International Journal of Research on Multidisciplinary Studies
Online ISSN: 3116-4137 | Print ISSN: 3116-4145
Volume 1, Issue 10, pp. 228-238, November 2026
https://ijroms.com
Original Article

When Teaching Goes Digital: Lived Experiences of Tech Challenged Teachers in Tech-Mediated Classrooms

Shiena Mhae V. Antonio[1], James L. Paglinawan[2]

Author Information:
[1]*Department of Education, City of Valencia, Bukidnon, Philippines*

[2]*Department of Professional Education, Central Mindanao University, Maramag, Bukidnon, Philippines*

Correspondence:
shienamhae.antonio@deped.gov.ph

Article History:

Date Received: October 13, 2026
Date Revised: October 26, 2026
Date Accepted: October 30, 2026
Date Published: November 06, 2026

DOI: https://doi.org/10.67903/ijroms0582

Document ID: *2026IJROMS0582*

Recommended Citation:
Antonio, S. M. V. & Paglinawan, J. L. (2026). When Teaching Goes Digital: Lived Experiences of Tech-Challenged Teachers in Tech-Mediated Classrooms. International Journal of Research on Multidisciplinary Studies, 1(10), 228-238. https://doi.org/10.67903/ijroms0582

Abstract. This study explored the lived experiences of tech-challenged teachers in tech-mediated classrooms in public elementary and secondary schools in the Division of Valencia City during School Year 2026-2027. It sought to understand how teachers with limited tech experience manage digital teaching amid barriers to access, skills, and support, specifically their reasons for using technology, difficulties, coping strategies, and recommendations for better technology use. Using a descriptive phenomenological design, the study included 17 tech-challenged elementary and secondary teachers (KI 1-KI 17), purposively selected for their technology experience. Data came from a researcher-made, semi-structured interview guide aligned with the four research questions. Participation was voluntary, with informed consent and confidentiality. Transcripts were analyzed using Braun and Clarke's six-phase thematic analysis. Four major themes emerged: purposeful technology use to improve learner-centered teaching and teacher effectiveness; persistent struggles with linked access, skill, and support barriers; adaptive and resourceful coping to sustain learning; and collaborative, system-supported capacity building for meaningful technology use. Participants reported using technology to boost learner engagement, support differentiated instruction and assessment, improve communication, and ease administrative tasks. However, unreliable internet, limited devices, technical problems, uneven digital skills, unequal learner access, and added workload limited regular use. Teachers reported coping through offline preparation, alternative materials, troubleshooting, collaboration, and self-directed learning. Findings suggest that meaningful technology use, as perceived by participants, requires more than individual teacher adaptability; it appears to rely on reliable infrastructure, continuous practical training, accessible technical help, collaborative support, and inclusive instructional alternatives. These findings reflect teachers' perceptions and reported practices rather than measured outcomes.

Keywords: Descriptive Phenomenological Design; Lived Experiences; Tech-Challenged Teachers; Technology Integration; Tech-Mediated Classrooms

Introduction

Digital technology can support teaching, learning, and school management, but it can also be burdensome or exclusionary when the right conditions are missing, notably access to technology and teacher preparation (UNESCO, 2023). Effective integration therefore depends not only on the availability of digital tools but also on teachers' digital competence, access to resources, and institutional support. Recent studies show that unreliable infrastructure shapes how educators' digital competence is enacted in practice, making technology use a shared individual and institutional responsibility rather than a matter of individual skill alone (Ilyas et al., 2026). Teachers' responses to technology-mediated teaching also vary widely, influenced by their digital competence and the institutional support available to them (Damşa et al., 2021). In the Philippine context, studies of elementary teachers report limited or unstable internet connectivity and unequal learner access to devices at home as major perceived obstacles (Aldave & Obiso, 2025). They also report insufficient computer units, limited ICT training, time pressure from ancillary duties, and difficulty with basic ICT skills (Rondubio & Gantalao, 2025). Filipino teachers' adoption of ICT-based instruction has likewise been examined through the Unified Theory of Acceptance and Use of Technology, which includes enabling conditions among its factors (Aldave & Obiso, 2025; Kim & Lee, 2022). Several of these studies measure barriers and acceptance through descriptive or correlational designs (Aldave & Obiso, 2025; Rondubio & Gantalao, 2025). Further qualitative inquiry is therefore needed to understand how teachers

This article is licensed under a Creative Commons Attribution 4.0 International License.

International Journal of Research on Multidisciplinary Studies
Online ISSN: 3116-4137 | Print ISSN: 3116-4145
Volume 1, Issue 10, pp. 228-238, November 2026
https://ijroms.com
Original Article

experience technological difficulties, cope with instructional disruptions, and identify the support they need. This concern is especially relevant in public schools, where differences in connectivity, device availability, digital skills, and technical assistance may affect technology-supported teaching.

In the public elementary and secondary schools of the Division of Valencia City, Bukidnon, technology supports both classroom instruction and administrative responsibilities. Nevertheless, teachers may encounter unstable internet connectivity, limited devices, unfamiliar applications, additional workloads, and insufficient technical assistance. Understanding how teachers navigate these challenges is essential for developing responsive professional development programs, strengthening institutional support, and promoting meaningful and equitable technology integration.

In this study, tech-challenged teachers refers to public school teachers who use technology for teaching or school-related tasks but encounter difficulties such as limited digital skills, unstable connectivity, inadequate devices, technical problems, or insufficient support. The term is a descriptive, situational label, not a judgment of ability, motivation, or professional worth. It does not imply resistance or unwillingness, because the participants were already using technology. It also recognizes that their difficulties arise from the interaction of personal skills and contextual constraints, such as infrastructure, connectivity, and institutional support, which shape how teachers act in technology-mediated settings (Damşa et al., 2021; Ilyas et al., 2026). This avoids deficit framing that locates the problem in the teacher alone.

