



Digital Learning Resources: Pre-service English Teachers' Viewpoints in Southwest Maluku Archipelago

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Abstract

The integration of digital learning tools in language teaching has gained great popularity in recent years, particularly within the context of the Era 5.0, which emphasizes the amicable relationship between humans and technology. This study explores the viewpoints of pre-service English teachers regarding the implementation and effectiveness of digital learning resources in language teaching and acquisition. By employing mixed-method research, the data gathered through a 5-Likert scale questionnaire and semi-structured interview. The study aims to uncover the perceptions, experiences, and attitudes of these future language educators toward the use of digital tools and platforms in their classrooms. The result showed that all students have positive attitudes towards the use of technology in language learning especially in preparing learning material. However, professional development in preparing the pre-service English teacher in real-life experience as a teacher in school to be tech-savvy is needed. This study also suggests integrating technology into extracurricular activities and embedding digital literacy within the curriculum to better prepare students for the future.

Keywords: *Pre-Service English Teacher, Digital Learning, Technology Learning*

DOI: 10.30598/matail.v5i1.16316

INTRODUCTION

In an increasingly digital era, education has undergone a profound transformation, with technological tools and resources reshaping traditional teaching and learning paradigms. The advent of the Super Smart Society, or Era 5.0, represents a pivotal moment in which digital solutions are seamlessly woven into daily life, extending prominently into education. In response, Indonesia's curriculum mandates that teachers integrate digital resources into their instructional practices to foster innovative, engaging, and meaningful learning experiences. However, not all educators are adequately equipped to meet these demands, particularly in regions like the Southwest Maluku Archipelago, where access to resources and training remains limited (Kholis & Murwanti, 2019; Hafifah & Sulisty, 2020).

The pandemic in 2020 accelerated the urgency for digital competence, thrusting

teachers into an environment where mastery of digital tools became essential for effective teaching. Yet, many educators were expected to adapt without sufficient preparation, workshops, or practical training. This shift highlighted a critical gap in teacher readiness, particularly for pre-service English teachers who are preparing to enter classrooms where digital fluency is increasingly necessary (Anggeraini et al., 2020). Studies have shown that pre-service teachers are often left with insufficient digital literacy training, which affects their ability to navigate and implement digital teaching tools effectively (Hafifah & Sulisty, 2020; Kholis & Murwanti, 2019). Moreover, the COVID-19 pandemic's effects and the arrival of Era 5.0 have accelerated the rapid adoption of digital tools in education, placing new demands on teachers to incorporate digital resources into their classrooms. In Indonesia, the national curriculum mandates this integration to enhance the quality of education, aiming for learning experiences that are innovative, engaging, and meaningful. However, many educators, particularly in remote regions like the Southwest Maluku Archipelago, face significant barriers to meeting these demands due to limited access to resources, inadequate training, and insufficient professional development opportunities (Kholis & Murwanti, 2019; Hafifah & Sulisty, 2020). These challenges are pronounced in remote areas, where access to digital tools and professional development opportunities is even more restricted. This challenge is especially pressing for pre-service English teachers who are preparing to enter the teaching profession without the digital competencies required for effective technology-enhanced language instruction (Anggeraini et al., 2020). This study aims to bridge the gap in digital readiness among pre-service teachers and explore their perspectives on using digital learning resources in their future classrooms.

Pre-service English teachers, as future leaders in language education, offer valuable perspectives on the adoption and impact of digital resources. Their academic training and emerging classroom experiences shape their viewpoints on technology's role in language teaching, revealing both the potential and challenges in digital integration (Anggeraini et al., 2020). By examining these perspectives, this study seeks to illuminate effective practices, pinpoint areas for improvement, and guide the professional development of aspiring educators. In the era of Education 5.0, integrating technology into language learning is important for creating an engaging and meaningful educational experience. However, many teachers face challenges in acquiring the necessary skills to successfully implement technological tools in their classrooms (Tondeur et al., 2020). This gap in technological proficiency can limit the potential of building joyful and interactive learning environments (Koehler & Mishra, 2009). Thus, it is important to explore the barriers teachers face in equipping themselves with adequate technological skills. (Kumar & Kumar, 2021).

