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DIGITAL HORIZONS IN EDUCATION: AN EXPLORATION OF PRIVATE SCHOOL TEACHERS' ASSIMILATION OF TECHNOLOGY

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ABSTRACT

This study explored the lived experiences, coping mechanisms, and perceptions of teachers on the assimilation of technology into teaching practices in selected private elementary schools in Talomo District, Davao City. Using a phenomenological design, the researcher conducted in-depth interviews (IDI) and focus group discussions (FGD) with ten purposively selected teachers. Findings revealed four major themes from their lived experiences: navigating the learning curve, transforming instructional delivery, strengthening autonomy and creativity, and emotional and professional growth. Teachers also employed key coping mechanisms such as self-directed learning, seeking support systems, and time management and prioritization. Their perceptions were grouped into three themes: perceived usefulness, perceived challenges, and attitudes toward technology use. Teachers saw technology as helpful in improving instruction, but also expressed concerns about training gaps, weak infrastructure, and time demands. Despite these, most teachers showed a strong willingness to adapt and reported increased confidence over time. The study's results align with the TPACK framework by Mishra and Koehler (2006), emphasizing the integration of technological, pedagogical, and content knowledge. These insights suggest the need for holistic professional development, peer collaboration, and sustained leadership support. Overall, the study highlights that meaningful tech integration is possible when teachers are empowered and systems are responsive to their needs.

KEYWORDS: *Technology Integration; Teaching Practices; TPACK Framework; Teacher Experiences; Coping Mechanisms*

INTRODUCTION

Teachers' assimilation of technology presents a significant challenge, particularly in environments where there is a lack of adequate training, resources, and support. Many teachers may struggle to effectively integrate digital tools and platforms into their teaching practices, often due to insufficient professional development opportunities that focus on building technological proficiency. This can lead to a gap between the potential benefits of technology in education and its actual application in the classroom. Additionally, the rapid pace of technological advancement can overwhelm teachers, making it difficult for them to stay updated with the latest tools and best practices. As a result, the full potential of technology to enhance student engagement and learning outcomes may not be realized, highlighting the urgent need for comprehensive support systems that empower teachers to confidently and effectively incorporate technology into their instructional methods.

As educational technology continues to evolve, understanding how teachers assimilate these tools into their teaching practices is critical for informing professional development, policy-making, and the design of effective instructional strategies. Previous research has highlighted the transformative potential of technology in education, noting its ability to enhance student engagement, personalize learning, and facilitate collaborative learning environments (Trust & Pektas, 2019; Ertmer & Ottenbreit-Leftwich, 2020). However, the process of integrating technology is complex and multifaceted, often influenced by factors such as teachers' technological proficiency, institutional support, and the availability of resources (Kukulska-Hulme et al., 2020).

Many areas face significant challenges due to insufficient internet connectivity, digital devices, and technological infrastructure, hindering teachers' ability to access online resources, communicate with students, and effectively deliver remote instruction. These obstacles are particularly pronounced in remote areas, where the lack of adequate technology impedes teachers' efforts to integrate digital tools into their teaching during the pandemic (Voithofer & Nelson, 2021). In Asia, the digital literacy and technological proficiency of teachers in remote areas vary widely, leading to disparities in their ability to utilize digital tools, platforms, and educational resources. Addressing these skill gaps necessitates targeted professional development and support initiatives (Kao et al., 2020).

Taking things in Philippine setting, shifting from traditional classroom instruction to remote teaching requires teachers to adapt their pedagogical approaches, lesson plans, and instructional strategies. Teachers in remote areas require training and support to effectively integrate technology into their teaching practices and facilitate engaging and interactive remote learning experiences (Mercado, Panganiban & Ramos, 2019). More so, the availability of digital devices such as laptops, tablets, or smartphones is crucial for both teachers and students to engage in remote learning activities. However, in many remote areas, schools and households may lack sufficient access to these devices. Teachers may not have personal or school-provided devices to facilitate remote instruction, limiting their ability to create and deliver digital lessons, access online materials, or communicate with students (Santos & Castro, 2021).

Conducting a qualitative phenomenological study on the assimilation of technology in teaching practices among teachers involves exploring the lived experiences and perceptions of educators as they integrate digital tools and resources into their instructional methods. This research approach is particularly valuable for gaining deep insights into the subjective realities of teachers who are navigating the challenges and opportunities presented by technology integration. Phenomenology, as a research method, aims to capture and describe the essence of these experiences from the perspective of those who are directly involved (Creswell & Poth, 2018).