This qualitative study aims to explore the lived experiences of tech-challenged teachers in tech-mediated classrooms in the Division of Valencia City, Bukidnon, Philippines, during School Year 2026–2027. Specifically, it seeks to understand their reasons for using technology, the difficulties they encounter, the strategies they employ to overcome these challenges, and their recommendations for improving teacher and institutional support. The Department of Education scheduled School Year 2026–2027 from June 8, 2026, to April 8, 2027 (DepEd Order No. 009, s. 2026). Data were gathered from September 21 to October 8, 2026, during the first weeks of Term 2, which began on September 16, 2026. Because the school year was still ongoing at the time, the findings reflect participants' perceptions and reported practices up to that point in the school year rather than the full year. The study intends to generate insights that may inform context-sensitive policies, continuous professional development, and school-based initiatives for meaningful and equitable technology integration.

Research Questions

This study aimed to explore the lived experiences of technology-challenged teachers in technology-mediated classrooms in the Division of Valencia City, Bukidnon, Philippines, during School Year 2026–2027. Specifically, it sought to answer the following questions:

1. Why do technology-challenged teachers use technology in their profession?
2. What difficulties do they encounter in technology-mediated teaching?
3. What strategies do they employ to overcome these difficulties?
4. What recommendations do they offer for improving teacher and institutional support for technology integration?

Scope and Delimitation of the Study

The study was delimited to the experiences of technology-challenged teachers in public elementary and secondary schools in the division and focused on their use of technology for instruction and related professional responsibilities. Its findings may inform context-sensitive policies, continuous professional development, and school-based initiatives for meaningful and sustainable technology integration.

Literature Review

Technology Integration and Instructional Benefits

Technology integration can support learner engagement, differentiated instruction, access to learning resources, assessment, and communication. However, its educational value depends on how digital tools are integrated into teaching rather than on the frequency of their use alone. Consoli et al. (2025), examining students' perspectives, found positive associations between the perceived quality of technology integration and behavioral engagement and digital competencies. Maulet et al. (2024), meanwhile, found that teachers' technological, pedagogical, and content knowledge was related to their perceived opportunities for using technology, although planning time and school-leader support received comparatively low ratings. These findings highlight complementary but distinct dimensions of technology integration: the quality of instructional practice and the conditions that enable teachers to implement it. Nevertheless, perceived engagement and digital competencies should not be equated automatically with improved academic achievement. For technology-challenged teachers, the central concern is therefore not simply whether

This article is licensed under a Creative Commons Attribution 4.0 International License.

International Journal of Research on Multidisciplinary Studies
Online ISSN: 3116-4137 | Print ISSN: 3116-4145
Volume 1, Issue 10, pp. 228-238, November 2026
https://ijroms.com
Original Article

technology is available or used, but how its perceived instructional benefits are shaped by teachers' knowledge, pedagogical intentions, and classroom circumstances.

Barriers to Technology Integration

Technology-related difficulties arise from the interaction of individual, institutional, and infrastructural conditions. Akram et al. (2022), in a systematic review, identified recurring challenges associated with resources, time, technical assistance, professional development, and organizational support. Similarly, Maulet et al. (2024) found that teachers' knowledge did not eliminate concerns about limited planning time and school-leader support. Qualitative evidence from under-resourced South African schools further illustrates how teachers' technological knowledge and pedagogical decisions interact with resource limitations and curricular demands (Sepadi et al., 2025). Although these studies differ in methodology and context, their findings challenge explanations that locate technology-integration difficulties solely in teachers' digital competence. A teacher may possess relevant knowledge yet remain unable to implement a planned activity because of unreliable connectivity, unavailable equipment, or inadequate preparation time. Conversely, access to technology does not guarantee pedagogically appropriate use. These distinctions are particularly relevant to Philippine public schools, where localized qualitative studies have documented unreliable internet access, limited resources, power interruptions, insufficient training, and inadequate institutional support (Fernandez & Baynosa, 2025; Macadato & Dy, 2024; Sarueda et al., 2025). The present study consequently examines how teachers experience these interacting barriers in their everyday instructional responsibilities rather than treating them as isolated problems.

Teachers' Coping Strategies and Professional Agency

Teachers' responses to technology-related difficulties reveal how instructional practices are maintained under varying conditions. Philippine qualitative studies document the use of self-directed learning, peer collaboration, and adaptive lesson-planning practices, while also identifying continuing limitations in resources, training, and administrative support (Macadato & Dy, 2024; Sarueda et al., 2025). Fernandez and Baynosa (2025) likewise reported teachers' need for continuing professional development and stronger institutional assistance. These findings suggest that coping strategies cannot be evaluated solely in terms of teachers' resourcefulness. Preparing offline materials, modifying lessons, troubleshooting equipment, or seeking assistance from colleagues may sustain classroom activities, but these practices may also demand additional time and effort. Individual adaptation can therefore demonstrate professional agency while simultaneously revealing shortcomings in institutional support. Moreover, a strategy that works in a well-equipped school may be impractical in a setting with unreliable electricity or limited devices. The present study explores how teachers select and adapt coping strategies, how they perceive their effectiveness, and what their experiences indicate about the sustainability of technology-mediated instruction.

Theoretical Lens and Institutional Support

This study is guided by the Technological Pedagogical Content Knowledge (TPACK) framework developed by Mishra and Koehler (2006). TPACK conceptualizes effective technology integration through the interaction of technological knowledge, pedagogical knowledge, and content knowledge. It emphasizes that effective teaching with technology requires more than technical proficiency; teachers must also understand how particular tools relate to instructional strategies and subject-matter objectives. Maulet et al. (2024) used this framework to examine teachers' knowledge and perceived technological affordances, while Sepadi et al. (2025) applied it to qualitative evidence from under-resourced schools. Together, these studies demonstrate the relevance of examining technology integration as a relationship between professional knowledge and instructional context.

