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Unfolding the Travails of Elementary Teachers' Technology-Mediated Instructions as Literacy Helper

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Abstract. This qualitative-phenomenological study explored the experiences of elementary teachers in public elementary schools in Compostela East, Davao de Oro, regarding technology-mediated instruction. Employing Creswell's thematic analysis, the research utilized in-depth interviews and focus group discussions as data collection methods, with ten elementary teacher participants chosen through purposive sampling, all with direct experience in employing technology-mediated instruction. The findings revealed that teachers encounter challenges in implementing this instructional approach due to insufficient training for both students and teachers, resource constraints, and the high cost of technology. Despite these hurdles, teachers expressed that seeking support from the school and participating in relevant training programs played a pivotal role in overcoming the challenges associated with technology-mediated instruction. Teachers believed that technology-mediated instruction facilitates connectivity between students and teachers, overcoming barriers of place and time. Moreover, they contended that this instructional approach contributes to students' success, emphasizing the crucial role of teachers' attitudes in its effective implementation. The study recommended that the Department of Education and schools conduct updated training programs focusing on educational technology and relevant trends beneficial for technology-mediated instruction. Additionally, the research suggested ongoing support and monitoring to ensure the sustained effectiveness of this instructional approach in public elementary classrooms.

KEY WORDS

1. elementary learners 2. literacy helper 3. technology-mediated instruction

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1. Introduction

It has been three years since the pandemic, and several shifts have occurred specifically in the school curriculum. The problem stays in more than one corner. Instead, the burden relies on the new school setup known as technology-mediated instructions, also called hybrid learning. It was observed that implementing hybrid learning, or the combination of virtual and actual pedagogies, produces adjustments and difficulties for grade-level students in rural areas. According to Bower (2019), technology-mediated instruction has various definitions. Thus, it is a digital medium for conveying information that links knowledge and individuals within the education arena. Kurt (2021) attested that integrating technological resources in the elementary school classroom has been encouraged, recognizing that today's youngsters think, behave, and learn differently and possess digital abilities and competencies that distinguish

them from their predecessors. At a global level, practically every educational facility in Ghana was seen as having to implement technology-mediated instruction. Ghana, a growing nation, did not give up in the slightest; instead, it increased its efforts to educate the public through various media. As presented in the study by Zengulaaru et al. (2022), all participating schools need help adjusting to the new standard or trend in teaching and learning that COVID-19 has forced upon them. The lack of adequate infrastructure, ICT, and other technological tools like laptops, computers, projectors, and a social skills lab for teaching and learning brings these on. Similarly, Rudhumbu (2021) stated that in Zimbabwe, there has been a prevalent notion that institutions providing online and accessible education deliver inadequate education to their students, with some alluding to virtual education as education for "old" individuals who have been unable to compete for admission to university education at regular universities. Also, within such countries, the history and development of technology-mediated instruction have been marked by concerns of poor quality from the outset. At the same time, in other nations, tight controls on Internet connectivity have hampered technology-mediated instruction's expansion. Henceforth, in South Florida, Sengupta Shivendu (2019) suggested that the learning outcomes of students who receive education in hybrid modes are significantly better than those of students who get instruction wholly or partially online. Even though technology is frequently portrayed as the answer to every learning-related problem that higher education institutions face, academics and policymakers need to be on the lookout for the actual benefits that the current state of technology is providing to guarantee that technology-mediated education benefits students, who are the main stakeholders in higher education. In the national arena, some instances in which students and teachers in the Philippines were not urged or supported to use existing technology, such as a learning management system, impacted the degree of online participation among the users (Garcia Cruz, 2022). Another issue is that teachers are only sometimes conversant with the teaching and learning methodology used in online learning. It can be challenging for academics and students to adjust to online instruction. It was reported that many educators had mixed feelings regarding their ability to use cutting-edge teaching techniques for online instruction. As cited by Berenji and Saeidi (2017), the impact of technology on education would be significant in the national arena. However, the State University of Biliran, Lagat (2020) revealed that flexible learning as a form of online instruction is slightly difficult to implement. This is due to the need for more internet connectivity, which hinders virtual communication for teaching and learning. Also, this gives school members a few alternatives when it comes to carrying out group projects for students or even homeschooling. Additionally, at the De La Salle University, Manila, Ugalingan et al. (2021) have investigated intriguing techniques to apply the internship experience for aspiring teachers, even if the COVID-19 pandemic has led to difficulties in teaching and learning. This investigation reveals that technical issues, changes in online communication, and a lack of content knowledge and pedagogical skills are relevant challenges for PSTs in implementing lessons in an online environment. This is because educational activities during these times require exploring possibilities on uncharted ground. Furthermore, there is little support for teachers and students in helping them use technology. Consequently, according to Dhurumraj (2021), there was a "lack of professional support needed to navigate virtual digital platforms and technical difficulties experienced with the utilization of ICT tools." In line with the detriments of technology-mediated instruction, a few studies conducted in Davao City gave relevant insight into such a

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topic. According to Fernandez (2023), Higher education institutions have intensified their online learning initiatives, including Ateneo De Davao University; students still suffer from not having a dependable internet connection, being unable to contact their teachers swiftly, and not having access to resources like gadgets, even though this was the solution during these difficult times. In the same locale, technology-mediated instruction is unlikely to increase student's engagement and motivation by using it to support their studies and allow students to be more equipped to obtain good school performance. Thus, teachers can use technology in the classroom to differentiate lessons, encourage students, and accommodate various skill levels (Paja et al., 2020). Furthermore, this research aims to compare public school teachers' perspectives on their cases and show the effects of utilizing technology-mediated instruction as a literacy helper. This study evaluates teachers' understanding while learning to adjust in face-to-face and virtual classrooms. From the already well-known teachers' point of view through their lived experiences, this will offer fresh questions for educators, students, and the institution. Moreover, it will add to the arguments for future study and address present difficulties in Philippine education that go beyond current technical advances.

1.1. Purpose of the Study—This study explored the effects of technological-mediated instruction on rural elementary teachers in Compostela East, Davao de Oro. It intended to learn about the adversities, coping strategies, and educational insights of grade-level teachers from different schools within the said district.

1.2. Research Questions—Essentially, this research sought to answer the following inquiries: answer on the following questions:

(1) What are elementary teachers' experiences with technology-mediated instruction amidst learning adjustments?
(2) What do public elementary school teachers utilize the coping mechanisms?
(3) What are the educational management insights gained based on the study?

1.3. Definition of Terms—A few words in this study might be unfamiliar. Thus, the following terminologies are defined accordingly. Literacy Helper. An individual or learning instruction that aids and guides the teaching and learning process. Technology-mediated instruction. An educational strategy known as blended learning or hybrid learning combines online educational resources and chances for online interaction with traditional classroom techniques. It is also referred to as web-enhanced instruction or mixed-mode instruction. Travails. An uncomfortable condition or event requires much effort, challenges, or discomfort.

1.4. Significant of the Study—Accordingly, this research study acknowledges elementary teachers' experiences in every school within Compostela East, Davao de Oro. Hence, this study is deemed beneficial for the following individuals: Educational Sector. This research's findings provide firm details to aid educational policies and decisions at the regional and national levels, allowing them to widen resources, curriculum building, and educational quality. School Administrators and Heads. The findings of this study also benefit the school in terms of generating ideas that would eradicate the negative effects of using technology-mediated instruction as a literacy helper for students. They can utilize this as a reference to elaborate on

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the study further. Teachers. The information collected from this study would also benefit teachers, as it would help them devise strategies for students who have difficulty adjusting to technology-mediated instruction. Students. The results of this research benefit students' learning, as they need to maneuver technology-mediated instruction and be aware of their learning travails. Parents. The study findings would help parents and guardians know what their children need to elevate their learning process, such as motivating them daily to do their school tasks. Importantly, parents should participate in school decision-making to contribute to an effective educational system. Future Researchers. Essentially, this research would serve as a core of collective information to improve the study in the future. Scholars may obtain plans and further references to widen their study.