This study aimed to delved into these intricacies by focusing on the first-hand experiences of teachers, providing a nuanced understanding of how they perceive, adapt to, and implement technology in their classrooms. By employing a phenomenological approach, the research seeks to uncover the meanings that teachers attach to their experiences and the impact of technology on their instructional practices. Such insights are essential for developing targeted interventions and support mechanisms that can facilitate more effective technology integration in education.

PURPOSE OF THE STUDY

The purpose of this study was to deeply understand and explore the lived experiences of teachers in private schools within the Talomo District, Davao City, as they navigated the process of assimilating technology into their teaching practices. The researcher aimed to gain insights into how these educators engaged with technological tools, adapted their instructional methods, and integrated digital resources into their everyday classroom activities. By focusing on their personal narratives, the study sought to uncover the challenges, successes, and strategies they employed in this journey, shedding light on the realities of technology integration in an educational setting that was continually evolving.

Through this qualitative approach, the goal was not only to capture the unique experiences of these teachers but also to understand the broader implications of technology assimilation in the context of private education in Talomo District. It was believed that by listening to and analyzing their stories, the researcher could identify the specific factors that influenced their ability to effectively incorporate technology into their teaching, as well as the support systems they relied on. Hence, the study aimed to contribute valuable knowledge to the field of education, offering practical insights that could inform policy-making, professional development, and future research on technology integration in schools.

REVIEW OF SIGNIFICANT LITERATURE

This part presents the review of the researches and literature. It discusses the insights relevant to the study. Hence, it establishes a solid background of the topic as it supplies readers with sufficient information on the challenges and developments in the field being studied.

Technology Assimilation

Technology assimilation refers to the process by which teachers integrate digital tools and resources into their instructional methods to enhance learning and teaching effectiveness. This involves not only the use of hardware such as computers, tablets, and interactive whiteboards but also the incorporation of software applications, educational platforms, online resources, and multimedia content into the curriculum (Cebi et al., 2022). Tools such as educational games, simulations, and multimedia presentations capture students' attention and make complex concepts more understandable and enjoyable (Trust, Krutka, & Carpenter, 2019).

Technology allows for personalized learning experiences tailored to the individual needs of students. Adaptive learning software can provide customized content and assessments, enabling students to learn at their own pace and according to their unique learning styles (Hong, Lin & Lee, 2019). Digital tools facilitate collaboration and communication among students and between teachers and students. Platforms such as Google Classroom, Zoom, and Microsoft Teams allow for real-time interaction, collaborative projects, and peer feedback, promoting a more connected and interactive classroom environment (Johnson, 2019). According to Aslam, Khan, and Ahmed (2020), integrating technology into teaching practices helps students develop essential digital literacy skills. These skills are critical for success in the modern world, where proficiency with digital tools is increasingly important for both academic and professional achievement.

During the pandemic, online teaching platforms and digital tools became crucial for delivering instruction, accessing educational materials, and facilitating teacher-student communication. Teachers proficient in technology integration were

better positioned to use these resources to support student learning (Akram et al., 2021). With schools closed and learning shifted online, teachers needed to quickly adapt to remote teaching to maintain learning continuity. Technological proficiency enabled teachers to deliver effective instruction and engage students in remote settings. These adept teachers were able to create and curate digital content, such as instructional videos, interactive simulations, and multimedia presentations, to enhance their lessons (Rahmadi, 2021).

Moreover, integrating technology allowed for personalized learning experiences tailored to students' individual needs and preferences. Teachers skilled in using technology could offer differentiated instruction, provide multimedia resources, and adapt materials to accommodate diverse learning styles and abilities (Tondeur et al., 2019). Ifinedo, Rikala, and Hämäläinen (2020) noted that the pandemic underscored the importance of ongoing professional development in technology integration for teachers. Educators who pursued professional learning opportunities to enhance their tech skills were better prepared to navigate online teaching challenges and maximize digital tools' potential to support student learning. Furthermore, Raygan and Moradkhani (2022) asserted that teachers knowledgeable in technology integration demonstrated adaptability and resilience in adjusting to the rapidly evolving educational landscape during the pandemic.

