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# Pre-Service Teachers Support Needs in Technology Integration

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**ABSTRACT:**

*This qualitative phenomenological study explored the support needs of the pre-service teachers (PSTs) in integrating technology into their teaching practices. Data were gathered through semi-structured interviews with 20 BSED pre-service teachers. Three key themes emerged: 1) training and professional development, 2) resource access, and 3) mentorship and community support. The findings highlight the perceived need for targeted interventions in teacher education programs to develop technological pedagogical content knowledge (TPACK) and build pre-service teachers' confidence in digital instruction. Recommendations include structured, hands-on training, equitable technology access, and the strengthened mentorship systems to better prepare future educators for the demands of 21st century classrooms.*

**KEYWORDS—***Pre-service Teachers, Support Needs, Technology Integration, TPACK*

## 1. INTRODUCTION

As classrooms continue to evolve in the digital age, the ability to effectively integrate technology into teaching has become a defining skill for educators. For pre-service teachers (PSTs), this transition brings both opportunities and challenges. While digital tools offer innovative ways to enhance learning, many PSTs enter their practicum or future careers without the confidence, training or support needed to navigate these technologies effectively. Despite the inclusion of digital literacy in teacher education curricula, several studies point to gaps between theory and actual classroom practice. Tondeur et al. (2017) emphasize that PSTs often feel unprepared to integrate technology meaningfully due to limited exposure during their training. The Technological Pedagogical Content Knowledge (TPACK) framework, introduced by Mishra and Koehler (2006), underscores the need for teacher preparation that goes beyond isolated skillsets like integrating technological fluency with pedagogical and content knowledge. Yet many PSTs report that their learning experiences lack cohesion across these domains (Gudmundsdotirr & Hatlevik, 2018).

In this context, understanding the perceived support needs of PSTs becomes essential. This study explores these needs through the lens of lived experiences, aiming to inform more responsive and practical teacher education programs that will help the future teachers.

## 2. METHODS

This study employed a qualitative phenomenological approach to explore the experiences of pre-service teachers regarding their technology integration needs. According to Creswell (2013), phenomenology focuses on the meaning individuals assign to their experiences.

Twenty (20) Bachelor of Secondary Education pre-service teachers from a teacher education institution in Bukidnon were selected through purposive sampling. These students were enrolled as first year to fourth year during the first semester of the academic year 2024-2025, Data were gathered through semi-structured interviews lasting between 20 to 30 minutes. Depending on participant availability, interviews were conducted either in person or via virtual platform such as Zoom and Google Meet. The questions were designed to elicit rich, detailed descriptions of their support needs and expectations regarding technology use. The data from these interviews were analyzed using thematic analysis by Braun and Clarke (2006). This involved a coding process where initial codes were identified and categorized to form broader themes that capture the participants' experiences and views. These themes were then reviewed and validated to ensure they represented the data collected.

Ethical considerations were rigorously maintained throughout the research process, with all participants providing informed consent and assured of their right to confidentiality and anonymity. Data was handled with strict privacy measures to remove any personal identifiers. This phenomenological approach aims to provide deep insights into the experiences of pre-service teachers, although it is acknowledged that the findings may not be generalizable beyond the studied sample due to the limited scope and the inherent subjectivity of qualitative analysis.

## 3. RESULTS AND DISCUSSION

### Support Needs for Technology Integration

*1. Training and Professional Development*

Many participants expressed the need for structured, hands-on training that goes beyond introductory ICT skills. While basic familiarity with tools is common, what PSTs seek is guidance on how to effectively integrate these tools into pedagogical practice.

*"Trainings and seminars in using technology especially, new technologies for teaching." (Participant 1)*

*"Training workshop about Technology especially in Information Technology." (Participant 2)*

*"I feel I need more training and support in integrating technology effectively into lesson plans and addressing technical issues that may arise during class." (Participant 3)*

*"Training, Webinars, and any related activities to enhance my skills on using it." (Participant 4)*

*The need on trainings and seminars is pretty much appreciated especially on how to use different technologies on teaching. participant 5)*

*"As well as technological literacy trainings will be helpful for me to become confident in using technology for teaching." (Participant 8)*

*"I feel I need support in the form of training, workshops, and access to resources that focus on integrating technology effectively into teaching and technical issues." (Participant 12)*

*"More avenue of teaching the young people like me in using more complex technological tools. Though I have used a lot of technology in my learning, I know that there's more to be used and to learn in terms of using technology." (Participant 15)*

*"Advanced seminars and workshops. I have to know more because students are also learning more. Peer groups that utilize tech for teaching would be helpful." (Participant 19)*