This study explores pre-service English teachers' perceptions of digital learning resources, emphasizing their transformative role in language education. The research specifically focuses on pre-service teachers in the Southwest Maluku Archipelago, aiming to understand how they view the integration of digital tools in language teaching. By examining their attitudes, experiences, and readiness to utilize digital resources, the study seeks to shed light on both the challenges and opportunities that future educators face when incorporating technology in language classrooms. This research aims to contribute to ongoing discussions about the strategic use of technology in education, offering valuable insights into how pre-service teachers can better prepare for a tech-integrated teaching environment. The findings are intended to address gaps in digital preparedness, fostering the professional development of future educators and enhancing the educational landscape in Indonesia's Southwest Maluku Archipelago. The study is guided by two primary research questions:

- a. What are the perceptions of pre-service English teachers in the Southwest Maluku Archipelago regarding the use of digital learning resources in language education?
- b. What challenges do pre-service English teachers face in integrating digital tools into their teaching practice, particularly in remote areas like the Southwest Maluku Archipelago?

LITERATURE REVIEW

Digital Learning Resources in Language Education

Digital learning resources include many technology tools and platforms aimed at improving teaching and learning, particularly in language instruction. The resources encompass online learning platforms, multimedia materials, virtual reality simulations, mobile applications, and diverse web-based tools (Golonka et al., 2014). Digital platforms, including Learning Management Systems (LMS) such as Moodle, Google Classroom, and Edmodo, provide an organized virtual environment for teachers to arrange course content, enable communication, and track student advancement. They frequently include discussion forums, interactive quizzes, and assignment portals, facilitating the effective management of language courses.

Multimedia content, including films, podcasts, animations, and interactive activities, enhances language acquisition by providing students with exposure to real language usage, hence increasing engagement and relatability. This type of information enhances listening and comprehension abilities by illustrating real-life situations, cultural contexts, and conversational dynamics. Virtual Reality (VR) simulations enhance learning by immersing students in three-dimensional environments that replicate real-world scenarios, such as traversing a foreign market or ordering food at a restaurant in the target language. Virtual reality offers a risk-free environment for practice, rendering speaking exercises less daunting and more efficacious.

Mobile applications, such as prominent platforms like Duolingo, Babbel, and Memrise, provide adaptable, portable learning opportunities. These applications frequently employ interactive games, flashcards, and monitoring features that enable students to study vocabulary, grammar, pronunciation, and listening abilities at their convenience. Moreover, online platforms such as Quizlet, Kahoot, and Padlet promote cooperation and involvement via quizzes, group projects, and collective debates. These platforms promote active student engagement in learning, integrating conventional language exercises into dynamic and pleasurable experiences.

Through the integration of these digital tools, teachers can promote active learner engagement, motivating students to engage directly in interactive tasks instead of passively receiving information. This method facilitates individualized learning by enabling the adaptation of content to the specific requirements, strengths, and progress of individual students. It fosters collaborative opportunities, enabling students to work together, exchange comments, and participate in substantive debates, thereby cultivating a dynamic and supportive learning community (Lai, 2015). The incorporation of many digital tools in language teaching can enhance the learning experience significantly.

Era 5.0 and the Super Smart Society

In Era 5.0, or the Super Smart Society, the harmonious integration of human existence and modern technology is transforming many facets of daily life, including education (Fukuyama, 2018). This period presents substantial prospects to revolutionize conventional teaching and learning methodologies, propelled by breakthroughs in digital technology. In this setting, digital learning resources transcend the confines of the classroom, broadening educational opportunities beyond conventional limits and enabling self-directed, personalized learning that addresses the varied requirements of individual students. Utilizing data analytics and artificial intelligence, these tools may evaluate learners' strengths and weaknesses offering tailored feedback and adaptive assistance, thus improving the learning experience (Zawacki-Richter et al., 2019).

An essential component of this educational revolution is the technology preparedness and training of pre-service English educators. Future educators must possess the knowledge and confidence to properly employ digital tools in their teaching practices. Research indicates that pre-service teachers frequently necessitate organized training and practical experience with technology to cultivate the essential skills for integrating technology in language education (Chai et al., 2019). This preparation encompasses selecting suitable digital materials, designing interactive courses with educational technology, and utilizing

AI-powered tools to develop tailored learning experiences. Moreover, teacher training programs must prioritize cultivating a mindset that values innovation and ongoing adaptability to new technology.