1.5. Theoretical Lens—This research is based on Husserl's (2003) theory, according to which phenomenology investigates the mechanisms underlying conscious perception as seen from a first-person perspective and in the context of particular experience conditions. The primary feature of an experience is its intentionality, or how it is focused on a certain object or person under its content or significance. This study primarily aims to investigate students' experiences amidst technology-mediated instructions. As a result, the traditional phenomenological research approach based on the Husserlian framework of descriptive inquiry focuses on "seeking realities not pursuing truth in the form of manifestation of phenomena as it is in the form of life world made of interconnected lived observations subjectively." Essentially, this study is inclined to align with the sociocultural theory of cognitive development. Vygotsky (1978) defined learning as acquiring knowledge, beliefs, and problem-solving techniques through encounters with "more knowledgeable others." Our relationships with people help us make sense of the information we encounter. It is an intrinsically social process in which we rely on others to help us comprehend the world. Thus, social learning comes before individual growth and is unique to the individual. Vitally, this learning theory holds that an individual's cognitive development is influenced by his or her parents, instructors, classmates, caretakers, and society. Interaction with people is at the heart of learning. Vygotsky stated that learning was a cultural occurrence, with children from different countries adopting different learning techniques. Moreover, Bandura (1971) proposed in his Social Learning Theory that people learn through observing, imitating, and mimicking the conduct of others. This idea proposes that by observing others, we might learn new behaviors and knowledge, a process known as vicarious learning. He claimed that people have beliefs and expectations that influence their acts and that they can consider the links between their actions and the consequences of those actions. Social learning theory explains how our surroundings and the individuals around us impact our behavior. It explains how people learn new skills and behaviors by observing others behave and attempting to replicate them. On the other hand, this study established the social impact theory, which, according to Latané (1981), states that individuals can be both sources and targets of social influence. The social impact theory hypothesizes that other people's influence results from social factors operating on the individual. The likelihood that someone will respond to social influence is assumed to rise with the source's power, the occurrence's immediacy, and the number of sources exerting the impact. In the context of elementary teachers and learners, this theory can be applied to understand the effectiveness of technology-mediated

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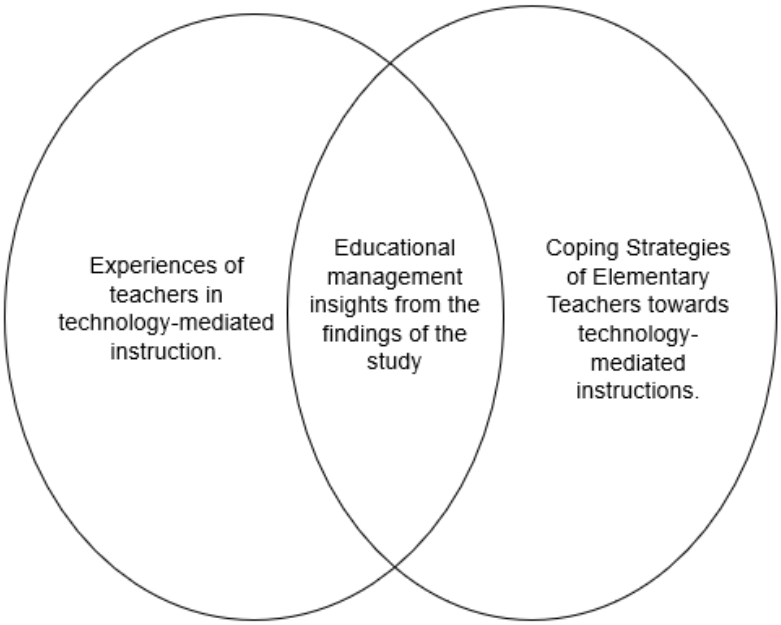

Fig. 1. Conceptual Framework of the Study

instruction as an academic helper in which the intervention of learning adjustment is crucial to examine. Also, the theory applies to see the impact of parents and educators as they lead students toward the new setting of the school curriculum. Nonetheless, this study conceptualized the idea of the experiences of elementary teachers from Compostela East, Davao de Oro, about the new setup brought by technology-mediated instruction. The coping strategies, perspectives, and findings from this study will serve as a new undertaking for those who wish to venture on such a topic.

2. Methodology

A summary of the research design, study participants, data collection procedure, data analysis plan, ethical considerations, and the study's high standards of excellence are provided in this chapter.

2.1. Philosophical Assumptions—A study's philosophical foundations and qualitative presumptions are essential to guide the investigation. The conceptual framework for qualitative research is built on ontological, epistemological, axiological, and methodological principles. The study's approach is based on these hypotheses, which also serve as the foundation for the research design. As presented by Creswell (2012), if these assumptions are taken and placed into interpretive frameworks by someone else, we can see how important they are to our study. Consequently, a paradigm is a set of theories, assumptions, and beliefs that form a person's perspective and manner of interacting with other people or things. When choosing which methods to use for data gathering and analysis, a researcher takes this viewpoint. They achieve this by considering their research's methodology and the prism they view the world (Alele Aduli, 2023). In this research, the paradigm guided my overall choice of methodology and techniques in an ethical process as well as creating relevant knowledge

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within such a topic. Ontology. Ontology is described as the examination of existence. It is concerned with the type of world we are exploring, the essence of being, and the framework of reality in general (Ahmed, 2008). The researcher who conducts qualitative research acknowledges the idea of many realities. Readers of a qualitative investigation, the subjects being studied, and varied researchers all embrace various realities. Themes that use the actual words of various people and portray varied perspectives as evidence of various realities use numerous sorts of proof. As a researcher, I interacted with the participant's environment by communicating with them in an actual scenario. Through interviews, I was able to understand their means of living, specifically their experiences. Epistemology. The epistemological premise asserts that conducting a qualitative study requires building a strong rapport with the participants. So, subjective evidence is gathered based on individual viewpoints (Jones, 2007). Knowledge was discovered through individuals' haphazard experiences. As a researcher, the research tools and methodology I used in this study and the evaluation of the findings and evidence acquired were all supported by the epistemological assumptions made. Axiology. Although each researcher brings unique views to a study, qualitative investigators are more upfront about their values. Axiology, or its equivalent, refers to the central idea supporting qualitative research (Kivunja Kuyini, 2017). In a qualitative study, the researchers publicly admit their principles, preconceptions, and value-leadenness of the data they gathered from the field while simultaneously acknowledging the implicit nature of the study. In this manner, I ensured that the principles of ethics and the researcher's potential within this study adhered to ethical standards and acknowledged the accuracy I offered for the study's conclusions. Methodology. Inductive, emergent, and impacted by the researcher's prior knowledge of data collecting and analysis are some of the characteristics of the methodologies utilized in qualitative research (Goundar, 2012). As a researcher, I explained, analyzed, and elaborated on the process of the research participants' data. This increased the credibility of the study as I made sure that the overall in-depth process was transparent and reproducible. Rhetoric. As perceived by Beqiri (2018), rhetoric is the use of words, interpersonal strategies, and presentation tactics that are persuasive and effective in conveying concepts, arguments, and conclusions in a way that will impact the audience's perception and comprehension of the study. As a researcher, I ensured that the research participants' information was interpreted clearly and honestly. Also, the knowledge delivered to the readers can persuade and effectively influence their overall thoughts.

2.2. Qualitative Assumptions—Through phenomenological research, my study aimed to investigate the travails of elementary teachers residing at Compostela East, Davao de Oro, regarding using technology-mediated instructions as literacy helpers in their teaching journey. My study focused on the distinctive perspectives and specifics of these people's experiences to determine the meaning and essence of their roles. Phenomenology served as the underlying phenomenological framework for this investigation. I pressed for a level of investigation in this work that extends beyond initial observations. The goal was to investigate how the participants viewed the occurrence and how they felt about it. Moreover, in-depth discourse, field notetaking, and interpretation of participants' responses were recognized further to identify the crucial background of their technical experiences. Utilizing a phenomenological approach,

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my study acknowledged the essential aspects of the participants' struggles, coping mechanisms, and the insights they gained towards applying technology-mediated processes.