Additionally, teachers' efforts to develop technological proficiency and effectively use digital tools and platforms for remote instruction are crucial in the teaching-learning process. Saubern et al. (2020) found that proficient use of digital tools and platforms helps teachers streamline administrative tasks, organize course materials, and deliver instruction more efficiently. This efficiency allows educators to focus more on designing engaging learning activities, providing personalized feedback, and facilitating student interaction, thereby enhancing the overall teaching experience. Aslam et al. (2021) emphasized that technologically adept teachers can leverage a wide range of digital resources, multimedia content, and online platforms to enrich instructional materials and offer diverse learning opportunities.

Hämäläinen et al. (2021) showed that teachers with strong technological proficiency were better equipped to transition to remote teaching and continue delivering high-quality instruction to students from a distance. Their ability to effectively navigate online teaching platforms, troubleshoot technical issues, and adapt instructional strategies to virtual settings was crucial in ensuring the continuity of learning during disruptions. Similarly, Seufert, Guggemos, and Sailer (2021) noted that developing technological proficiency allows teachers to expand their skill set, stay updated on emerging technologies and educational trends, and pursue continuous professional development.

Pedagogical innovations enable teachers to adapt their instructional methods to remote learning environments. By experimenting with various teaching strategies and technological tools, educators can deliver engaging and interactive lessons to students learning from home (Androutsos & Brinia, 2019). According to López Carrillo et al. (2019), such innovations empower teachers to modify their instructional methods to meet the unique challenges of remote learning. Traditional teaching approaches may not always translate effectively to online environments, but by experimenting with innovative strategies, educators can find new ways to engage and motivate students. With the plethora of technological tools available, teachers can experiment with various platforms, apps, and software to facilitate remote learning.

Innovative teaching methods utilize technology to create engaging and immersive learning experiences, which not only capture students' attention but also foster active participation and engagement, thereby enhancing retention and comprehension of the material (Kukulska-Hulme et al., 2020). According to Ng et al. (2019), technology enables educators to integrate various multimedia elements into their lessons, such as videos, animations, simulations, and virtual reality experiences. These dynamic resources stimulate students' senses and interest, making learning more interactive and memorable. By adopting these strategies, educators can transform education and equip students for success in a digitally-driven world.

Lesson planning and curriculum adaptation are crucial in teaching, particularly when integrating technology into education. Backfisch et al. (2021) found that these practices allowed teachers to tailor instructional materials and activities for online formats, ensuring learning objectives were met despite the pandemic's challenges. By utilizing their knowledge of technology integration, educators designed engaging and interactive lessons that held students' attention and facilitated meaningful learning experiences. Additionally, Kimmons, Graham, and West (2020) noted that technology-enabled lesson plans can promote collaborative learning experiences, encouraging peer interaction, teamwork, and shared problem-solving. Collaborative projects, online discussions, and group activities mediated by technology can boost students' motivation through social interaction and collective achievements.

Research also shows that adapted curricula can address the diverse learning needs and preferences of students. Using technology tools for differentiated instruction, teachers can offer personalized learning experiences that match students' interests, abilities, and learning styles, thereby increasing their motivation to learn (Spangenberg & De Freitas, 2019). Furthermore, Muhamad et al. (2023) suggested that integrating real-world contexts and digital resources into lesson plans makes learning more relevant and authentic for students. When students see practical applications of their studies through technology, they are more motivated to engage with the content and apply their knowledge meaningfully.

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RESEARCH QUESTIONS

The research questions underlying the investigation in this study are as follows:

1. What are the experiences of teachers on assimilation of technology into teaching practices?
2. How do teachers cope up with challenges they face in assimilating technology into their instructional methods?
3. What educational management insights can be gain from the findings of the study?

METHODOLOGY

This section contains the philosophical assumption, qualitative assumption, research design, research participants, research ethics, role of researcher, research instrument, research procedure, data collection, data analysis, analytical framework, and trustworthiness of the study.

Research Design

In this study, I used a qualitative design following a phenomenological study method. The qualitative research design served as the systematic framework guiding my exploration of the research topic. As emphasized by Klopper (2008), this approach allowed me to delve into understanding social phenomena through the subjective experiences, meanings, and interpretations of individuals or groups within their natural contexts. By employing a qualitative research design, I aimed to explore, describe, interpret, and understand social phenomena in depth, providing insights into the complex human behavior, interactions, and experiences related to the research focus. I gathered qualitative data through methods such as interviews, observations, focus groups, and document analysis to capture the depth and complexity of these phenomena.
The phenomenological qualitative research design was my chosen approach, as it sought to understand individuals' lived experiences and the meanings they assigned to those experiences (Groenewald, 2004). Through this approach, I explored the essence of phenomena as perceived by the respondents, aiming to uncover the underlying structures and processes that shaped their subjective realities. I focused on gathering rich, detailed descriptions of the respondents' experiences using methods such as interviews, observations, and journaling. Techniques like bracketing, epoché, and phenomenological reduction were employed to set aside any preconceived notions, allowing the respondents' experiences to emerge without bias.