Equipping pre-service English teachers for Era 5.0 entails not only familiarizing them with modern technological resources but also enhancing their pedagogical practices for meaningful technology integration. This include utilizing digital platforms to enhance communication, collaboration, and feedback, as well as to establish engaging, student-centered learning environments. With sufficient preparation, pre-service teachers can adeptly manage the intricacies of a technology-enhanced classroom, equipping themselves to address the challenges of a swiftly changing educational environment and to assist their students in becoming digital natives capable of flourishing in the Super Smart Society.

Teacher Competencies in the Digital Age

To successfully include digital resources in language instruction, teachers must cultivate competencies that extend beyond conventional teaching techniques. This necessitates a collection of competences, including technology literacy, digital content creation, and the capacity to promote learning in virtual settings. Technological literacy encompasses the ability to utilize digital tools and platforms proficiently, enabling educators to adeptly manage a technology-enhanced classroom. This essential competency allows teachers to identify suitable digital resources, resolve fundamental technological problems, and adjust to the progression of new technologies (Mishra & Koehler, 2006).

Besides technological literacy, teachers must possess competencies in digital content creation. This encompasses the capacity to generate, alter, and curate digital content that is both engaging and pedagogically valid. It entails comprehending the utilization of multimedia components—such as video, audio, and interactive content—to augment language acquisition, hence rendering lessons more captivating and efficacious. Creating content that is pedagogically significant and aesthetically pleasing necessitates that educators integrate creativity with educational goals.

Furthermore, enabling online education is an essential skill in a digital classroom. Educators must possess the skills to administer virtual learning environments, foster online collaboration, and sustain student engagement in remote contexts. This entails understanding digital communication tools, cultivating a feeling of community among learners, and delivering prompt feedback via online platforms.

Teacher preparation programs are crucial for cultivating these competencies in pre-service teachers, assuring their readiness to excel in digitally enhanced educational environments. Training in digital pedagogy, which entails the incorporation of technology into instructional methodologies, is essential for equipping future educators. Instructional design, emphasizing the appropriate structuring of learning experiences using technology, is another crucial domain. These programs frequently incorporate practical experience with digital technologies, enabling pre-service teachers to utilize instructional technology prior to entering the classroom. This course equips prospective educators with the skills to identify and apply digital materials that match with educational objectives and to adjust their instruction across various digital platforms.

Teacher preparation programs equip pre-service teachers with competencies that allow them to maximize the advantages of a digitally enhanced learning environment, ensuring effective student engagement, the promotion of active learning, and adaptability to the continuously changing technological landscape (Tondeur et al., 2012).

Emancipated Learning and Learner Autonomy

Emancipated learning, an educational methodology prioritizing student autonomy and self-direction, integrates effectively with the functionalities provided by digital resources. This educational approach enables students to engage actively in their learning, shifting from conventional teacher-centered models to a more student-centered experience. Emancipated learning empowers learners to select the content, methods, and timing of their

studies, cultivating a sense of ownership over their educational experience (Blaschke, 2012). In language education, digital resources are crucial in aiding this transition, allowing students to customize their language learning experiences according to their specific requirements and preferences. Digital tools enable students to engage with material in alignment with their learning styles by allowing them to select specific topics, practice at their own pace, and choose content that resonates with them (Reinders & Hubbard, 2013). This emphasis on student autonomy fosters increased engagement, as students are motivated to establish their own learning objectives and actively pursue their attainment. They are driven to explore and employ diverse digital resources, including interactive language applications, online dictionaries, multimedia platforms, and virtual language communities. This technique enables them to track their progress, assess their learning strategies, and implement improvements as needed. Self-monitoring fosters a sense of accountability, as learners gain awareness of their strengths and areas requiring growth.

By fostering this liberty, emancipated learning not only improves language acquisition but also cultivates essential abilities for lifelong learning. Students acquire adaptability, resilience, and resourcefulness—traits vital for success in the swiftly changing digital environment. Mastering one's own learning process equips students for academic success and future career problems, where digital literacy and autonomous problem-solving are more esteemed. Emancipated learning enhances language competence and provides students with essential tools for success in the digital era, promoting a mindset of ongoing growth and adaptation.

METHOD

Design

This study employed a mixed-methods research design, combining quantitative and qualitative approaches to gain comprehensive insights. Data were collected through a five-point Likert scale questionnaire and semi-structured interviews, capturing both statistical and thematic aspects of students' perceptions.

The Likert scale questionnaire, featuring eight questions, allowed for descriptive and statistical analysis of participants' responses, while the semi-structured interviews provided nuanced, in-depth insights through thematic analysis.