2.3. Design and Procedure—To effectively match the research design, data collection strategy, and data analysis technique to the study's objectives, it is vital to establish the appropriate method set. In this undertaking, I applied a qualitative transcendental or phenomenological design. According to Cropley (2019), the fundamental assumption of qualitative research is that "truth" is a matter of judgment. Considering their interactions with others and the external world, each person creates an autonomous, unique view of the world. Thereby, Amorado and Talili (2017) proved that qualitative research aims to understand certain situations better and find knowledge that others can use. Subsequently, as a researcher, I meticulously elaborated and recognized their experiences instead of disregarding their overall viewpoints. Thus, I collected information from the participants with no bias and to their ethnographical beliefs and customs. Additionally, Husserl (2003) described phenomenology as the study of the nature of consciousness, specifically applied to the individual, using the definition of intentionality as the defining characteristic. The experiences people undergo throughout their lives eventually determine all their value and importance in this sense. Likewise, I aspired to know their daily scenarios by documenting their real-life reflections on teaching in a digital era. On the other hand, transcendental, according to Moustakas (1994), is merely the act of perceiving events from a new angle and with an open mind, which results in creating new knowledge based on the meaning of experiences. As a researcher, I managed to conduct a study that collects primary information from teachers' relevant perspectives and with accurate overviews. Nonetheless, this qualitative research design helped the researcher acknowledge teachers' needs regarding the effect of technology-mediated instruction.

2.4. Research Participants—The main participants of this study were elementary teachers from different schools within the district of Compostela East, Davao de Oro. However, the participants were only exclusive to elementary grade-level teachers. Thus, the number of respondents was catered from 10 to 15. It was likely that a sample of participant sessions and follow-up interviews conducted during the study to clarify and expand on participant information was required to gather high-quality interview data. According to Polkinghorne (2005), the average number of participants in qualitative studies is between 10 and 15. He said a qualitative investigation is deeply anchored in awareness and can illuminate the participants' experiences. Moreover, the chosen participants have prior experiences with technology-mediated instruction and have difficulties coping with the new learning setup living in rural areas, specifically elementary students. Primarily, the participants' personal information was kept confidential. In this study, there were 6 IDI participants and 4 FGD participants.

2.5. Ethical Considerations—Arifin (2018) states that protecting human subjects using appropriate ethical standards is essential for research data. Then, as a researcher, I adhered to the moral standards and recommendations for qualitative research. The regulations that follow are briefly explained. Logicality. The narratives were created and refined through

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the incident report's representation, outline, and transcription. Authenticity. The participants get to choose the language for their comments. They received my assurance that I would encode and sum up their ideas, opinions, and experiences clearly and efficiently. To the best of the researcher's abilities, all steps taken during this investigation, including the ethics of anonymity and secrecy, were meticulously documented. Each participant's age, gender, and even demographic status were kept secret in this situation. We did this using a coding method to categorize and arrange the data. Confidentiality. Individuals, educators, pupils, and every single personal information involved to them was kept confidential. Therefore, I collected their consent before officially collecting data through online interviews and surveys. Regardless of whether a participant wanted to protect their privacy, it was appropriate for me to consider that decision and respect their rights to their safety. Participants were also free to leave the study at any time. The privacy and anonymity rights of respondents were essential. I did not divulge any legal nuances or challenges that led to conflicts or burdened a certain group or organization. The websites gathered for this investigation's web sources adhered to legally to avoid any issues in this study.

2.6. Role of the Researcher—As asserted by Austin and Sutton (2015), the primary duty of researchers is to try to understand the participants' thoughts and emotions. As a result, it takes a lot of confidence to ask others to talk about and expose their perceptions. As the researcher, I initially came up with this issue for the process because I think it significantly impacted the present education system. It took time to decide on the appropriate name for our project. Second, when choosing participants, I intended to personally contact them and keep them updated online, such as by sending Gmail messages or through messenger chat. I informed them that personal safety would be kept private out of respect for their privacy. Before that, I drafted a letter requesting authorization as a declaration of support to carry out the in-depth interview. After that, I asked them questions in person or via Google Meet as part of the scheduled interview. After learning about and hearing about their experiences, I gathered the data, analyzed it, and interpreted it before reviewing and presenting the results. My primary responsibilities for this project were to provide descriptive findings and monitor the future. The participants' experiences, which fluctuate from person to person, were considered emotionally and logically. I, responsible for the data gathered in this study, was kept strictly confidential.

2.7. Data Collection—For greater data collection, the researcher considers the following terms when conducting the study to make the participants fully aware of such an investigation. This includes: Securing endorsement from the Dean of Graduate School. First and foremost, the researcher secured an endorsement letter from the Dean of the Graduate School of Rizal Memorial Colleges. Along with the letter are the outlines of the paper and the objectives and methodologies to conduct the study ethically and appropriately. This took place in the first week of November 2023. Ask permission from the Schools Division Superintendent. After securing a letter of endorsement, the researcher consulted the school division superintendent regarding gathering the chosen school for this study. This includes presenting the outline for Chapters 1 and 2. It is also the research instrument to make the school division super-

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intendent aware of the study's aim. Thus, I waited for the SDS's verdict before conducting the study. This was done from the second to the third week of December 2023. Seek permission from the school heads. After the School Division Superintendent granted permission, the researcher sought approval from the school heads where the data gathering took place. Of course, letters containing the study's aim and the allocated time for the data collection were sent to the school heads. The researcher obtained permission from the school heads in the first week of January 2024. They were obtaining consent from the participants. Once the school leaders agreed, the researcher asked for consent from the research participants. The written consent spells out the study's objectives, the participant's right to be included in such investigation, and their data privacy to accomplish the research. The researcher provided a consent form to the participants in January 2024. I was conducting the interview. To ensure accuracy and reliability in gathering data, the researcher will plan and conduct interviews after receiving consent from each participant, using a structured or semi-structured interview guide. Hence, the interview took place on the first week of February 2024. I am transcribing the interviewees' responses. After the interviews, the researcher thoroughly notes any nonverbal cues and contextually relevant data in the participants' transcripts. This method would capture the entire spectrum of participant responses using speech recordings and note-taking. The responses were transcribed from the last week of February to the first week of March 2024. Data Coding and Thematic Content Analysis. Finally, the researcher would examine the theme's content and code it. This entailed reviewing and meticulously categorizing the collected information into themes, segments, and subcategories based on the respondents' responses. The researcher would conclude and gain insights into the study objectives by identifying connections and trends in the data. The analysis was done from the third week of March 2024.

2.8. Data Analysis—Following the data collection comes the data analysis. The goal of the data analysis in this study was to find any trends that represented notions that participants represented throughout the process of gathering data and concerning the study's goals. The inductive technique, which aimed to identify emergent themes from specific observations, was used in this study instead of the other two primary approaches to qualitative information analysis. Through this method, I analyzed and organized our data using the structured interview questionnaire. As a framework for gathering, compiling, and assessing our respondents' perceptions, Colaizzi's (1978) approach was used. I used Colaizzi's method of data analysis, which involved transcribing the audio recordings and highlighting and color-coding the key passages. Reading the data multiple times was necessary to familiarize myself with the responses and quickly spot the participants' most frequent responses. I classified the typical responses and separated the significant themes to create emergent and clustered themes. The procedure combined the findings of participants' concepts gleaned from the participants' statements. The information was then presented in tables with textual and structural descriptions. According to Boyatzis (1998), data display is the arrangement of data into charts, graphs, and matrices so the reader may understand its implications. Data reduction was also used, eliminating irrelevant data and transforming it into information that helped readers understand the study. In this study, l separated and arranged a large amount of qualitative data to combine and classify the data as needed.

