The Utilization Of Digital Literacy Resources By The Teachers In The Selected High Schools In Sumbawa

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Abstract: This study aims to examine the utilization of digital literacy resources by teachers in two selected schools in Sumbawa, representing urban and rural areas, by exploring the types of digital literacy resources used, teachers' preferences, and the reasons behind their choices. Grounded in the *Technology Acceptance Model* (TAM) by Fred Davis, which suggests that teachers tend to prioritize *Perceived Usefulness* (PU) over *Perceived Ease of Use* (PEOU). This study employs a qualitative method with a case study design. Data collection involved triangulation techniques, including interviews, observations, and document analysis, to ensure data accuracy and reduce bias. Thematic analysis was used to analyze the data. The findings reveal that Davis's theory applies only in specific contexts. The teachers in the urban school were found to prioritize PU over PEOU, utilizing a variety of digital literacy resources, although some demonstrated limited use due to age and technology stuttering. Conversely, the teachers in the rural school prioritized PEOU over PU due to a lack of training, the absence of integration policies, and limited initiatives to incorporate digital literacy resources into teaching.

Keywords: Digital Literacy Resources, Teachers, SMAN 1 Alas and SMAN 1 Alas Barat.

Introduction

Digital literacy plays an important role in modern education in the world, including in Indonesia. In the current era of globalization and technological advancement, the ability to access, obtain, manage and utilize digital information is needed to keep up with the times. Especially for a teacher in this era of globalization must have these abilities in order to optimally utilize digital literacy technology and integrate it in teaching activities in the classroom as a form of effort to improve the quality of Indonesian education. This is in line with what was expressed by According to Aditama et al. (2021), in the current era of globalization, various approaches can be employed to enhance the quality of education, one of which is integrating information technology into the learning process, whether as a tool, multimedia, or other applications. The adoption of information technology provides teachers with opportunities to innovate in their teaching, ultimately contributing to the improvement of education quality in Indonesia (Gunawan, et al., 2021). Additionally, according to Pranoto (2021) the importance of digital literacy in finding information in the current era of technological sophistication therefore, the ability to obtain, manage, and utilize information is needed in order to survive or even adapt to circumstances that are always changing, uncertain, and competitive (Yustiqvat, et al., 2019). Traditionally, information was mostly sourced from books, magazines and newspapers, but now it is mostly obtained from digital literacy resources that can be accessed via the internet (Hadisaputra, et al., 2019). Millar and Schrier (2015) explain that students generally prefer printed textbooks to e-textbooks, mainly because they prefer the printed format to the digital format. From the above explanation, printed textbooks are still important but it cannot be denied

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that we live in a digital era that requires us to be able to adapt to changing times so that we are required to be more literate with various sources of information, both printed textbooks and digital literacy references. Therefore, mastering digital literacy has become an important competency in today's educational landscape.

Acknowledging the critical importance of digital literacy competencies, this study seeks to explore the extent to which teachers in selected schools in Sumbawa utilize and integrate digital literacy resources into their teaching practices. The research focuses on two contrasting schools, SMAN 1 Alas (urban) and SMAN 1 Alas Barat (rural), chosen to represent different educational contexts. The decision to select Sumbawa as the research site stems from observations indicating suboptimal utilization of digital literacy resources by teachers in this region. This concern aligns with the mandates of the Merdeka Curriculum, which emphasizes the integration of digital literacy in teaching and learning processes. A study conducted by Lesasunanda and Malik (2024) at MAN 1 Sumbawa revealed that many teachers lack an adequate understanding of the significance of digital literacy in enhancing instructional quality, underscoring the relevance of this investigation.

This study places a strong emphasis on exploring the connection between teachers' use of digital literacy and students' learning outcomes. Prior research conducted at MTsN 2 Bandar Lampung by Kurniawan (2024) demonstrated that digital literacy has a positive and substantial impact on students' academic performance. Thus, the limited application of digital literacy among teachers in Sumbawa may adversely affect students' achievements. This study aims to provide insights into the correlation between digital literacy practices and student outcomes while offering actionable recommendations to enhance educational quality through the integration of digital technologies.