In the present study, TPACK informs the interview questions by directing attention to teachers' reasons for using technology, their selection of digital tools for particular instructional purposes, the difficulties encountered during implementation, and the adjustments they make when technological resources do not function as intended. It also provides a sensitizing framework for thematic analysis, helping the researcher examine how technological, pedagogical, and content-related concerns appear in participants' accounts and how these dimensions intersect. However, TPACK does not fully explain structural constraints such as inadequate infrastructure, limited planning time, workload, or insufficient technical support. These conditions are therefore considered contextual influences rather than automatically interpreted as deficiencies in teachers' knowledge. Institutional support and professional development are examined as enabling conditions that may help teachers translate their knowledge into effective classroom practice. This approach allows the analysis to recognize both teacher agency and the broader conditions that shape technology integration.

This article is licensed under a Creative Commons Attribution 4.0 International License.

International Journal of Research on Multidisciplinary Studies
Online ISSN: 3116-4137 | Print ISSN: 3116-4145
Volume 1, Issue 10, pp. 228-238, November 2026
https://ijroms.com
Original Article

Research Gap and Contribution

Existing international and Philippine studies have examined the instructional potential of technology, teachers' professional knowledge, barriers to implementation, and coping practices. Philippine qualitative research has specifically explored teachers' lived experiences, including those of elementary and multigrade teachers working under resource constraints (Arellano et al., 2024; Fernandez & Baynosa, 2025; Macadato & Dy, 2024; Sarueda et al., 2025). These studies establish that teachers' experiences of technology integration are not an unexplored research area. Rather than claiming an absence of comparable research, the present study addresses a contextual and analytical gap by examining how teachers' instructional purposes, technology-related difficulties, coping strategies, and perceived support needs are connected across public elementary and secondary schools in the Division of Valencia City, Bukidnon, during School Year 2026–2027. By bringing these dimensions together within a specific division-level context, the study seeks to provide locally grounded insights into the conditions that enable or constrain technology-mediated teaching. Its contribution lies in the integrated examination of these experiences and their implications for context-responsive professional development, institutional assistance, and more equitable technology integration.

Methodology

Research Design

The study employed a qualitative phenomenological research design to explore the lived experiences of technology-challenged teachers in technology-mediated classrooms. It was conducted in public elementary and secondary schools in the Division of Valencia City, Bukidnon, Philippines, during School Year 2026–2027. The inquiry focused on teachers' purposes for using technology, the challenges encountered, coping strategies, and recommendations for strengthening technology integration and institutional support.

Research Locale

The study was conducted in the public elementary and secondary schools of the Division of Valencia City, Province of Bukidnon, Philippines, during School Year 2026–2027. Valencia City was chosen as the research locale because its public schools use technology for classroom instruction, learner assessment, communication, and administrative tasks. At the same time, teachers may experience varying levels of internet connectivity, device availability, technical assistance, and digital competence across schools. These conditions make the division a suitable setting for examining how technology-challenged teachers navigate technology-mediated classrooms.

Research Participants

The participants of the study were 17 technology-challenged teachers from public elementary and secondary schools, excluding private schools, in the Division of Valencia City, Bukidnon. They were selected because they had experience using technology in teaching or school-related responsibilities while encountering difficulties such as limited digital skills, unstable connectivity, inadequate devices, technical problems, or insufficient support. Purposive sampling was used to ensure that the participants could provide rich and relevant accounts of their lived experiences in technology-mediated classrooms. Participation was voluntary, and informed consent was secured before the interviews. To protect their identities, pseudonyms were used in the presentation of data, and all information gathered was treated with confidentiality.

Research Instrument

The researcher used an expert-validated, researcher-developed, semi-structured interview guide aligned with the study's four research questions to collect data. The interviews explored participants' experiences with technology integration, the difficulties they encountered, their coping strategies, and recommendations for teachers, school administrators, and the Schools Division Office. Probing questions were used to elicit detailed accounts and clarify responses. Informed consent and necessary permissions were obtained before data collection, and identifying information was excluded from the research report.

Data Gathering Procedure

Data were gathered using the validated instrument. The guide explored teachers' purposes for using technology, difficulties encountered, coping strategies, and recommendations for improving support. TPACK informed the exploration of technological, pedagogical, and content-related concerns, while institutional and infrastructural conditions were considered contextual influences. Data were collected through individual interviews from September 21 to October 8, 2026, following the applicable permissions and informed-

This article is licensed under a Creative Commons Attribution 4.0 International License.

International Journal of Research on Multidisciplinary Studies
Online ISSN: 3116-4137 | Print ISSN: 3116-4145
Volume 1, Issue 10, pp. 228-238, November 2026
https://ijroms.com
Original Article

consent procedures. Results were fact-checked by the participants before they were interpreted and discussed.

Results and Discussions

Research Question 1: Why do technology-challenged teachers use technology in their profession?

Theme 1*:* Purposeful Technology Integration as a Means of Improving Learner-Centered Teaching and Teacher Effectiveness

The findings revealed that teachers used technology primarily to improve instructional delivery, promote learner engagement, accommodate diverse learning needs, facilitate assessment, and manage school-related responsibilities. Technology was viewed not merely as a classroom resource but as a means of making instruction more interactive, accessible, and responsive to learners' needs. This finding is consistent with the systematic review by Msambwa et al. (2024), which emphasized that ICT integration can support teaching and learning when digital tools are aligned with instructional objectives, teachers' pedagogical knowledge, and the learning context.