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2.9. Framework of Analysis—It was specifically developed for use with frameworks in qualitative research to analyze qualitative data in the context of practical policy studies. The primary goal of framework analysis was to discover, describe, and analyze significant patterns in specific occurrences across several topics related to the subject under study. According to Saldana's (2015) coding manual for qualitative research, the framework analysis method consists of the following steps: Data Familiarization. The planning and outlining of the overall study topic are included in the first step of data familiarization. This includes outlining the overall goal and the detailed research questions. This is the process of familiarizing oneself with the data by rereading the interview transcripts. If the qualitative researcher opts to transcribe themselves, the transcription procedure would familiarize the researcher with the data. This stage aims to pique the qualitative researcher's interest in the data and encourage them to think about the common topics participants discussed. For Braun Clarke (2013), as they read or type the data on a sheet of paper, qualitative researchers might make note of these frequent patterns. Framework Identification. This second stage was all about making a transcription and familiarizing yourself with the information. Read the data repeatedly while taking notes to identify any emerging patterns, themes, or difficulties. Phenomenological research focuses on the inductive themes that emerge from the data, but it may also employ preexisting theories or ideas related to the topic being investigated. The framework serves as a general framework to arrange and assess the data while leaving the topics open to being expanded upon or modified as the study progresses. Indexing. The qualitative analyst groups codes related to one another or have similar meanings together using the list of codes they have created after the written materials have been coded. After the codes have been grouped, the qualitative researcher gives the cluster labels based on their shared relationships or meanings. The qualitative researcher then examines the clusters to see any extra linkages within the clusters. If so, the qualitative analyst combines the two or more clusters and provides a new provisional label associated with the correlation. Labeling produces themes. This is repeated until no more is possible, followed by clustering and reassembling. Charting. Following the coding phase, tables or charts that display the distribution of numbers and incidence for each subject or category must be created. As a result, it is simpler to summarize the data and identify trends. Mapping. In qualitative research, mapping involves asking participants in focus groups or interviews to arrange or "map" various items or representations according to their perceptions or conceptualizations. It was a powerful tactic for exposing and examining people's classifications and perceptions of an issue or a market. Interpretation. The final step in the analytical process for a qualitative study is analyzing the coded data to produce significant results. Making links between codes, themes, and other study concepts was the focus of interpretation. In a phenomenological study, themes, patterns, and connections identified in the prior stages are merged to form a coherent narrative communicating the phenomenon's essence. This narrative should provide a detailed and in-depth account of the participants' observations of the phenomenon under investigation and their assigned interpretations.

2.10. Trustworthiness of the Study—This study sought to define the four factors that generate a reliable study: credibility, confirmability, transferability, and dependability (Lincoln Guba, 1985). According to Polit Beck (2012), the level of confidence in data, interpretation,

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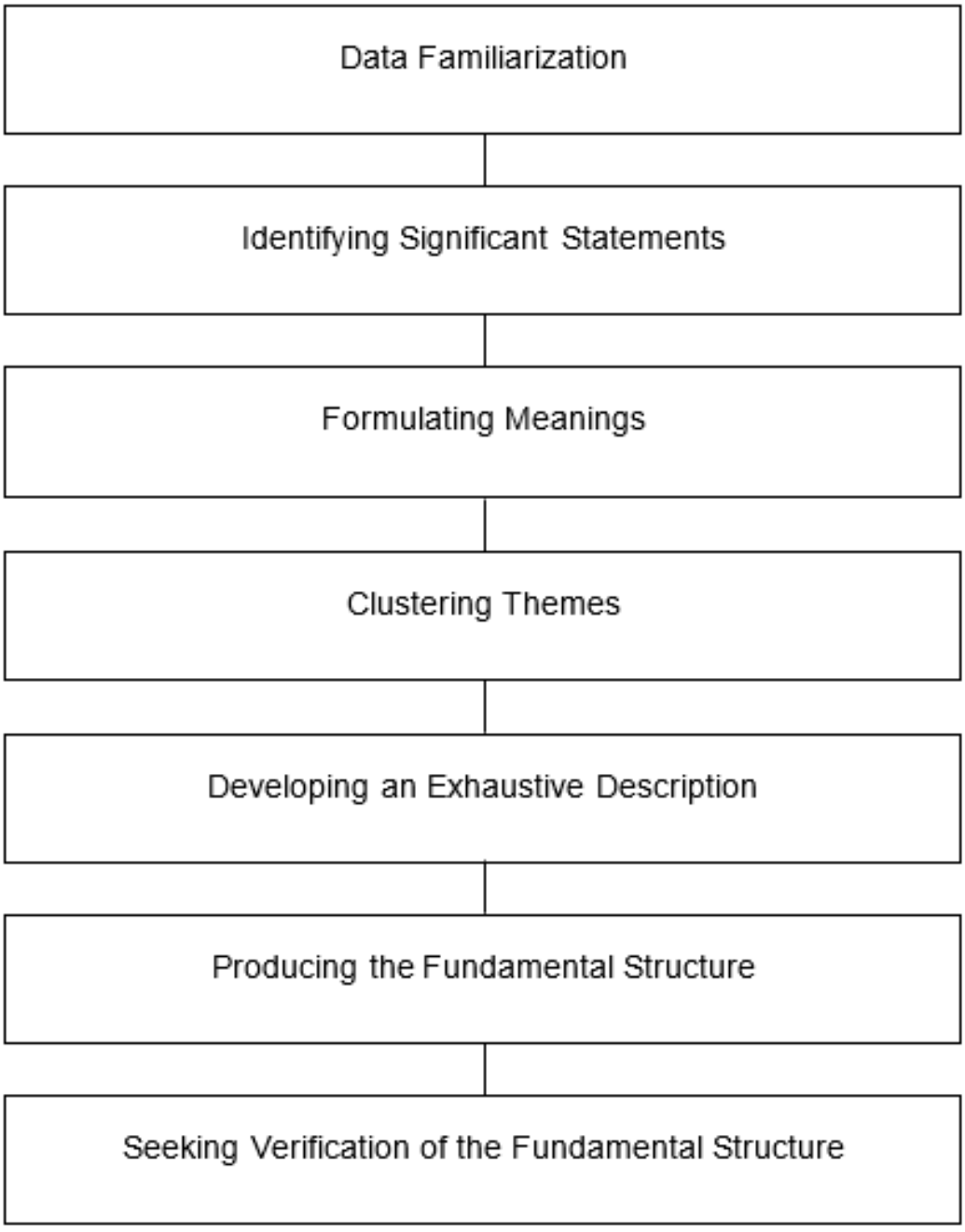

Fig. 2. Analytical Framework of the Study

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and procedures employed to ensure the quality of a study is referred to as the study's rigor. In each study, researchers should create the protocols and methods required for the study to be considered worthy of readers' attention. Credibility. According to McElfresh (2023), the credibility of qualitative research is a measure of its truth value or of whether the study's conclusions are correct and accurate. To some extent, it depends on the trustworthiness of the researchers and their study methodologies. Multiple views during data collecting help ensure the credibility of qualitative data. This could be accomplished through data, investigator, theoretical triangulation, participant validation or member checks, or rigorous data collection approaches. Transferability. As the name signifies, it assesses whether the study's findings are relevant in different situations, conditions, and settings. It can also be seen in terms of generalizability. You can use thick descriptions to establish transferability in qualitative research by providing appropriate details about the site, participants, and methods or procedures utilized to collect data across the research process (McElfresh, 2023). As stated by Korstjens Moser (2018), It is the researchers' responsibility to provide a full overview of the participants and the research technique so that it may be assessed whether the findings apply to a specific case. The researcher would utilize descriptive language to highlight the restrictions of the sample size, the sort of data to be collected, the procedures, and the tools, to mention a few. Confirmability. As McElfresh (2023) suggested, confirmability was the ability to demonstrate that your qualitative research was objective and unaffected by the presumptions or biases of the researchers. An objective reflection of the data gathered from participants was what reliable research should instead produce. In other words, your data should be self-explanatory. A common way to show certainty was an audit trail that breaks down each data analysis step and demonstrates that your conclusions were not skewed by conscious or unconscious bias but accurately reflect the participants' responses. A precise coding schema that lists the codes and patterns found during investigations could be used to support confirmability. Audit trails are used for this method. A bracketing interview, member checking of the data, triangulation of the results, and engaging in reflexivity exercises to address potential personal bias were further ways to ensure it. Dependability. Tobin and Begley (2004) characterized the consistency of the data under repeated, similar conditions as dependability. According to Korstjens and Moser (2018), the researcher should ensure that the analytical process follows the accepted standards for a particular design. Dependability can be guaranteed through meticulous data-gathering, well-documented procedures, and analysis. An audit of the inquiry conducted by an outside reviewer typically ensures trustworthiness. This would be the committee for students.

3. Results and Discussion

This part of the study deals with the research questions and the elementary school teachers' responses based on them. These participants shared their experiences, coping mechanisms, and insights as teachers in public elementary schools in Compostela East, Davao de Oro, who have employed technology-mediated instruction in their respective classrooms.

3.1. The experiences of elementary school teachers in technology-mediated instruction— In the rapidly advancing landscape of education, technology-mediated instruction has become indispensable in 21st-century classrooms, crucial for enhancing student learning and teacher effec-

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tiveness. Technology integration facilitates students' efficient comprehension of lessons while providing educators with innovative means to deliver their teachings. However, this transition to a tech-driven pedagogy is challenging, particularly for elementary teachers in public schools in Compostela East, Davao de Oro. These educators face unique hurdles, including limited access to necessary resources, technical infrastructure constraints, and the need for specialized training. Addressing these challenges is paramount to ensuring a seamless and equitable technology integration in the learning experience for teachers and students.