Moreover, this study considers efforts to improve teachers' competencies in Sumbawa by leveraging digital literacy. It aims to provide valuable inputs for designing and implementing future programs that ensure optimal integration of digital literacy in learning processes. Such initiatives are expected to yield positive impacts on students' academic performance. Although there are limited studies on digital literacy utilization in Sumbawa, prior research from other regions offers valuable insights. For instance, Wiguna (2023) found that teachers in Banyumas Regency, Central Java, demonstrated moderate competence in using digital literacy resources, yet their integration into teaching practices remains suboptimal.

This underutilization is particularly concerning in an era where educators are expected to adapt to rapid technological advancements. The inability of many teachers to integrate digital literacy resources into classroom learning represents a significant challenge. Addressing this gap, the current study investigates the utilization of digital literacy resources by teachers in Sumbawa's unique context. Despite the Indonesian curriculum's requirements for integrating digital literacy into educational activities, numerous barriers hinder the full realization of this objective, leaving many educators unable to maximize digital literacy in their teaching practices.

To address these challenges, this study provides recommendations to the Indonesian Ministry of Education to enhance teacher training and support systems. Robust training programs tailored to improve teachers' digital literacy skills are critical to complementing curriculum policies. Without such initiatives, these policies risk falling short of their intended impact, leaving teachers ill-prepared for the demands of modern education.

While prior studies have predominantly examined digital literacy in urban schools, there is limited research on its application in rural schools like those in Sumbawa. Research by Habibi et al. (2020) highlighted significant disparities between rural and urban teachers in utilizing digital literacy resources. Additionally, no study has specifically investigated the contextual use of digital literacy by teachers in Sumbawa. This research seeks to bridge this gap by analyzing digital literacy utilization in both rural and urban schools in Sumbawa to understand the disparities and challenges in these settings.

The efficient utilization of digital literacy plays a crucial role in creating a learning environment where students can cultivate critical thinking, effectively manage digital information, and actively participate in educational activities. According to Tang and Chaw (2016), digital literacy—which encompasses skills like information management, critical thinking, and responsible online behavior—is fundamental for students to succeed in blended learning settings. The utilization of digital literacy resources enables teachers to create dynamic, student-centered classrooms, enhancing student motivation and understanding of learning materials. Digital learning models and media can facilitate student-centered learning by providing opportunities for exploration and improving student quality (Purnamasari et al., 2020). However, many teachers are not fully aware of this potential due to limited experience in integrating digital literacy resources into online teaching and a lack of training and government support. This aligns with findings

from Akram et al. (2022), which identified barriers such as slow internet speeds, excessive workloads, lack of infrastructure, limited online teaching experience, and insufficient training from schools or the Indonesian government. These challenges often result in monotonous teaching methods.

In Indonesia, digital literacy is critical for improving the quality of human resources. As a country with relatively low human resource development, Indonesia faces challenges due to low literacy levels, including digital literacy. Indonesian human resources often lack skills and education, making it difficult to enhance productivity and competitiveness (Supriyatno et al., 2024). Recognizing the disparities in digital literacy utilization between urban and rural schools, this study compares SMAN 1 Alas, which is equipped with adequate digital facilities, and SMAN 1 Alas Barat, which has only recently begun adopting digital literacy practices.

This study differs from previous research by focusing on the implementation of digital literacy resource utilization in two schools with different characteristics in one study, one school in an urban area and one school in a rural area. Both schools have their own characteristics that differentiate them from each other such as geographical location, access to and ability to use digital literacy resources, and school accreditation. While many studies have explored the optimization of digital literacy resources in urban schools, few have addressed schools in rural areas, particularly in Sumbawa Regency, making this study unique in that the study authors examined the extent of digital literacy resource utilization in two schools with different characteristics at one time. In addition, this study also examines the factors that hinder teachers in both schools from effectively integrating digital literacy resources into their teaching which has never been investigated by previous researchers on the integration of digital literacy resources in learning by teachers in senior high schools in Sumbawa.

Method

This study employed a qualitative approach utilizing a case study design. This was done to investigate the utilization of digital literacy resources by teachers in urban and rural areas. This is particularly appropriate for this research as the case study design provides an in-depth look at the specific contextual factors that influence teachers' behaviors, preferences and experiences in these different settings. Qualitative research, as described by Creswell (2014), investigates complex human or social phenomena,

making it an appropriate methodology to understand in detail the use of digital literacy resources in an educational context. Given that digital literacy in teaching involves a number of layers related to social interactions, technology access and pedagogical strategies, this approach is ideal for gaining insights into teachers' choices and practices across different environments.