The subject of the Study

The sample for this study consisted of twenty students from the Technology-Enhanced Language Learning course, selected using purposive sampling to ensure relevance and alignment with the research objectives.

RESULT AND DISCUSSION

Result

Pre-service English teachers' perceptions of digital learning resources are captured through various questions regarding their confidence, preparedness, and collaboration in creating effective digital tools. An overview of these perceptions and expectations is presented in Table 1.

Table 1. Pre-service English teachers' viewpoints

Statement	Perception and Expectation	f	%
I am confident in my ability to create and implement classroom digital learning resources.	Positive	12	80
I have everything I need to make high-quality digital teaching resources.	Positive	13	86.6
Training and preparation have prepared me to handle the digital world as a pre-service teacher.	Positive	15	100
TELL class learning objectives are in line with what is required in the modern digital world.	Positive	13	86.6

I work with and learn from my colleagues in building digital learning tools	Positive	15	100
My lecturer consistently supports my efforts to create effective digital learning resources.	Positive	15	100
Creating good digital learning resources can be challenging and requires constant support.	Positive	14	93.3
I want to learn more to be a good digital educator.	Positive	15	100

The findings demonstrate a high level of optimism among pre-service English teachers about their digital education skills. 80% of participants expressed confidence in creating and implementing digital learning resources, indicating their readiness to handle the requirements of a technology-driven educational environment. This sense of readiness is further supported by 86.6% of respondents who believe they have access to sufficient resources, allowing them to focus on the quality of their digital content rather than worrying about resource limitations.

Training plays a pivotal role in shaping this confidence. Every participant, without exception, agreed that their training effectively prepared them to navigate the digital world as pre-service teachers. This unanimous agreement underscores the value of well-structured training programs that align with the realities of modern education. Indeed, 86.6% of respondents felt that the goals of their Technology-Enhanced Language Learning (TELL) class matched the requirements of today's digital world, ensuring that their training was not only relevant but directly applicable to their future teaching careers.

A key component of this preparation is the collaborative learning environment fostered among peers. All students indicated that they actively engage with classmates when developing digital tools, highlighting a culture of cooperation and collective learning. Such collaboration is a cornerstone of their digital education experience, providing mutual support and an opportunity to enhance their skills through shared effort.

Support from lecturers is another critical factor in developing digital teaching competencies. All participants noted consistent guidance from their instructors, who offered encouragement and constructive feedback while creating digital learning resources. This backing is crucial, as 93.3% of students acknowledged that designing effective digital materials can be challenging and requires sustained support. Despite these challenges, every participant strongly desired to continue learning and improving, demonstrating a clear commitment to professional growth in the digital domain.

Pre-service English teachers in the Southwest Maluku Archipelago demonstrate overwhelmingly positive perceptions and expectations. They show high confidence in their abilities, satisfaction with the resources and training, and a clear awareness of the challenges they face. The collaborative environment and consistent support from lecturers enhance this optimistic outlook. However, recognizing the complexities involved in digital education underscores the need for continuous professional development.

Challenges Identified

Apart from the survey results, interviews also revealed specific challenges that pre-service teachers encounter when developing digital learning resources. One major concern is the need for more familiarity with certain educational applications, which can hinder the effective creation and assessment of digital materials. Many participants voiced the need for stronger technical skills and a deeper understanding of technology to navigate this landscape confidently.

Connectivity issues also emerged as a significant obstacle, with unstable internet access frequently disrupting the seamless integration of digital resources. Additionally, reliance on paid features in various applications presents financial constraints, as some essential tools still need to be within reach. Time management adds to the pressure, as learning and mastering new digital platforms can be time-consuming amidst busy schedules.

Power outages, common in the region, further complicate the implementation of digital resources in classrooms.

Nevertheless, pre-service teachers persist in adapting and moving forward. Their willingness to tackle these challenges highlights the need for continued access to professional development and support systems that can help them overcome these barriers.

Opportunities in the Digital Age

Interview participants underscored the various advantages of the digital era for language education in Indonesia. A recurring theme is the enhanced accessibility to diverse learning materials, allowing students to learn at their own pace and according to their needs. Digital tools are seen as engaging and interactive, motivating students and making the learning experience more dynamic. Technology's role in supporting both teachers and students is also emphasized. Educators can create or source digital materials, enriching the classroom environment, while students benefit from the flexibility of accessing content anytime, anywhere. This digital shift aligns with global trends, offering educators personal and professional growth opportunities. Online platforms also facilitate connections with native speakers, fostering authentic communication skills.