3.1.1. Expensive Technology—Public elementary teachers in Compostela East, Davao de Oro, face the significant challenge of expensive technology. Due to budget constraints, schools in this region often need more access to modern and advanced technological resources. With limited funds, it becomes difficult for teachers to integrate essential tools such as computers, tablets, and interactive learning software into their classrooms. This creates a digital divide, hindering the students' exposure to technology-driven education. Teachers must find innovative ways to deliver quality education without the necessary technological support, making it a constant struggle to keep up with the evolving demands of 21st-century learning. From the responses, teachers consistently expressed the significant challenges they face in integrating technology into their classrooms, primarily due to budget constraints, as participants 2, 4, and 5 perceived. High costs associated with purchasing updated devices and software strain the limited budget, hindering the provision of optimal technological tools for students. This financial burden prevents the school from allocating funds for modern gadgets and educational software, limiting the potential for an interactive and engaging learning experience. As attested by research participants 9 and 10, outdated equipment and a lack of resources make it challenging to keep pace with the dynamic needs of a technology-mediated classroom, impacting students' exposure to essential skills for the digital age. Despite the belief in the power of technology to enhance education, the undeniable cost barrier creates disparities in access, perpetuating educational inequalities and hindering the preparation of students for a tech-driven future. In alignment with this perspective, Henrie et al. (2015) asserted that the expenditure involved in monitoring classrooms within a technologically mediated learning context is considerable. This emphasizes the financial commitment required to effectively implement and maintain technology-enhanced educational environments.

3.1.2. Resource Constraints—Public elementary teachers in Compostela East, Davao de Oro, grapple with resource constraints that impact the overall quality of education. Limited teaching materials, textbooks, and other educational resources significantly challenge effective teaching and learning. Inadequate school supplies and facilities funding create an environment where teachers must constantly improvise and share resources, leading to compromised student learning experiences. This challenge exacerbates existing educational disparities and underscores the urgent need for increased investment in the education system to provide teachers with the essential tools and materials required for an enriching academic environment. In this section, it was revealed that teachers face multifaceted challenges in integrating technology into their lessons. As experienced by participants 1, 3, and 4, the primary obstacle lies in outdated textbooks, which lack modern technology integration, making engaging students in a

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tech-driven instructional environment arduous. Limited availability of essential facilities like speech labs and computer laboratories, coupled with maintenance issues, further restricts the consistent use of technology. The broader problem extends to the need for updated materials, equipment, and functional laboratories, hindering the creation of an immersive technological learning environment. Additionally, the challenge for participants 8 and 9 is compounded by the need for tailored resources for diverse student needs and insufficient support systems, including ongoing training opportunities. Overcoming these obstacles requires financial investment and a comprehensive approach to address resource scarcity, relevance, and ongoing teacher development. In congruence with this context, Samawi and Al-regimen (2022) contended that insufficient resources pose a significant challenge to effectively maintaining technology in the classroom. This, in turn, hinders students from keeping pace with lessons that involve technology. These constraints impact the seamless integration of technological tools into the learning environment, creating obstacles for educators and learners.

3.1.3. Need for Students and Teachers Training—Public elementary teachers in Compostela East, Davao de Oro, confront the challenge of insufficient training opportunities for students and teachers. Limited access to professional development programs and workshops hampers teachers' ability to stay updated on the latest pedagogical techniques and educational trends. This lack of training also affects students, as they may need more adequate guidance to develop essential skills for the future. The absence of continuous learning opportunities hinders the overall educational growth of teachers and students, making it imperative for the education system to prioritize and invest in ongoing training programs to enhance the quality of education in Compostela East. Regarding the responses above of teachers 2, 3 and 4, it can be summed up that teachers in public elementary schools confront the challenge of implementing technology-driven instruction. Students exhibit varying proficiency levels with technology, hindering seamless integration into the learning process. Furthermore, educators encounter difficulties as not all possess comprehensive knowledge of the latest educational trends and technologies. Proposed solutions include regular training sessions for teachers to stay updated. Financial constraints within families exacerbate the issue, limiting access to and understanding of modern technology. Adequate funding is seen as crucial to overcoming this obstacle. Additionally, for participants 8 and 9, finding suitable and engaging technology resources aligned with diverse student needs and a need for standardized tools across schools further complicates technology integration in classrooms. The passage emphasizes the importance of addressing these challenges for effective technology-mediated education. In conformity to this context, Samawi and Al-regimen (2022) further argued that inadequate training for teachers and students in utilizing technology poses a significant challenge to this mode of instruction. Additionally, the end-user challenges, encompassing the difficulties teachers and students face when engaging with technology, exacerbate the situation. Overcoming these challenges is particularly difficult for teachers needing more essential technological expertise to support their students effectively. Also, Dangwal (2017) recommended Reorientating teacher training programs, emphasizing both in-service and pre-service training. This approach was essential to adequately prepare instructors for technology-mediated instruction, ensuring they possess the requisite skills to navigate and integrate technology seamlessly into the learning process. Figure 3 shows the experiences of elementary school teachers in teaching in

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technology-mediated instruction and the emergence of three themes: insufficient teacher training, expensive technology, and resource constraints.

3.2. The coping mechanisms of the elementary school teachers in teaching in a technology–mediated instruction—The coping mechanisms of the elementary school teachers in teaching in a technology-mediated instruction

3.2.1. Enhancing Department and School Support—Despite the challenges posed by technology-mediated instruction, elementary teachers in Compostela East, Davao de Oro, tenaciously seek support from their schools and the Department of Education. Recognizing the importance of a collaborative approach, these educators actively engage with administrators and educational authorities to address technological hurdles, fostering an environment where solutions are shared, and challenges are collectively tackled. This collaborative effort provides practical assistance and instils a sense of unity and shared responsibility, allowing teachers to navigate the complexities of technology integration more effectively. In Compostela East, Davao de Oro, teachers express the invaluable support they receive from their school in navigating technology-driven instruction. Collaborating with colleagues and utilizing school resources has improved their proficiency and fostered a collaborative environment benefiting teachers and students, as observed by teachers 7 and 10. Seeking assistance from school administration is highlighted as essential for overcoming challenges in integrating technology into elementary classrooms. The support includes organizing regular training sessions and providing access to educational technology resources, significantly enhancing the overall learning experience for students. Teachers 1, 4, and 5 emphasized the importance of addressing technology-related challenges directly with the Department of Education, advocating for standardized tools and platforms to create a more cohesive and effective educational environment. They stress the significance of collaborative efforts within the school community, pooling experiences and concerns and presenting them collectively to the Department of Education for a stronger voice in advocating for necessary resources and support systems. The teachers emphasize the proactive approach of connecting with fellow educators to jointly address technology-related concerns, contributing to the broader goal of creating a standardized and supportive framework for technology integration in elementary education. Similarly, Abbacan-Tuguic (2021) advocated for educational institutions to establish comprehensive systems that facilitate student access to paper or digital course packages and instructional materials. This could be achieved through designated pick-up points, digital channels, or a point accumulation system. By adopting these measures, institutions actively contribute to supporting students in navigating technology-mediated instruction, ensuring a smoother and more inclusive learning environment.