The population in this study was all teachers in two selected schools in Sumbawa, namely SMAN 1 Alas and SMAN 1 Alas Barat. According to Goudge (1955) population is a collection of individual organisms or objects studied in a study. After determining the population, the study author determines the sample that would be used as respondents in this study. In this regard, the sample that has been determined is all English Education teachers in the two selected schools in Sumbawa which amount eight people consisting of four teachers from SMAN 1 Alas and four teachers from SMAN 1 Alas Barat, all of whom are teachers in the English education subject. This is considered to be in accordance with the theme of the English language education major that the author took at the university of Mataram. This study seeks to explore how teachers implement the use of digital literacy resources in teaching English. A sample refers to a subset of a population chosen for study, enabling data collection to be conducted more efficiently and cost-effectively compared to surveying the entire population (Turner, 2020).

This study employed triangulation to collect data and enhance the validity and reliability of the findings to ensure that the data gained were valid by implementing the triangulation data collection technique. According to Denzin (1998), triangulation involves utilizing multiple data sources or methods to cross-check results, minimizing bias and ensuring the validity of the data. Schlunegger et al. (2024) further categorize triangulation into two primary types: methodological triangulation and data analysis triangulation. Methodological triangulation integrates different data collection techniques, such as interviews, observations, and document analysis, to provide a holistic perspective. Conversely, data analysis triangulation employs multiple analytical methods both qualitative and quantitative to compare and contrast findings across datasets.

This choice of data collection technique aligns with Noble and Heale's (2019) assertion that methodological triangulation greatly improves the validity and reliability of research findings. By employing diverse methods, researchers can cross-verify data, thus ensuring more trustworthy and reliable outcomes. This integrated approach allowed

the study author to robustly address the study's objectives while contributing to the broader understanding of the role of digital literacy resources in education.

Thematic Analysis was selected as the qualitative data analysis method in this study due to its ability to systematically identify, analyze, and report patterns or themes from data collected through interviews, observations, and documents. According to Braun and Clarke (2019) this method offers high flexibility and is adaptable to various research paradigms, as it is not bound by specific theories or epistemologies, making it suitable for diverse theoretical approaches. Its primary goal is to uncover significant themes that reflect patterns in the data, providing deeper insights into participants' experiences and addressing the research questions (Kiger & Varpio, 2020). Additionally, Thematic Analysis excels in managing complex data and producing in-depth findings by organizing and interpreting the data in detail while identifying relationships between themes and their broader research context. This systematic and transparent approach ensures coherence and rigor in qualitative data analysis (Nowell et al., 2017).

Result and Discussion

There are three themes emerged through the interviews with all respondents. The themes as the findings of this study are presented in the following matrix:

Table 1. Matrix

Objective of the Study	Themes Emerged	Note
1. To figure out what types of digital literacy resources are used by the teachers.	1. Types of digital literacy resources are used by the teachers.	1. There was only one teacher from an urban school who actually used the different types of digital literacy resources and the others were very limited in their use.
	2. Lack of use the abundance of types of digital literacy resources.	1. Inability in exploring the use of digital literacy resources. 2. The absence of
		training in the use of digital literacy resources by the schools and Indonesian educational institutions.
2. To figure out what preference of resource type that are chosen by the teachers.	1. Preference for creative and interactive tools.	1. There were only two teachers use creative and interactive tools as their preferences namely, Canva and Blog.
	2. Preference of video-based resources for visualization.	1. There was only one teacher chooses YouTube as his preference to provide video visualization to teach.
	3. Preference of regular website on the internet.	1. All the teachers from the rural school have the same preference of it which is website such as Wikipedia, ditik.com. kompas.com etc.
	4. User Experience	1. The teachers who are experienced in using many types of digital literacy resources are more likely prefer tools that are difficult to use but offer many useful features.
3. To explore teachers' reasons behind choosing their preferences for resources.	1. Teacher considering perceived usefulness for their preference.	1. Low technology mastery is the reason why these teachers

		prefer weak and easy-to-use resources.
2. Teacher considering the perceived ease of use for their preference.	1. High technological mastery is the reason why a teacher prefers resources that have many useful features even though their use is difficult.	