Participants reported using presentation slides, videos, images, simulations, graphing tools, digital games, online activities, and educational platforms to explain lessons and encourage participation. These tools helped teachers present information in different formats and make abstract concepts more understandable. KI 1 described technology as a means of making lessons "more engaging, interactive, and relevant to today's learners." Similarly, KI 7 reported using presentation slides, graphing tools, and short videos to help Mathematics learners visualize abstract concepts. These accounts suggest that teachers valued technology for expanding how content could be presented and explored. The findings align with Msambwa et al. (2024), whose review highlighted the importance of integrating ICT into instructional practices to support learning. However, the present study captures teachers' perceptions of these benefits rather than directly measuring changes in learner engagement or achievement.

Technology also supported differentiated instruction and learner monitoring. Participants indicated that digital resources enabled the presentation of alternative explanations, self-paced activities, and additional learning support for pupils and students with varying levels of understanding. KI 4 and KI 13 highlighted the usefulness of technology in providing differentiated activities, monitoring learner progress, and identifying those who required additional assistance. These accounts suggest that teachers valued technology for its potential to provide more flexible learning experiences. Such uses are consistent with research on digital instructional integration, which emphasizes that technology can support varied learning activities when teachers select tools appropriate to learners' needs and intended outcomes (Msambwa et al., 2024). The findings therefore point to the perceived value of technology as a means of responding to differences in learners' understanding, although the extent to which these practices improved individual learning outcomes was not established.

Another important finding concerned assessment and feedback. Participants used digital quizzes, online forms, and learning platforms to check understanding, monitor progress, and identify learning difficulties. KI 3 cited Kahoot!, Quizizz, and Google Forms as tools for conducting assessments, while KI 4 emphasized the role of technology in tracking learner performance and providing activities responsive to learners' needs. These practices are supported by Børte et al. (2023), whose systematic review identified the alignment of digital tools with pedagogical practice and teachers' ability to interpret assessment data as important conditions for effective technology-supported formative assessment. Huang et al. (2025) likewise found that digital technologies can support the generation and delivery of feedback and help learners engage with it. These studies reinforce the importance of using digital assessment not simply to collect answers but to inform instructional decisions and subsequent learning support.

Beyond classroom instruction, technology was perceived as a means of improving administrative efficiency. Participants reported using digital tools for lesson preparation, grade encoding, attendance monitoring, report writing, record-keeping, document management, and communication with parents and learners. KI 11 explained that working without technology could require more time and effort and increase the likelihood of errors. KI 16 emphasized that technology expedited school-related tasks and reduced the use of materials such as bond paper. KI 7 also described using digital tools for encoding grades, preparing reports, tracking attendance, and communicating with stakeholders. These responses indicate that participants associated technology with more convenient information processing and communication, extending its perceived usefulness beyond classroom instruction. This is consistent with Presbitero and Obiso's (2025) study of digital tools and administrative efficiency in basic education, which reported a significant relationship between digital tool use and administrative efficiency. The similarity supports the

This article is licensed under a Creative Commons Attribution 4.0 International License.

International Journal of Research on Multidisciplinary Studies
Online ISSN: 3116-4137 | Print ISSN: 3116-4145
Volume 1, Issue 10, pp. 228-238, November 2026
https://ijroms.com
Original Article

relevance of technology to teachers' administrative responsibilities, although the present study did not independently measure time savings, error reduction, or productivity.

Despite these perceived benefits, the findings revealed limitations associated with teachers' confidence and access to reliable technology. KI 9 acknowledged limited confidence in using technology, while KI 14 identified unstable or slow internet connectivity as a continuing concern. These accounts indicate that recognizing the value of technology does not necessarily ensure consistent classroom implementation. Peng et al. (2024) found that teachers' attitudes, self-efficacy, and digital competence are relevant to ICT integration, reinforcing the importance of considering both teachers' readiness and their working conditions. In the present study, technology use was described as being influenced by teacher competence, equipment availability, connectivity, preparation time, and institutional support. Thus, participants' positive views of technology coexisted with practical barriers that could constrain its use. This qualification is important: the findings demonstrate why these teachers choose to use technology and what they perceive it can offer, rather than proving that technology use invariably improves teaching effectiveness.

Research Question 2: What difficulties do technology-challenged teachers encounter in technology-mediated teaching?

Theme 2*:* Technology Integration as a Persistent Struggle of Managing Interconnected Access, Competence, and Support Barriers

The participants' accounts revealed that technology-related difficulties were interconnected, involving unreliable internet connectivity, limited devices, uneven digital skills, and insufficient technical support. These categories emerged from recurring descriptions of disrupted lessons, difficulties operating applications, unequal learner access, and additional preparation needed to maintain instruction.

Access barriers and unequal participation. Participants reported that unstable internet connections, malfunctioning equipment, and insufficient devices interrupted planned activities and limited learner participation. KI 15 explained, "Our class has more than 40 students, but only around 10–15 tablets or laptops are functional." KI 12 also described students continuing activities at home using cellular data when internet access was unavailable at school. These accounts illustrate how technological limitations affected classroom participation and could transfer some of the burden to learners and their families.

Digital skill gaps and instructional disruption. Participants also struggled with unfamiliar applications, troubleshooting, and differences in learners' digital competence. KI 4 described feeling anxious and frustrated when technical problems took time away from teaching. Meanwhile, KI 10 continued preparing digital presentations despite limited confidence. These experiences suggest that teachers' willingness to use technology coexisted with difficulties in developing the skills and confidence needed for its effective integration.

