum* study include investigating factors contributing to variations in teachers' involvement in creating technology integration goals. Additionally, further exploration is needed to address challenges faced by early-grade teachers in integrating technology, such as individualized support for students (Jones et al., 2021).

In light of the study's findings, future research should assess the effectiveness of tailored training programs for teachers' specific needs and grade levels. Longitudinal studies are necessary to examine the sustained impact of comprehensive support systems, including resources, school culture, and collaboration among stakeholders, on technology integration (Miller et al., 2020). Furthermore, research on innovative pedagogical approaches and emerging technologies can contribute to effective strategies for enhancing student engagement and learning outcomes. Investigating the role of external stakeholders, such as parents and policymakers, can also create a more inclusive and supportive environment for technology integration in schools.

Implications

This study on elementary school teachers' perceptions of digital technology integration has important implications for education stakeholders. The findings emphasize the need for collaborative efforts between administrators, technology coordinators, and teachers to align technology use with school goals. Involving teachers in creating the vision and goals for technology integration can enhance coordination and ensure a cohesive approach.

The study also highlights the importance of tailored training programs that address teachers' specific needs and grade levels. Providing practical, hands-on training opportunities and promoting self-directed learning can empower teachers to effectively integrate technology into their lessons. Professional development initiatives should be customizable and accessible to support teachers in enhancing their technological skills and pedagogical practices. The findings suggest the significance of collaborative decision-making, customized training, and ongoing support to facilitate successful technology integration in elementary schools. These insights contribute to improving technology integration practices and promoting meaningful teaching and learning experiences.

Conclusion

This qualitative research study provided valuable insights into elementary school teachers' perceptions of digital technology integration into the instructional curriculum. The study shed light on the challenges faced in integrating technology in early grades, emphasizing the need for individualized support and assistance for teachers to overcome

these challenges. The research underscores the significance of tailored training programs that address teachers' specific needs and grade levels. Practical, hands-on training and the utilization of online resources are crucial in empowering teachers to effectively integrate digital technology into their lessons. The findings emphasize the importance of comprehensive support systems, including clear goals, sufficient resources, a supportive school culture, and the involvement of all stakeholders in the planning process.

In conclusion, this study contributes to our understanding of successful digital technology integration in the elementary school instructional curriculum. By highlighting the importance of collaboration, customized training, and comprehensive support, the research provides valuable insights for educators, administrators, and policymakers to enhance technology integration practices in educational settings. These findings have the potential to inform the development of professional development programs that equip teachers with the necessary skills and support to integrate digital technology effectively, ultimately enhancing the delivery of instruction and improving student performance.

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