The findings revealed that from the interviews, observation, and documents related to types of digital literacy resources, preference, and reasons behind the preference are used by the teachers in the two selected high school in Sumbawa. First, findings related to what types of digital literacy resources are used by the teachers contain two categories. i.e., (1) Types of digital literacy resources are used by the teachers; (2) Lack of use the abundance of types of digital literacy resources. The triangulation data revealed that there was only one teacher from the urban school who utilized many types of digital literacy resources and the rest of them had very minimal use of digital literacy resources especially the teachers in the rural school who were only limited to using public websites and YouTube as the type of digital literacy resources relied on in teaching. As expressed by a teacher from a rural school who said *"we only use YouTube and website like wikipedia, detik.com, cnn.com etc., for teaching process"*. The reasons why the use of the abundance of types of digital literacy resources is lacking and tends to be weak are due to the inability to explore the use of resources, the absence of training on the use of resources, and no policy of using some types of resources. As expressed by a teacher in an urban school that there is no special training for teachers regarding the utilization of digital literacy resources in the teaching process *"there has never been any special training or workshop on the use of resources in this school"* and a teacher in a rural school also expressed the same thing when the study author asked whether there has been previous training or workshops regarding the use of resources at the school, the respondent answered *"no, that's never been done"*.

Second, findings related to the teachers' preferences on using digital literacy resources contain four categories, i.e., (1) Preference for creative and interactive tools; (2) Preference of video-based resources for visualization; (3) Preference of regular website on the internet; (4) User Experience. The triangulation data revealed that there are two teachers from the urban school prefer creative and interactive tools such as Blog and Canva, this can be seen from the interview fragment from the teacher concerned who said *"I prefer my personal blog that I created because it can help me to enhance students' creativity by making short story etc., and post their result to my personal blog"* and the another teacher said *"I like Canva over others because it helps me to increase students' creativity and in designing PowerPoint and making pamphlet and others"*. Furthermore, data triangulation also revealed that there was only one teacher from an urban school who chose YouTube as his preference, he revealed *"I chose YouTube because I think the educational videos on the educational YouTube channel can provide me with additional materials and learn how to present teaching materials to students well"*. Moreover, it revealed that all teachers in rural schools have a uniform preference for the use of websites. As expressed by a teacher *"the main reason is that they are very helpful and serve as reliable sources of supplementary teaching materials aside from the school textbook"*. On another hand, User experience plays a big role in deciding whether a teacher prefers easy and few benefits or difficult but offers many features and benefits for learning.

Third, findings related to the reason of the teachers behind their preferences contain two categories i.e., (1) Teacher considering perceived usefulness for their preference; (2) Teacher considering the perceived ease of use for their preference. For the teacher who is considering the point number one above it relates to the theory theorized by Fred Davis in chapter two that a teacher tends to prefer a resource based on its function which offers so many advantages and varied features as stated by a teacher in the interview, he said that *"Personally, I prefer perceived usefulness. I don't mind learning how to use new, complex tools if they offer extensive functionalities. I aim to optimize the tools' features to improve my teaching performance and support student learning. Adapting to and mastering complex tools is worth it for the sake of better teaching outcomes"*. Meanwhile a teacher who is considering the point number two above tends to prefer a resource that does not have many benefits or function they only consider the ease of use. This is in line with a teacher's statement who said *"I would prefer tools that are easier to use because even if their features are simple or limited, at least I can understand how to operate them"*.

Conclusion

In conclusion, this study demonstrates that while Fred Davis's Technology Acceptance Model (TAM, 1989) is valid in specific contexts, its relevance is

shaped by factors such as teachers' experience, knowledge, and age, along with external influences like geographical location and institutional support. Teachers with higher technological proficiency and those in urban schools tend to prefer digital resources characterized by Perceived Usefulness (PU) over Perceived Ease of Use (PEOU), aligning with Davis's theory. However, senior teachers and those in rural schools, constrained by limited experience, training, and infrastructure, often favor PU resources, contradicting the theory. These findings highlight the need for targeted training, supportive policies, and improved technological infrastructure to optimize the integration of digital literacy resources in teaching, as also emphasized by previous research.

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