Limited support and additional workload. Preparing digital materials, checking equipment, resolving technical problems, and creating alternative activities added to teachers' responsibilities. KI 6 described managing technology-based preparation alongside lesson planning and other duties. To sustain instruction, participants downloaded videos, prepared printed worksheets, saved offline presentations, and sought assistance from colleagues. Although these responses demonstrated adaptability, they also revealed that instructional continuity often depended on teachers' additional effort.

These findings are consistent with literature identifying teacher competence, technological access, and support as important considerations in educational technology integration (Akram et al., 2022; Wohlfart & Wagner, 2023). A further qualification emerged in KI 9's concern that learners' use of ChatGPT might discourage independent sentence construction, while KI 11 and KI 16 mentioned digital distractions. These accounts broaden the findings beyond technical difficulties to include teachers' concerns about meaningful learner engagement. However, these are participants' perceptions, not evidence of direct causal effects.

Taken together, the theme shows that the challenges experienced by technology-challenged teachers were not isolated technical problems but interrelated barriers involving access, skills, and support. While teachers developed practical ways to manage disruptions, their experiences point to the need for reliable infrastructure, continuous hands-on training, accessible technical assistance, and instructional alternatives that accommodate learners with unequal access.

Research Question 3: What strategies do technology-challenged teachers employ to overcome these difficulties?

Theme 3*:* Adaptive and Resourceful Coping to Sustain Learning Amid Technology-Related Challenges

Teachers reported using practical strategies to continue instruction when internet connectivity, devices, or digital applications failed. Analysis of recurring responses yielded four categories: preparation of

This article is licensed under a Creative Commons Attribution 4.0 International License.

International Journal of Research on Multidisciplinary Studies
Online ISSN: 3116-4137 | Print ISSN: 3116-4145
Volume 1, Issue 10, pp. 228-238, November 2026
https://ijroms.com
Original Article

alternative resources, troubleshooting and instructional adjustment, collaboration and self-directed learning, and personal persistence amid difficulties.

Preparation of alternative resources. Participants described downloading videos and presentations, preparing printed worksheets, and keeping offline activities ready for use. KI 1 explained, "One way is to prepare offline options like downloading videos, PowerPoints, and PhET simulations beforehand so lessons can continue without internet." This response illustrates how teachers prepared for possible disruptions rather than relying entirely on internet-dependent instruction. The finding is consistent with Fahrni et al. (2025), whose systematic review found that digital tools can complement traditional approaches and that combining digital and analog strategies is valuable in supporting learning.

Troubleshooting and instructional adjustment. Teachers also checked equipment before class, addressed basic technical problems, and modified activities when their original plans became impractical. KI 11 reported using "gallery walks instead of PowerPoint presentations" and incorporating interactive games and group activities. This account suggests that coping involved pedagogical decisions as well as technical problem-solving. Teachers adjusted how lessons were delivered to preserve opportunities for participation. Yao (2026) similarly identified pedagogical adaptation and teacher agency as prominent areas in the research on resilience and adaptation in digital teaching.

Collaboration and self-directed learning. Participants sought assistance from colleagues, ICT coordinators, and people with greater technical knowledge. They also watched tutorials, read online guides, practiced unfamiliar applications, and attended training. KI 9 explained, "If I cannot solve the issue, I ask assistance from my fellow teachers or someone who is more knowledgeable about technology." This finding highlights the role of interpersonal assistance and independent practice in addressing gaps in digital competence. Yao (2026) likewise identified digital competence and social or institutional support as recurring themes in studies of teacher adaptation. The participants' accounts suggest that learning to use technology was an ongoing process supported by both personal initiative and other people's expertise.

Personal persistence and the limits of coping. Some teachers emphasized patience, calmness, and maintaining a positive outlook when technical difficulties arose. KI 10 described taking a deep breath, praying, and asking knowledgeable colleagues for help. Not all participants, however, felt able to develop their skills as much as they wished. KI 17 stated, "As much as I would like to learn more about technology, I do not have time to explore about it." This contrast is important: teachers demonstrated willingness to adapt, but time constraints and limited support could restrict their efforts. Yao (2026) also identified contextual constraints alongside personal coping and adaptation, reinforcing the need to consider teachers' working conditions rather than attributing successful technology integration to individual resilience alone.

The findings show that teachers relied on preparation, instructional flexibility, collaboration, self-directed learning, and persistence to sustain lessons during technology-related difficulties. These responses helped them manage immediate disruptions, but they did not eliminate problems involving connectivity, equipment, or limited training opportunities. Meaningful support should therefore strengthen teachers' existing coping practices through practical professional development, accessible technical assistance, reliable resources, and sufficient time to learn. These conclusions concern participants' reported experiences and practices; the study did not measure whether the strategies improved learning outcomes.

Research Question 4: What recommendations do technology-challenged teachers offer for improving teacher and institutional support for technology integration?

Theme 4: Adaptive, Collaborative, and System-Supported Capacity Building for Meaningful and Sustainable Technology Integration

The participants' responses suggest that meaningful technology integration requires more than teachers' willingness to learn. It also depends on opportunities for practical training, collegial assistance, reliable infrastructure, accessible technical support, and school policies that allow teachers sufficient time to develop their digital skills. This theme emerged from recurring recommendations across the interviews: teachers should begin with familiar tools and learn gradually; colleagues and learners can serve as sources of assistance; and school and division administrators should provide sustained institutional support. These recommendations point to a shared responsibility for technology integration rather than placing the burden solely on individual teachers.

Several participants recommended starting with simple, familiar applications and gradually exploring more advanced tools. KI 4 advised teachers to "start small and learn one tool at a time," while emphasizing the value of Learning Action Cell (LAC) sessions, webinars, and other professional development activities. Similarly, KI 2 recommended regular practice, learning from mistakes, and seeking help rather than treating technology as an additional burden. Their responses indicate that professional learning is more likely to feel manageable when teachers can practice relevant skills at their own pace and connect training to actual classroom responsibilities.