3.2.2. Training for Tech-Mediated Instruction—In the face of technological struggles, elementary teachers in Compostela East prioritize continuous professional development through teacher training programs. Embracing the belief that knowledge is a powerful tool for overcoming challenges, these educators actively participate in tailored training sessions that en-

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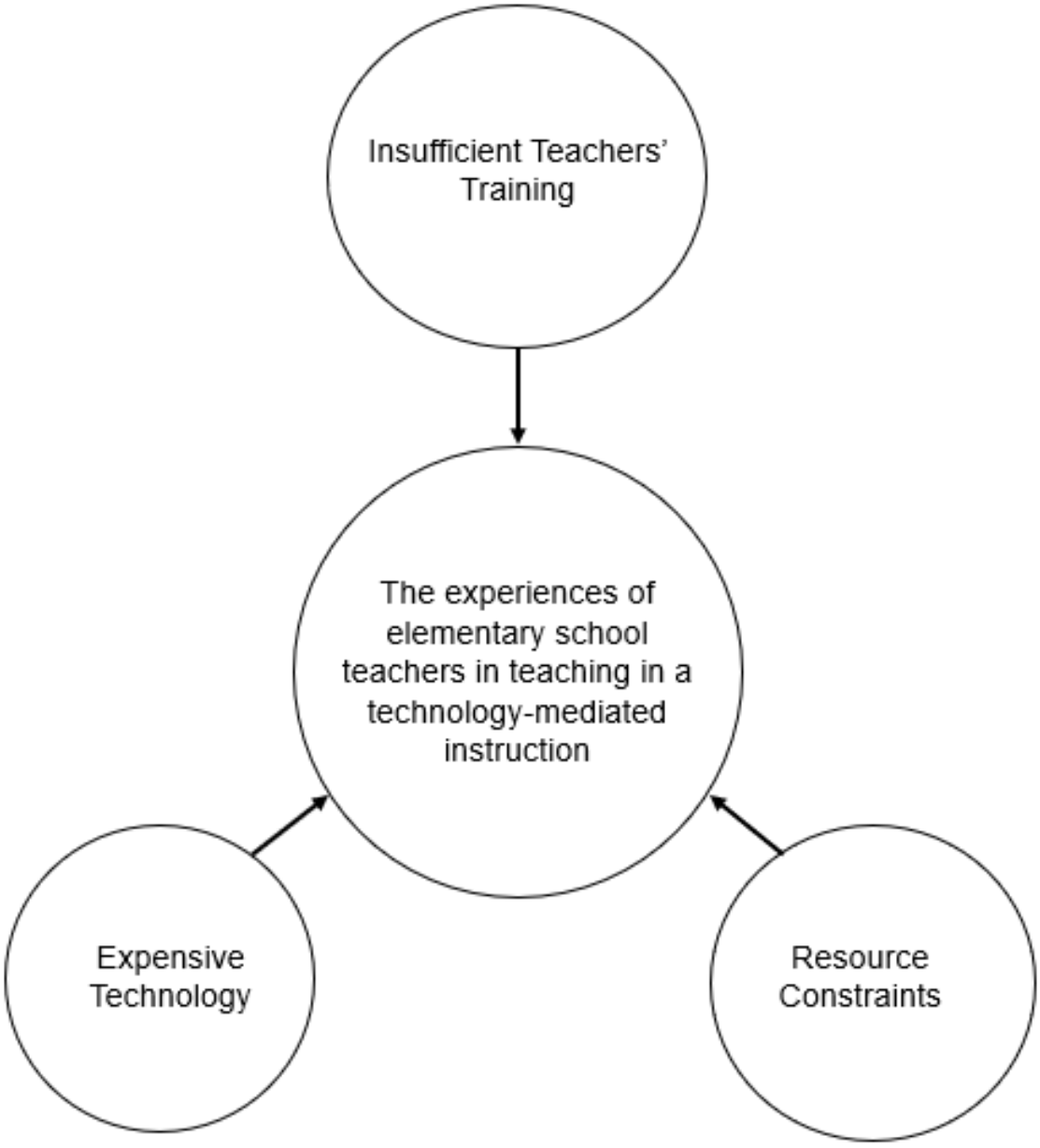

Fig. 3. The Experiences of Elementary School Teachers in Teaching in a Technology-Mediated Instruction

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hance their technological proficiency. By staying abreast of the latest advancements and instructional methodologies, teachers empower themselves to navigate the evolving landscape of technology-mediated instruction, fostering a lifelong learning culture that positively impacts educators and students. On the other hand, elementary teachers' statements highlight the immense benefits of attending training sessions and seminars on educational technology, emphasizing the positive impact on their teaching skills and classroom dynamics. Staying informed about the latest trends enables them to integrate innovative methods, creating a more engaging learning environment for elementary students. The events are considered game-changers, providing knowledge and skills to navigate diverse classrooms effectively. Teachers express how participation in technology-centric seminars expands their understanding of instructional tools, empowering them to adapt teaching methods for dynamic and relevant experiences. The professional development gained from these events fosters a sense of community among educators, facilitating the exchange of valuable ideas and experiences, ultimately contributing to a more tech-savvy educational community. While teachers believe that training for both students and teachers is a challenge in technology-mediated instruction, Dangwal (2017) accentuates the notion that teacher training programs must be reoriented to prepare instructors for this education. Preparations for introducing this approach to elementary schools would address multiple issues concurrently. It would represent a more efficient allocation of financial resources and effort invested in various projects, ultimately ensuring comprehensive educational access for all children.

3.2.3. Positive Disposition to Tech-Mediated Instruction—Maintaining a positive disposition towards technology and its application in the classroom is a key coping mechanism employed by elementary teachers in Compostela East. Despite the inherent challenges, these educators cultivate an optimistic mindset, viewing technology not as an obstacle but as a valuable tool for creating student-centred learning environments. By embracing the potential of technology to enhance pedagogy and engage students, teachers in Compostela East foster a constructive and forward-thinking approach that transcends the difficulties associated with technology-mediated instruction. This positive perspective creates a more conducive and innovative learning atmosphere for teachers and students. Ultimately, these teachers, specifically participants 1, 5, 7, and 10, emphasize the significance of maintaining a positive attitude towards technology-mediated instruction in overcoming challenges in their elementary classrooms. They believe that embracing the learning curve with optimism inspires personal. Adaptation sets a positive example for students, and cultivating a can-do attitude is crucial in navigating the evolving landscape of educational technology. This positive approach is described as a motivating force in their teaching journeys, fostering professional growth and creating inspiring, dynamic learning environments. The transformative experience involves viewing challenges as opportunities for growth, making teachers more resilient and inspiring students to see technology as a tool for learning rather than a barrier. The positive mindset is seen as a game-changer, enabling creative solutions to challenges and adaptation to the changing educational landscape. Teachers highlight the impact of this attitude on both their teaching styles and students' enthusiasm for learning, emphasizing its instrumental role in professional development and fostering a collaborative and inspiring atmosphere among edu-

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cators. Consistent with this context, Simasathiansophon (2014) underscored the importance of fostering a constructive mindset among educators toward technology-mediated instruction or blended learning. Embracing a positive perspective on this approach is crucial for students and teachers. Implementing advanced blended learning methodologies significantly enhances the learning experience. Figure 4 shows the coping mechanisms of elementary school teachers in teaching technology-mediated instruction and the emergence of three themes: enhancing department and school support, training for technology-mediated instruction, and a positive disposition to tech-mediated instruction.

3.3. The Insights of Elementary School Teachers In Teaching in A Technology-Mediated Instruction—

3.3.1. Tech-mediated instruction fosters connectivity despite constraints—Elementary teachers in public elementary schools in Compostela East, Davao de Oro, recognize that technology-mediated instruction has the transformative power to connect students and educators regardless of time and place. Through integrating digital tools and platforms, these teachers have observed that learning can extend beyond the confines of the traditional classroom. Virtual classrooms, online assignments, and collaborative projects enable students to engage with educational content from the comfort of their homes, fostering a sense of inclusivity and accessibility for all learners. This insight underscores the significance of technology in breaking down geographical barriers, providing an avenue for continuous learning, and creating a more interconnected educational experience. According to teacher participants 2, 5, 6, 8, and 9 responses, they perceived that instruction facilitated by technology overcomes obstacles such as time and location. This allows educators to conveniently and efficiently impart knowledge to their students while they gain flexibility in understanding their lessons. According to studies, using ICT for teaching-learning allows teachers and students to stay connected and facilitates learners irrespective of their location and time (Hussain, 2018; Thaheem et al., 2021). Teachers feel comfortable guiding and discussing with their students within or outside the universities through several digital platforms such as WhatsApp, Facebook, and Google groups (Hodgson Shah, 2017). Regarding the connection of learners with other students, ICT integration in educational practice encourages students to interact with their classmates more (Asad et al., 2020), which helps resolve their academic challenges and keeps them socially active.