Therefore, integrating digital tools into language education holds great promise, offering increased accessibility, engagement, and professional development for teachers. While challenges exist, the benefits highlight the importance of embracing technology in the educational landscape.

Discussion

To effectively navigate the demands of the digital age, pre-service teachers emphasize the importance of accessibility and adaptability in using digital tools for language education. One of the primary factors enabling effective use of digital learning resources is reliable internet access. As noted by Zawacki-Richter et al. (2019), uninterrupted internet connectivity is crucial for ensuring that digital platforms and tools can be consistently utilized, particularly for rural or underserved areas. Access to fast and stable internet allows educators and students alike to take full advantage of digital resources, such as multimedia content, interactive learning platforms, and collaborative online environments, which are key to fostering an engaging and dynamic learning experience.

In many rural and remote regions, however, the digital divide remains a significant challenge. To bridge this gap, government support is essential. Investment in infrastructure, especially the expansion of internet networks, can greatly improve access to digital resources in these areas. As Tondeur et al. (2012) point out, increasing the availability of internet services and technological tools in rural schools can ensure that all students, regardless of their geographical location, benefit equally from the opportunities that technology offers. Moreover, governmental policies and investments that target these areas will enhance the equity of education, helping to reduce the divide between urban and rural learning environments.

In addition to reliable access, continuous learning and staying updated with technological advancements are essential components of effective digital teaching. Pre-service teachers recognize the importance of regularly practicing digital skills, as technology evolves rapidly. According to Mishra and Koehler (2006), teachers must develop not only content knowledge but also technological and pedagogical expertise to integrate technology meaningfully into their teaching practices. To stay current, pre-service teachers suggest engaging in workshops, participating in online professional development programs, and creating peer-sharing communities to exchange best practices and new trends in educational technology.

Furthermore, the effectiveness of digital tools in enhancing language education depends on the quality of the content and its interactivity. Pre-service teachers highlight the importance of designing engaging, high-quality content that captivates students' interest and

motivates them to actively participate. Blaschke (2012) notes that interactive and engaging content not only aids in language acquisition but also fosters deeper learning by encouraging students to take responsibility for their progress. The use of multimedia, simulations, and other interactive elements enables students to experience the language in a more immersive and meaningful way.

Pre-service English teachers also emphasize the importance of creativity and innovation in the digital classroom. As future educators, they believe that it is their responsibility to innovate and design materials that not only educate but also engage and inspire students. This aligns with the views of Reinders and Hubbard (2013), who stress that creativity is a vital skill in using technology effectively for language learning, as it allows educators to craft learning experiences that are both instructional and captivating.

Moreover, integrating technology into extracurricular activities and embedding digital literacy within the curriculum are essential steps to better prepare students for the future. Digital literacy is not only about the ability to use technology but also about understanding how to use it responsibly and effectively. Pre-service teachers recommend incorporating digital literacy into all aspects of education, both within the classroom and in extracurricular activities, to ensure students are fully prepared to thrive in a technology-driven society. As Blaschke (2012) emphasizes, digital literacy should be an ongoing part of a learner's educational journey, helping them develop skills that will be valuable throughout their lives.

CONCLUSION

In conclusion, the pre-service teachers in this study recognize that navigating the digital age requires continuous efforts from both educators and governments. By ensuring accessibility, fostering adaptability, and integrating creativity and innovation, pre-service teachers can not only enhance language learning but also help students become responsible digital citizens, equipped with the skills necessary for the future. Pre-service English teachers in the digital age require technical resources, robust training, and personal motivation to become effective, tech-savvy educators. Essential elements include stable internet access, opportunities for professional development, guidance from experienced mentors, and institutional support. The prevalence of financial constraints highlights the necessity for accessible and affordable educational resources. There is a strong desire for structured training and encouragement to keep pace with evolving educational technology trends, ensuring that pre-service teachers are well-equipped to engage and inspire their future students.

To support these educators, universities must provide adequate facilities, such as specialized labs, consistent internet connectivity, and structured workshops focused on technology use in education. Lecturers play a critical role as mentors, offering practical guidance and motivation. A relevant and up-to-date curriculum and a supportive academic atmosphere help bridge the gap between training and real-world application. Ongoing professional development is essential for pre-service teachers to confidently navigate the changing digital environment and positively influence their upcoming students.

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