This phenomenological qualitative research design was well-suited for studying the assimilation of technology in teaching practices, offering a comprehensive understanding of teachers' experiences, perspectives, and practices in these contexts. By employing phenomenological methods, I intended to delve deeply into these experiences to gain insights into the specific contexts, challenges, and successes encountered by teachers in remote settings. Additionally, this approach allowed me to capture the subjective realities of teachers, acknowledging the diversity of perspectives and experiences that existed. Through this method, I hoped to uncover nuanced insights that might not have been apparent through quantitative or standardized assessments.

Research Participants

I selected ten (10) teachers from private schools in Talomo District, Davao City as the participants for this study. I used a purposive sampling technique to choose these participants. As Guarte and Barrios (2006) explained, purposive sampling was a method where a sample was chosen based on specific features or characteristics that allowed for a detailed exploration and understanding of the constructs under study and the research questions. Purposive sampling offered flexibility and customization in participant selection, enabling me to focus on specific attributes or criteria that were most relevant to my research questions. Although purposive sampling did not have the representativeness of probability sampling methods, it was a valuable approach for generating in-depth insights and understanding complex phenomena within targeted populations.

In selecting the participants, I implemented certain inclusion criteria. These criteria included: private school teachers currently teaching in Talomo District, Davao City; teachers who had experience with integrating technology into their classroom instruction; teachers who had taught during the pandemic and had experience with remote or hybrid teaching modalities; and teachers who were willing to participate in the study and provide detailed information about their experiences with technology integration. Conversely, I excluded teachers who had not taught during the pandemic or had limited experience with remote or hybrid teaching modalities, as well as those who were unwilling to participate in the study or provide detailed information about their experiences with technology integration.

Research Instrument

In gathering data, I utilized a semi-structured interview questionnaire. This researcher-made interview questionnaire was developed upon consultation and reviewed by experts, undergoing several processes to accommodate their suggestions. The components that were validated included the language and the conceptual levels of questions to ensure they were suited to the respondents' level of understanding, the suitability of the items to the research design to avoid leading questions, and the alignment of the interview questions to the objective of the study.

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Data Analysis

Thematic analysis of in-depth interviews and focus group discussions involved identifying patterns, themes, and recurring concepts within the transcribed interview data. I familiarized myself with the interview transcripts by reading through them multiple times to gain a comprehensive understanding of the data. I systematically coded the transcripts, assigning descriptive labels to segments of text that captured key ideas, concepts, or patterns related to the experiences of the teachers. Codes were grouped into higher-order themes based on their relevance and similarity. Themes were refined through iterative analysis, with me constantly comparing and contrasting codes to identify overarching patterns and concepts. I reviewed the identified themes, examining their coherence, relevance, and significance in relation to the research questions. Themes were interpreted in light of the study's objectives and theoretical frameworks.

Thematic analysis across data sources involved synthesizing findings from in-depth interviews and focus group discussions. Themes identified from each data source were compared and synthesized to identify convergence and divergence across different sources of data. I looked for patterns and relationships between themes to develop a coherent and comprehensive narrative. Findings from different data sources were triangulated to validate and corroborate key findings and conclusions. In conducting this qualitative study on teachers' experiences with the assimilation of technology into their teaching practices, I utilized environmental triangulation to enhance the credibility and depth of the findings. Specifically, I gathered data from multiple private schools within the Talomo District, Davao City, to capture diverse classroom settings and resource availability. Additionally, I conducted observations in different teaching environments, such as traditional classrooms and technology-enhanced rooms, to compare how various settings influenced technology integration. By incorporating data from these varied environments, I aimed to develop a comprehensive understanding of the factors that supported or hindered the effective use of technology in teaching practices.

RESULTS AND DISCUSSIONS

The data analysis presented in this chapter is the outcome of the study. In addition, discussions are provided to provide a full explanation of the themes that are generated in response to the objectives established for this study.

Lived Experiences of Teachers on Assimilation of Technology Into Teaching Practices

Figure 3 illustrates the experiences of teachers on assimilation of technology into teaching practices. These experiences have been categorized into four distinct themes: Navigating the Learning Curve; Transforming Instructional Delivery; Strengthening Teacher Autonomy and Creativity; and Emotional and Professional Growth.