3.3.2. Tech-mediated instruction relies on teachers' attitudes—The teachers in Compostela East, Davao de Oro, acknowledge that the effectiveness of technology-mediated instruction hinges on educators' attitudes towards its integration into their teaching practices. Their experiences reveal that a positive and open-minded approach from teachers enhances the overall learning experience for students. Teachers who embrace technology not only as a supplementary tool but as an integral part of the learning process tend to create more engaging and dynamic educational environments. Conversely, resistance or reluctance from teachers may hinder the seamless integration of technology, emphasizing the critical role that educators' attitudes play in unlocking the full potential of technology-mediated instruction. On the flip side, elementary educators 3, 4, 5, 6, and 10 also emphasized the significance of their atti-

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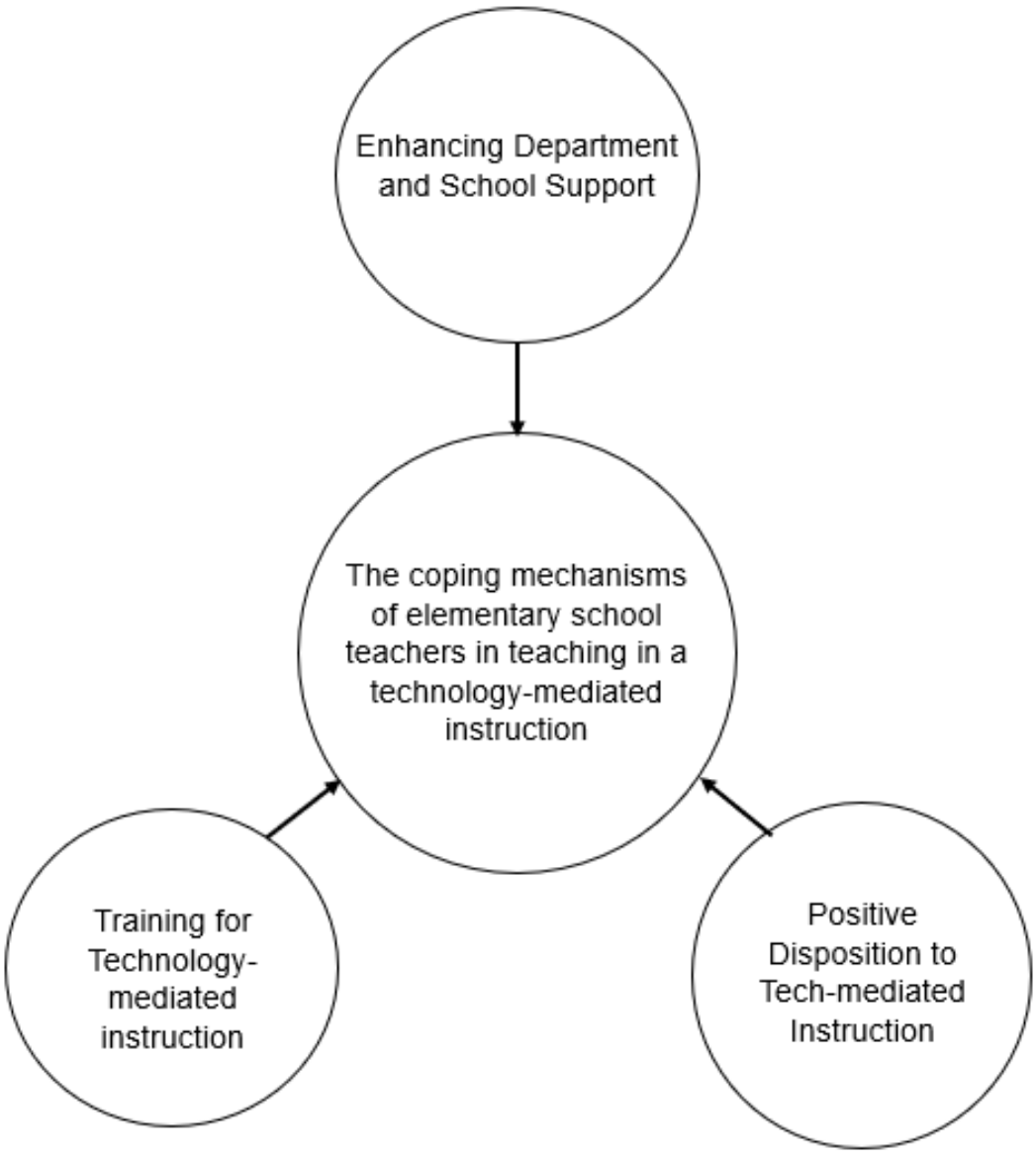

Fig. 4. The Coping Mechanisms of Elementary School Teachers in Teaching in a Technology-Mediated Instruction

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tudes toward technology-mediated instruction. In this learning context, it's not solely about being proficient in technology and staying updated on educational trends; rather, how they navigate and manage these aspects holds greater importance. Regardless of the challenges they face, their approach transcends these barriers. Aligned with the sentiments of educators, the successful incorporation of ICT in education heavily relies on teachers' self-efficacy (Guoyan et al., 2021). Self-efficacy is a crucial factor that empowers teachers to effectively achieve desired student learning outcomes. Recognizing the pivotal role of teachers' self-efficacy in the seamless integration of ICT, various studies advocate for enhancing their pedagogical and technological skills by implementing training programs. Additionally, Abbasi et al. (2021) have identified favorable attitudes among teachers regarding integrating technology into their instructional methods, establishing a noteworthy correlation between technology utilization and technological competencies. The role of teachers in utilizing technology-mediated instruction extends to its potential impact on students' success in online learning.

3.3.3. Tech-mediated instruction enhances students' success—Elementary teachers in public schools in Compostela East, Davao de Oro, recognize the immense potential of technology-mediated instruction in driving student success. They observe that digital tools and resources provide diverse opportunities for personalized learning, catering to different learning styles and abilities. Technology's interactive and adaptive nature allows students to progress at their own pace, receive immediate feedback, and explore content that suits their needs. This insight underscores the transformative impact of technology on enhancing student engagement motivation and ultimately contributing to a more effective and student-centric learning experience in the public elementary schools of Compostela East. Despite teachers' challenges in implementing technology-mediated instruction in their classrooms, participants 2 and 4 believed it brings significant student benefits. They note that it enables them to customize lessons according to students' learning styles, improving material retention. Additionally, this approach enhances accessibility, allowing students to access their lessons at any time and from any location. In line with the teachers' 6, 8, and 10 responses, the teachers believed that using Information and Communication Technology (ICT) in teaching allows students to effectively utilize educational technologies for accessing, selecting, establishing, and interpreting information. This integration is instrumental in addressing diverse learning needs through creative solutions. Various studies have demonstrated a significant correlation between the use of technology in educational practices and students' academic achievements. Additionally, ICT in classrooms creates a motivating environment, keeping students engaged in educational activities, as Jogezai et al. (2018) highlighted. Figure 5 shows the coping mechanisms of elementary school teachers in teaching technology-mediated instruction and the emergence of three themes: enhancing department and school support, training for technology-mediated instruction, and a positive disposition to tech-mediated instruction.

4. Implications and Future Directions

In this chapter, I present a summary of the study. I derived implications and future directions from the findings summarized here. My research aimed to investigate the experiences, coping