This article is licensed under a Creative Commons Attribution 4.0 International License.

International Journal of Research on Multidisciplinary Studies
Online ISSN: 3116-4137 | Print ISSN: 3116-4145
Volume 1, Issue 10, pp. 228-238, November 2026
https://ijroms.com
Original Article

The emphasis on practical, sustained learning also suggests that a single training session may not be sufficient to address differences in teachers' digital confidence and experience. Professional development should therefore provide opportunities to apply tools, ask questions, receive feedback, and revisit skills as needed. This interpretation is consistent with the broader understanding that effective technology integration involves not only access to digital tools but also teachers' pedagogical knowledge and capacity to use them purposefully. The participants' accounts support prioritizing practical, context-responsive training over activities that introduce many applications without enough time for guided practice.

Peer support also emerged as an important part of the participants' recommendations. KI 1 encouraged teachers to "collaborate with tech-savvy colleagues or join peer-led training groups," while KI 13 noted that teachers should not hesitate to ask learners for help because "learning together makes the class more fun." These responses portray technology learning as a social process in which teachers can exchange practical knowledge, learn through shared experience, and seek assistance without viewing their difficulties as personal shortcomings.

This finding aligns with Amemasor et al. (2025), whose systematic review identified collaborative learning, hands-on training, ongoing mentorship, and institutional support as important features of professional development for digital instructional integration. The participants' recommendations suggest that schools could make peer learning more systematic through mentoring arrangements, collaborative lesson preparation, and Learning Action Cell sessions focused on actual teaching tasks. Such arrangements may be especially helpful for teachers who need time and reassurance to develop new skills. However, the interviews document participants' recommendations and experiences; they do not establish that a particular peer-support arrangement has already improved technology integration in the study schools.

Institutional support, infrastructure, and manageable workloads

Participants consistently placed responsibility for sustainable technology use on schools and the Schools Division, particularly in providing reliable internet, functional devices, technical assistance, and regular practical training. KI 2 emphasized the need for "stable and reliable internet connection, updated computers, and other necessary ICT equipment," while KI 5 recommended having a technical support person or ICT coordinator who could respond when problems arise. KI 6 also called for "sufficient time to accomplish technology-mediated tasks," indicating that support involves not only equipment and training but also the organization of teachers' work.

Some responses went beyond equipment and training to question administrative arrangements. KI 5 suggested reducing duplicate reports and streamlining online submissions, while KI 13 recommended allowing adequate time to complete required documents and hiring non-teaching personnel to handle paperwork. These responses reveal an important tension: technology is intended to support teaching, but technology-mediated reporting and administrative demands may compete with the time teachers need to prepare lessons and develop digital competence. Sustainable integration therefore requires attention to the conditions under which teachers are expected to use technology, not simply encouragement to acquire more skills.

This interpretation is consistent with the OECD's (2023) discussion of teacher digital competence, which emphasizes that infrastructure alone does not guarantee meaningful educational use; teachers also need the competencies and support to select technology appropriately for teaching and professional tasks. A Philippine-focused systematic review by Talaue et al. (n.d.) similarly identifies administrative support and collaborative learning communities as factors associated with professional development, while noting challenges including inadequate internet access, limited funding, and heavy workloads. In the present study, participants' recommendations point to a need for coordinated support: dependable infrastructure, responsive technical assistance, relevant training, realistic time allocations, and administrative procedures that do not unnecessarily add to teachers' workload.

Although most participants advocated for training, collaboration, and gradual learning, their responses also showed that teachers may differ in the kind of support they consider necessary. KI 11, for example, stated that teachers need not force themselves to master every technological task and described seeking assistance with paperwork. KI 13 placed greater emphasis on reducing documentation demands and providing non-teaching personnel to handle administrative work. These accounts broaden the theme beyond digital skills: some teachers see sustainable technology integration as dependent on redistributing responsibilities and reducing pressures that leave insufficient time for professional learning.

The variation matters because it cautions against interpreting all technology challenges as problems that can be solved through training alone. While skills development may help teachers use digital tools more confidently, it cannot independently resolve unreliable connectivity, insufficient equipment, limited technical assistance, or excessive administrative work. The findings are consistent with the OECD (2023) and Amemasor et al. (2025), which emphasize the importance of combining teacher competence development with institutional conditions that enable technology use. In the context of public schools in

This article is licensed under a Creative Commons Attribution 4.0 International License.

International Journal of Research on Multidisciplinary Studies
Online ISSN: 3116-4137 | Print ISSN: 3116-4145
Volume 1, Issue 10, pp. 228-238, November 2026
https://ijroms.com
Original Article

Valencia City, Bukidnon, the participants' recommendations therefore support a coordinated approach involving teachers, school leaders, ICT personnel, and the Schools Division Office.

The theme captures participants' view that meaningful and sustainable technology integration develops through the interaction of individual learning, collegial collaboration, and institutional support. Teachers recommended beginning with manageable tools, practicing regularly, learning from peers, and using technology purposefully. They also called for practical training, reliable infrastructure, responsive technical assistance, adequate time, and reduced administrative burden. These findings suggest that capacity building should be continuous and responsive to teachers' actual needs rather than limited to one-time training activities. Since the study explored teachers' lived experiences and recommendations, these findings represent their perceptions of the support required; they do not demonstrate the effectiveness of any particular intervention.