Navigating the Learning Curve. This theme encapsulates the teachers' process of adjusting to the digital shift in education. Their lived experiences reflect an initial stage of discomfort and uncertainty, followed by gradual adaptation through self-directed learning and peer collaboration. Teachers encountered a range of challenges, including unfamiliar interfaces, technical glitches, and errors in digital material preparation, all of which contributed to a steep learning process. However, through exploration, perseverance, and support from peers, teachers began to develop confidence and competence in using educational technologies. This theme highlights that assimilation into digital practices is not immediate but is a transformative journey shaped by trial, error, and reflection.

IMPLICATIONS AND FUTURE DIRECTIONS

This part of the paper presents the implications and future directions of the study. The discussion is supported by the literature presented in the first chapters and the implications is in accordance with research questions presented in this study.

Findings

The primary purpose of the study was to explore the experiences of teachers on assimilation of technology into teaching practices, specifically, the phenomenological design wherein a semi-structured interview guide was administered through in-depth interview (IDI) and focus group discussion (FGD). The researcher selected the 10 teachers from selected private elementary schools in Talomo District, Davao City as the participants through purposive sampling method. The researcher employed a semi structured interview guide to explore the lived experiences of teachers on assimilation of technology into teaching practices; coping mechanism of teachers with challenges they face in assimilating technology into their instructional methods; and teachers' perception on the assimilation of technology into their teaching practices.

Based on the results the summary of the findings were the following:

The lived experiences of teachers in Talomo District, Davao City, on the assimilation of technology into teaching practices revealed a multifaceted journey, reflected in four emergent themes: Navigating the learning curve, transforming instructional delivery, strengthening teacher autonomy and creativity, and emotional and professional growth. Under Navigating the Learning Curve, teachers encountered initial struggles with unfamiliar digital platforms, frequent technical issues, and relied heavily on trial-and-error learning. In Transforming Instructional Delivery, educators recognized how technology enhanced their lesson presentation, improved student engagement, and supported the shift to blended learning. Strengthening Teacher Autonomy and Creativity highlighted how teachers took ownership of their instructional design,

experimented with new strategies, and integrated local context into their teaching. Finally, Emotional and Professional Growth captured the development of teachers' self-efficacy, a sense of fulfillment from overcoming challenges, and increased confidence in using technology.

Further, the experiences of teachers in Talomo District revealed three major themes representing their coping mechanisms with the challenges of integrating technology into their instructional practices: Self-directed learning, seeking support systems, and time management and prioritization. Under Self-Directed Learning, teachers showed initiative by exploring digital tools independently, using online resources such as tutorials and templates, and engaging in continuous practice to build confidence and skill. The theme Seeking Support Systems revealed that teachers relied on collegial help through peer collaboration, assistance from tech-savvy students, and Participation in Professional Learning Communities (PLCs) where strategies and resources were shared. Lastly, Time Management and Prioritization emerged as teachers coped by creating structured schedules, using automation and digital tools to reduce their workload, and setting boundaries to maintain a healthy work-life balance. These themes highlight the proactive, collaborative, and adaptive behaviors that helped teachers manage the demands of digital teaching.

Furthermore, the perceptions of teachers in Talomo District regarding the assimilation of technology into their teaching practices were captured across three major themes: Perceived usefulness of technology in teaching, perceived challenges in technology integration, and attitudes toward technology use. Under Perceived Usefulness, teachers acknowledged that technology enhanced lesson delivery through multimedia tools, improved student engagement with interactive activities, and increased their productivity through automation and reusable digital resources. In contrast, the theme Perceived Challenges revealed that limited training, weak infrastructure, and time-consuming preparation created significant barriers to integration. Despite these difficulties, the theme Attitudes Toward Technology Use showed that teachers demonstrated a strong willingness to adapt, even while experiencing anxiety and self-doubt, which over time transformed into a sense of empowerment and professional growth. These findings align with the TPACK framework which posits that meaningful technology integration occurs at the intersection of technological, pedagogical, and content knowledge—evident in how teachers continuously adjusted their strategies to suit instructional goals, learner needs, and available tools.