These perspectives echo the findings of Amhag et al. (2019), who argues that educators need training not just in using digital tools but in aligning them with pedagogical tools. Similarly, Adams and Hill's (2020) stress the importance of sustained, practice-based professional development that fosters digital literacy, critical thinking, and teaching confidence. Additionally, Stockless et al. (2022) mentioned that pre-service teachers have moderate mastery of digital tools and competency, limiting their ability to organize collaborative learning activities with students. It is noted that teacher trainees need structured and advanced training on digital tools and their pedagogical applications to meet the demands of complex digital learning environments (Tripathi & Misra, 2024). Without proper training, PSTs may struggle with lesson delivery, classroom management in digital environments, or troubleshooting technical issues, and these are possible challenges that could undermine student learning outcomes.

**2. Resource Access**

Limited access to hardware, educational software, and reliable internet continues to be a major barrier, particularly in rural or underserved areas.

*"Stable internet and access to online learning platform or ebooks would really help." (Participant 5)*

*"Just to have a stable internet connection, proper utilization/integration of technology and to be more informed on the existing technologies that are beneficial to my learning." (Participant 7)*

*"Free usage of educational sites online." (Participant 9)*

*"I feel I need support in the form of training, workshops, and access to resources that focus on integrating technology effectively into teaching and technical issues." (Participant 12)*

This aligns with Clarke and Adams (2021), who emphasized the need for institutions to provide equitable access to digital tools. Mandasari et al. (2025) and Ruggiero and Mong (2015) similarly note that infrastructure challenges remain a persistent problem that limits the practical application of tech-integrated lessons. As claimed by Wieczorek & Namuchila (2025), technology integration in education can improve engagement and understanding, but barriers like lack of resources, insufficient training, and unreliable internet access limit its potential benefits. Without these resources, even the most well-intentioned teacher preparation becomes ineffective in real-world teaching.

**3. Mentorship and Community Support**

Mentorship and community support are widely recognized as powerful tools for personal, academic, and professional growth. Effective mentorship programs not only provide guidance and skill development but also foster a sense of belonging and strengthen community ties.

Participants highlighted the value of mentorship and community support from instructors and peers in educational systems.

*"I think the proper support from the teachers on using technology is the kind of support that I wanted to be confident in using technology for teaching." (Participant 10)*

*"Proper way of using technology. I want someone to teach me to use technology properly. ((Participant 11)*

*"It would also help to have a supportive group of colleagues to share ideas and solve problems together." (Participant 12)*

*"The support from peers and teachers." (Participant 13)*

*"Support in using editing tools." (Participant 14)*

*"Moral and technical support from peers,parents and even instructors would help me a lot." (Participant 16*

*"I think it is about to learn more techniques and/or ways in delivering my lesson with the use of technologies." (Participant 17)*

*"Maybe a clear guidance and resources that will help me confidently teach using technologies." (Participant 20)*

Mentorship, according to Wilson (2022), plays a vital role in building competence and confidence among PSTs. Institutions need to play a proactive role in supporting their educators through mentorship and access to technical assistance. This involves not just the theoretical aspects of technology use but also the practical, hands-on strategies to manage digital tools in a live classroom setting (Baker & Simmons, 2021). Such guidance can help PSTs develop teaching methods to integrate technological advancements in their future classrooms.

In a similar study conducted by Andersen and Watkins (2018), peer mentorship provides value to nursing students and instructors by supporting self-directed learning, relationships, and a positive learning environment. Molitor et al. (2018) mentorship and community support are valuable for pre-service and in-service teachers, and can be fostered through professional development and collaborative communities. Henry-Noel et al. (2018) Mentorship offers emotional support, career guidance, and helps mentees navigate transitions. Both mentors and mentees gain new skills, leadership abilities, and cultural understanding (Elias et al., 2021).

In the absence of robust mentorship, PSTs may feel isolated when confronted with the pressures of integrating new technologies into their classrooms.

## 4. CONCLUSION AND RECOMMENDATION

This study identified three major areas of support that are needed by PSTs for their future classroom teaching: training and professional development, resource access, and mentorship and community support. Teacher education institutions are expected to respond by integrating structured digital pedagogy training, ensuring equitable technology access, and establishing a strong mentorship program. Recommendations include the institutionalization of TPACK-based training, partnerships with edtech providers for resource sharing, and fostering communities of practice among faculty and PSTS. To fully equip PSTs for 21st century

classrooms, a paradigm shift is needed, from technology as a tool, to technology as an integral component of pedagogy, policy, and practice.

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