Ethical Considerations

Confidentiality and anonymity were maintained through the use of codes or pseudonyms and the removal of identifying details from transcripts and research reports. Recordings, transcripts, consent forms, and other research materials were securely stored, with access restricted to the researchers. Electronic files were password-protected, while physical documents were kept in secure storage. Data were handled in accordance with the Data Privacy Act of 2012 (Republic Act No. 10173) and applicable institutional requirements. Research data will be retained for two years and subsequently disposed of through secure deletion of electronic files and shredding of printed documents, subject to applicable institutional requirements. Data were used solely for the stated research purposes and were not disclosed in identifiable form without appropriate authorization and a lawful basis. The study minimized potential psychological, emotional, and professional discomfort by using non-intrusive questions and allowing participants to decline questions that caused discomfort. Technology-related difficulties were interpreted within their institutional, infrastructural, and contextual circumstances rather than as evidence of individual professional inadequacy. Throughout the research process, the researcher upheld fairness, reflexivity, and academic integrity to ensure that participants' experiences were represented accurately and respectfully.

Conclusion

This study found that technology integration among public elementary and secondary school teachers in the Division of Valencia City, Bukidnon, was a purposeful yet challenging process shaped by instructional goals, digital competence, resource availability, and institutional support. Participants perceived technology as useful for learner engagement, differentiated instruction, assessment, communication, and administrative tasks. However, unreliable connectivity, limited devices, unequal learner access, technical difficulties, and additional workload constrained its consistent use. Teachers reported coping through offline resources, alternative instructional activities, troubleshooting, collaboration, and self-directed learning. Nevertheless, these strategies did not eliminate the structural barriers they encountered. Participants' recommendations emphasized practical and continuous professional development, reliable infrastructure, accessible technical assistance, collegial support, adequate preparation time, and streamlined administrative requirements. The findings suggest that technology integration requires both teacher capacity building and institutional support. However, the reported instructional benefits reflect participants' perceptions and experiences, not verified improvements in learner achievement. The study's findings are also limited by its single-division setting, purposive sampling of 17 teachers, and reliance on self-reported interview data, which may limit transferability to other contexts. Future research could incorporate classroom observations, learner perspectives, and direct measures of learning outcomes to examine how technology integration relates to instructional practices and learner achievement.

Recommendations

The Schools Division Office should prioritize assessing school-level internet connectivity, functional devices, and technical support needs, then direct available resources toward the most pressing gaps. This recommendation follows participants' reports of unstable internet access, insufficient functional devices, and technical disruptions. The Division should also support practical, ongoing professional development focused on digital tools used for instruction, assessment, and school-related tasks, responding to teachers' reported skill gaps and recommendations for hands-on training. School heads and ICT coordinators should strengthen accessible technical assistance and peer learning by facilitating opportunities for teachers to share resources, demonstrate familiar applications, and seek help with technical problems. Learning Action Cell sessions and other existing professional development activities could be used for this purpose, reflecting participants' reported experiences with colleague support and recommendations for collaborative learning. School heads

This article is licensed under a Creative Commons Attribution 4.0 International License.

should also review reporting requirements and technology-related workloads, where feasible, to reduce duplicate documentation and provide reasonable preparation time, as participants identified administrative demands and limited time as barriers to learning and technology use. Teachers should continue preparing downloaded presentations, videos, printed worksheets, and alternative activities to maintain instructional continuity when connectivity or equipment is unavailable. They should select digital tools according to lesson objectives and learners' needs, adapt activities when technical problems arise, and collaborate with colleagues when additional assistance is needed. Where device shortages persist, school leaders and teachers may assess whether shared-device arrangements are feasible and equitable; this is a possible response to the reported access problem, rather than an intervention whose effectiveness was established by this study. Given participants' concerns about ChatGPT and digital distractions, schools may also discuss appropriate classroom use of digital tools while maintaining attention to learners' independent thinking and participation. Future research should include schools from other divisions and, where feasible, combine teacher interviews with classroom observations, learner perspectives, and relevant learning-outcome data. These approaches could help clarify how teachers' reported practices relate to classroom experiences and learner achievement, which this study did not directly measure. Such research would also address the present study's single-division scope, purposive sample of 17 teachers, and reliance on self-reported interview data.

References

Akram, H., Abdelrady, A. H., Al-Adwan, A. S., & Ramzan, M. (2022). Teachers' perceptions of technology integration in teaching-learning practices: A systematic review. Frontiers in Psychology, 13, Article 920317. https://doi.org/10.3389/fpsyg.2022.920317

Aldave, M. J., & Obiso, D. (2025). Teachers' acceptance and application of educational technology in teaching the 21st-century learners. Psychology and Education: A Multidisciplinary Journal, 43(5), 626–639. https://doi.org/10.70838/pemj.430508

Amemasor, S. K., Oppong, S. O., Ghansah, B., Benuwa, B.-B., & Essel, D. D. (2025). A systematic review on the impact of teacher professional development on digital instructional integration and teaching practices. Frontiers in Education, 10, Article 1541031. https://doi.org/10.3389/feduc.2025.1541031

Arellano, A., Abais, R., Balbuena, J., Bulasa, M. L., Canino, H. M., Eleccion, J. J., Estra, M. J., Hipulan, M. J., Lenizo, M. R., Nepomuceno, C., Saladaga, R. S., Suarez, J., Tordos, A., & Cabello, C. (2024). Exploring teachers' transition, strategy adjustments, and experiences in integrating technology into teaching. Psychology and Education: A Multidisciplinary Journal, 24, Article 2024PEMJ2332. https://doi.org/10.5281/zenodo.13730256

Børte, K., Lillejord, S., Chan, J., Wasson, B., & Greiff, S. (2023). Prerequisites for teachers' technology use in formative assessment practices: A systematic review. Educational Research Review, 41, Article 100568. https://doi.org/10.1016/j.edurev.2023.100568