Implications

These findings of the study imply that for technology integration to be successful and sustainable, educational leaders must support both the technical and emotional dimensions of teacher development. Professional development should not only build digital skills but also foster autonomy, encourage innovation, and provide space for reflective practice. Schools should invest in infrastructure and technical support while promoting a culture of collaboration, allowing teachers to learn from one another and grow collectively. Moreover, training should be contextualized, encouraging the use of localized content and strategies that resonate with students' lived realities. Ultimately, the study affirms that meaningful technology assimilation requires a holistic approach—where capacity-building, empowerment, and empathy for teachers' lived experiences are central to policy and practice.

Moreover, the findings suggest that supporting teachers' coping strategies requires a multidimensional approach to professional development and school leadership. Schools must encourage self-directed learning by providing access to reliable online resources and recognizing informal learning as a valid form of teacher growth. Institutionalizing support systems—such as peer mentoring programs, student-led tech support groups, and active PLCs—can foster a culture of collaboration and reduce teacher isolation. Moreover, educational leaders should address workload concerns by promoting the use of time-saving technologies and offering flexible scheduling arrangements to protect teachers' well-being. These coping mechanisms reflect not only individual resilience but also systemic needs that require supportive policies, capacity-building structures, and a school culture that values teacher agency, care, and continuous improvement.

In addition, the study's results highlight that successful and sustainable technology integration in education depends not only on access to digital tools but also on developing teachers' confidence, competence, and support systems. Informed by the TPACK framework, educational stakeholders must provide professional development programs that address all three knowledge domains: technological skills, pedagogical strategies for tech use, and subject-specific application. Addressing perceived challenges also requires systemic responses, including consistent training, infrastructure upgrades, and policies that support manageable teacher workloads. Additionally, cultivating a culture that encourages openness, risk-taking, and collaborative learning will help transform hesitant attitudes into empowered instructional practices. The study affirms that when teachers are supported in developing their TPACK competencies, they are more likely to innovate, engage learners effectively, and use technology as a tool for both teaching excellence and professional fulfillment.

Future Directions

Based on the findings of the study, it is important that the findings are properly relayed and used by the significant people whom this research was intended for. Thus, the researcher recommends the following:

For the Department of Education (DepEd). The Department of Education must institutionalize a comprehensive digital transformation plan that prioritizes teacher capacity-building aligned with the TPACK framework. This includes the

development of structured and progressive ICT training programs, especially for public school teachers with limited prior exposure to technology. Investment in upgrading ICT infrastructure, ensuring equitable access to devices and stable internet across all schools, is critical to bridging systemic gaps. DepEd should also promote localized and culturally relevant digital content to support context-based teaching, as teachers have shown success in integrating familiar examples to enhance understanding. Additionally, integrating teacher-led tech innovations and feedback into national policy design can strengthen bottom-up, evidence-based educational reforms.

For School Heads. School heads must take a proactive role in creating supportive school environments where technology integration is sustained by continuous mentoring, collaborative learning, and professional learning communities (PLCs). They should conduct needs assessments to identify the specific digital competency levels of their faculty and allocate time and resources for on-site tech coaching and peer learning sessions. School leaders should also reinforce time management practices and offer flexible workloads to ensure that teachers have time to prepare, explore tools, and maintain work-life balance. Recognizing and celebrating teachers' milestones in technology integration—such as digital lesson design or student engagement achievements—can boost morale and motivation. Ultimately, school heads must be visionary yet grounded in understanding the day-to-day realities of teachers.

For Teachers. Teachers are encouraged to continue developing self-directed learning habits, such as exploring digital platforms, participating in online training, and joining teacher communities for tech-based instruction. The study highlights that teachers thrive when they combine independent exploration with collaborative support systems, including peer mentoring and student assistance. Teachers should also seek to strengthen their TPACK competencies by aligning technology use with sound pedagogy and relevant content. Reflecting on their own experiences—especially successes in overcoming fear and barriers—can help reshape teaching beliefs and sustain long-term tech adoption. Most importantly, teachers should view themselves not only as users but also as innovators and co-creators of digital learning environments.
For Future Researchers. Future research should explore the longitudinal impact of technology assimilation on student achievement, teacher well-being, and classroom practices to better understand how teacher experiences evolve over time. Studies may also examine comparative perspectives across districts, urban-rural settings, or between public and private schools to identify scalable and adaptable best practices. Qualitative follow-ups using phenomenological approaches can be expanded with mixed-methods research to quantify the impact of specific coping mechanisms and interventions. Moreover, future researchers may delve into the gendered, generational, and subject-area differences in teachers' tech integration journeys. Emphasizing teacher voice and lived experience will remain essential in developing inclusive, context-sensitive, and transformative educational technology frameworks.

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