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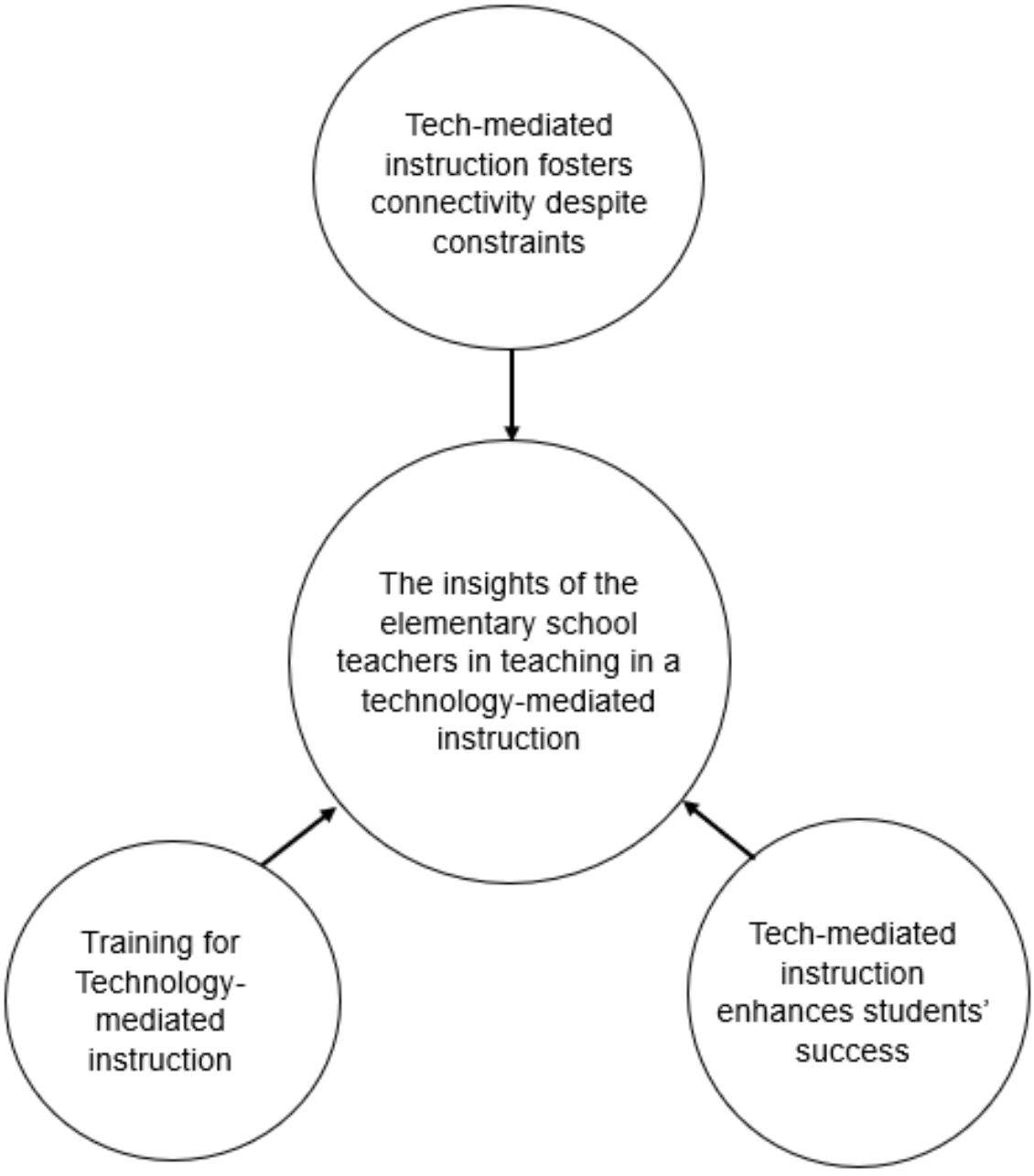

Fig. 5. The Insights of the Elementary School Teachers in Teaching in a Technology-Mediate Instruction

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strategies, and insights of various elementary teachers in different public elementary schools in Compostela East, Davao de Oro, concerning technology-mediated instruction. To achieve my research objectives, I employed a qualitative phenomenological research design and utilized thematic analysis for data analysis, following the approach outlined by Creswell (2007). In this study, I comprehensively describe the experiences shared by elementary teachers. These teachers possess valuable knowledge about the phenomenon under investigation, which was thoroughly discussed in the previous chapter.

4.1. Findings—The study's findings on elementary teachers' experiences in technology-mediated instruction in various public schools of Compostela East, Davao de Oro, offer valuable insights for educators and educational institutions aiming to improve technology integration in the classroom. One significant challenge identified is the need for more training for students and teachers in technology-mediated instruction. To address this, schools must prioritize and invest in comprehensive training programs. This should encompass the technical aspects of technology use and focus on fostering a cheerful disposition towards tech-mediated instruction. Encouraging teachers to actively engage in such training programs will empower them to utilize technology effectively as an educational tool. Expensive technology and resource constraints also emerged as substantial barriers. Schools and educational authorities must explore cost-effective solutions and strategically allocate resources to ensure widespread access to necessary technological tools. This may involve seeking support from external sources, including local communities, government initiatives, and partnerships with technology providers. On the other hand, coping strategies identified in the study, such as developing a positive disposition towards tech-mediated instruction and seeking support from schools and the Department of Education, should be actively promoted. Schools can create a supportive environment by fostering a culture that values and encourages technological integration in teaching and learning. Additionally, educational institutions should establish channels for teachers to seek assistance and resources from the school administration and educational authorities. Ultimately, insights into the benefits of technology-mediated instruction, including enhanced connectivity despite constraints and improved student success, emphasize the importance of continuing efforts in this direction. Educational institutions should acknowledge and celebrate successful instances of tech-mediated instruction, showcasing them as examples for others. Recognizing and highlighting positive outcomes can contribute to a more favorable attitude toward technology integration among teachers and students. In conclusion, the study underscores the need for a holistic approach to address challenges related to technology-mediated instruction. Educators and educational institutions can create an environment conducive to effective and inclusive technology integration in elementary education by prioritizing training, allocating resources strategically, promoting positive attitudes, and celebrating success stories.

4.2. Implications—Based on the results of the thematic analysis of the responses from the participants of the study, the following findings and their corresponding themes were revealed as such: the experiences of elementary teachers in public elementary schools in terms of technology-mediated instruction were, first and foremost, insufficient student and teachers'

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training are prevalent as it took the current issue of technical abilities of individuals. Second, the expensive technology and resource constraints abruptly hinder the availability of technical resources for both elementary teachers and students. Despite these struggles, the elementary teachers' coping mechanisms include a positive disposition toward technology-mediated instruction, which is a great path to adjusting to using such advances. Moreover, engagement towards technology-mediated instruction training and seminars and seeking support from the Department of Education and institutional support are better mechanisms to revitalize and apply technology-mediated education in the pedagogical process. Their insights concerning technology-mediated instruction encompassed technology-mediated instruction to foster connectivity despite constraints by raising public awareness of navigating technologies honestly and properly. At the same time, technology-mediated instruction as an enhancement for students' success claims how important it was to update the learning set-up of students in a way that would not disrupt their internet etiquette. Mostly, technology-mediated instruction and its reliance on teachers' attitudes showcase how teachers use technology, reflecting how students would improve since technology is just an aid for teaching and learning. Therefore, it was upon our understanding how we smoothly reciprocate the application of modern advances in the field of teaching.

4.3. Future Directions—The phenomenological study on elementary teachers' experiences in technology-mediated instruction in Compostela East, Davao de Oro, has unearthed critical issues that beckon further research, offering fertile ground for various methodological approaches. Quantitative studies could build on the identified challenges of insufficient training, expensive technology, and resource constraints by conducting large-scale surveys to quantitatively assess the prevalence and impact of these challenges across a broader sample of elementary teachers in diverse regions. This approach would provide statistically significant insights into the extent of the issues and help devise targeted interventions. In parallel, case study research could be instrumental in delving into the coping strategies identified in this study. In-depth case studies of individual schools or teachers could offer a nuanced understanding of the contextual factors influencing the effectiveness of engagement in training, positive disposition, and seeking support. By examining these coping strategies in specific contexts, researchers can uncover best practices and context-specific interventions that could be replicated or adapted in similar educational settings facing comparable challenges. Additionally, mixed-methods research could provide a comprehensive view by combining quantitative data on the prevalence of challenges with qualitative insights into coping strategies. This could offer a more holistic understanding of the complex interplay between challenges and coping mechanisms. For instance, a study might employ surveys to quantify the extent of insufficient training and then use qualitative interviews to explore how teachers who have undergone training differ in their experiences and perceptions. Regarding technology-mediated instruction fostering connectivity and enhancing student success, future quantitative studies could investigate specific, measurable outcomes such as academic performance, student engagement, and satisfaction. Large-scale assessments and standardized tests could be employed to objectively measure technology's impact on student success, providing empirical evidence to support or refine the qualitative insights obtained in this study. Furthermore, an extension of the research into

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different geographical regions could take the form of a comparative case study. By selecting schools from various regions with distinct socio-economic contexts, researchers could compare the effectiveness of coping strategies, the prevalence of challenges, and the overall impact of technology-mediated instruction, shedding light on the role of contextual factors. In conclusion, the implications for future research are manifold, spanning quantitative studies to assess prevalence, case studies for nuanced exploration of coping strategies, and mixed methods approaches to provide a comprehensive understanding. These diverse methodologies can collectively contribute to a robust body of knowledge that informs evidence-based practices and policies in technology-mediated instruction for elementary teachers.

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