Consoli, T., Schmitz, M.-L., Antonietti, C., Gonon, P., Cattaneo, A., & Petko, D. (2025). Quality of technology integration matters: Positive associations with students' behavioral engagement and digital competencies for learning. Education and Information Technologies, 30(6), 7719–7752. https://doi.org/10.1007/s10639-024-13118-8

Damşa, C., Langford, M., Uehara, D., & Scherer, R. (2021). Teachers' agency and online education in times of crisis. Computers in Human Behavior, 121, Article 106793. https://doi.org/10.1016/j.chb.2021.106793

Department of Education. (2026). DepEd Order No. 009, s. 2026: Guidelines on the implementation of the three-term school calendar in basic education. https://www.deped.gov.ph/deped-orders/

Fahrni, D. D. D., Iten, G., Prasse, D., & Hascher, T. (2025). Teachers' practices in the use of digital technology to promote students' self-regulated learning and metacognition: A systematic review. Teaching and Teacher Education, 165, Article 105150. https://doi.org/10.1016/j.tate.2025.105150

Fernandez, J., & Baynosa, B. (2025). The lived experiences of elementary teachers integrating information and communication technology in classroom instruction. Psychology and Education: A Multidisciplinary Journal, 50(7), 805–836. https://doi.org/10.70838/pemj.500704

Huang, W., Stephens, J. M., & Brown, G. T. L. (2025). Feedback assisted by technology: A systematic review of empirical research. International Journal of Technology in Education, 8(2), 421–444. https://doi.org/10.46328/ijte.1061

Ilyas, M. T., Mercader, C., & Bosco, A. (2026). Infrastructure-first digital competence in resource-constrained higher education. Progresif: Jurnal Pendidikan dan Profesi Keguruan, 6(1), 343–354. https://doi.org/10.59562/progresif.v6i1.12473

This article is licensed under a Creative Commons Attribution 4.0 International License.

Kim, J., & Lee, K. S. S. (2022). Conceptual model to predict Filipino teachers' adoption of ICT-based instruction in class: Using the UTAUT model. Asia Pacific Journal of Education, 42(4), 699–713. https://doi.org/10.1080/02188791.2020.1776213

Macadato, S. A., & Dy, K. G. (2024). Lived experiences of multigrade teachers on technology integration at Paiton Elementary School. IMCC Journal of Science, 4, 100–107. https://myjournal.imcc.edu.ph/wp-content/uploads/12-Macadato.pdf

Maulet, A., Admiraal, W., Algozhaeva, N., & Balta, N. (2024). School teachers' perceived knowledge and affordances for using technology in teaching. Contemporary Educational Technology, 16(3), Article ep515. https://doi.org/10.30935/cedtech/14713

Mishra, P., & Koehler, M. J. (2006). Technological pedagogical content knowledge: A framework for teacher knowledge. Teachers College Record, 108(6), 1017–1054. https://doi.org/10.1111/j.1467-9620.2006.00684.x

Msambwa, M. M., Daniel, K., & Lianyu, C. (2024). Integration of information and communication technology in secondary education for better learning: A systematic literature review. Social Sciences & Humanities Open, 10, Article 101203. https://doi.org/10.1016/j.ssaho.2024.101203

Organisation for Economic Co-operation and Development. (2023). Teacher digital competences: Formal approaches to their development. In OECD digital education outlook 2023. OECD Publishing. https://doi.org/10.1787/c74f03de-en

Peng, R., Abdul Razak, R., & Halili, S. H. (2024). Exploring the role of attitudes, self-efficacy, and digital competence in influencing teachers' integration of ICT: A partial least squares structural equation modeling study. Heliyon, 10(13), Article e34234. https://doi.org/10.1016/j.heliyon.2024.e34234

Presbitero, M. R., & Obiso, D. (2025). Role of digital tools and administrative efficiency in basic education: A basis for tech-driven administrative optimization training plan. Psychology and Education: A Multidisciplinary Journal, 50, 1070–1084. https://doi.org/10.70838/pemj.500907

Rondubio, V., & Gantalao, J. J. (2025). ICT in the context of education for quality outcomes-based teaching-learning model. Psychology and Education: A Multidisciplinary Journal, 35, 984–993. https://doi.org/10.70838/pemj.350901

Sarueda, S. M. D., Benolirao, E. C., & Ramos, A. L. (2025). Teachers' lived experiences with ICT integration in teaching and learning: A case study. Psychology and Education: A Multidisciplinary Journal, 40, 1160–1165. https://doi.org/10.70838/pemj.400902

Sepadi, M., Kgaphola, T., & Molapo, K. (2025). Teachers' understanding of technology usage in rural schools. Frontiers in Education, 10, Article 1548457. https://doi.org/10.3389/feduc.2025.1548457

Talaue, F. T., Garcia, J. A. S., Roleda, L. S., Prudente, M. S., & Mistades, V. M. (n.d.). Systematic review of professional development programs for teachers in the Philippines. Second Congressional Commission on Education. https://edcom2.gov.ph/publications/systematic-review-of-professional-development-programs-for-teachers-in-the-philippines/

UNESCO. (2023). Global education monitoring report 2023: Technology in education: A tool on whose terms? https://doi.org/10.54676/UZQV8501

Wohlfart, O., & Wagner, I. (2023). Teachers' role in digitalizing education: An umbrella review. Educational Technology Research and Development, 71, 339–365. https://doi.org/10.1007/s11423-022-10166-0

Yao, Y. (2026). Teacher resilience and adaptation in digital teaching contexts: A systematic review of research trends, psychological constructs, and evidence gaps. Frontiers in Psychology, 17, Article 1950412. https://doi.org/10.3389/fpsyg.2026.1950412

This article is licensed under a Creative Commons Attribution 4.0 International License.