

Unlocking digital language assessment literacy: Vocational school English teachers' perspectives

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Abstract

The integration of technology in education has expanded considerably, enabling practitioners in vocational education to utilize digital resources effectively. The primary objective of this research is to investigate the current state of digital assessment literacy among teachers and identify areas for improvement. The researcher conducted semi-structured interviews, observations, and document analysis to explore digital literacy skills of the English teachers, based on Hague and Payton's framework. The study reveals that the integration of digital tools in language assessment in vocational schools in Indonesia is still lagging behind, which has an impact on students' readiness to face the world of work that increasingly relies on digital competencies. The lag is seen from four major categories of the framework, namely technical skills, creativity and analytical skills, communication and collaboration, and cultural and safety awareness. Barriers include access to technology, training opportunities, and pedagogical beliefs. Addressing these challenges through comprehensive policy, training, and research initiatives could transform educational practices and outcomes, aligning them more closely with the demands of the 21st-century workplace.

Keywords

Digital literacy, Vocational education, Language assessment literacy, Assessment literacy

Introduction

The rapid integration of technology into educational systems globally has significantly transformed access to knowledge, as evidenced by the International Telecommunication Union's report that over 5.3 billion people were internet users in 2022. This digital revolution is particularly crucial in vocational education, which aims to align closely with evolving workforce needs by equipping graduates with relevant, competitive skills. In this context, digital literacy becomes imperative for vocational school teachers. Digital literacy defined as the ability to effectively use technology to search, evaluate, organize, create, and communicate information is essential for educators to fully harness the potential of digital resources to enhance learning [1].

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Despite the recognized importance of digital literacy, there is a notable gap in its application within vocational education, especially in the realm of digital assessment. Digital assessments, which have become increasingly vital due to the shift towards remote and online learning, require teachers to not only understand but also adeptly implement technology-based evaluation methods. These skills are crucial for designing assessments that accurately measure students' readiness for the digital demands of modern careers [2]. However, research indicates that teachers, particularly in Indonesian vocational schools, often lack the necessary digital assessment literacy, thereby impacting the effectiveness of their teaching and the employability of their students [3]. Vocational high school graduates experience the highest unemployment rates compared to other educational levels, suggesting a significant gap between educational objectives and labor market realities [4].

Despite the critical importance of digital assessment literacy, research on this topic among English teachers in Indonesian vocational schools remains limited [5]. This underscores the need for further investigation to better understand the current state of digital assessment literacy among teachers and identify areas for improvement. By focusing on these aspects, the study seeks to provide feasible insights that can inform policy and practice, ultimately enhancing the quality of vocational education in alignment with the demands of the global digital economy.

1. What is the current level of digital language assessment literacy among English teachers in Indonesian vocational high schools?
2. What factors contribute to the development of digital language assessment literacy among those teachers?

Method

To investigate digital assessment literacy among English teachers in Indonesian vocational high schools, this study utilized a case study methodology. Baxter and Jack argued that case studies uniquely illuminate the dynamics within specific settings [6]. Understanding the context in which teachers operate such as their school environment, available resources, and institutional support is crucial for studying digital literacy. The investigation involved three English teachers from a rural vocational high school, selected through purposive sampling to ensure diverse perspectives and varying levels of engagement with digital tools [7]. For confidentiality, participants were pseudonymously coded as TA, TB, and TC.

Data were collected from multiple sources, including observations, semi-structured interviews, and document analysis. Each teacher participated in 30–45 minutes interviews focused on their digital language assessment literacy, with questions based on the Hague and Payton Framework to cover all relevant components. Additionally, documents such as English test materials and student assessment results were analyzed to provide context and evidence of assessment practices. Data analysis followed the

interactive model of Miles et al. [8] involving data condensation, display, and conclusion drawing. Information was organized according to the eight dimensions of the Hague and Payton framework, and thematic maps were used to identify patterns and relationships, facilitating conclusions that were systematically verified against existing theories on digital assessment literacy.

Result and Discussion

Digital language assessment literacy of vocational school English teachers

In the result, the eight dimensions of Hague and Payton framework were grouped into four categories, technical skills, creativity and analytical skills, communication and collaboration, cultural and safety awareness.

1. Technical skills

Despite technological advancements, vocational school English teachers predominantly rely on traditional paper-and-pencil assessments. This approach is misaligned with the digital skills required in today's job market and fails to prepare students adequately. Document analysis shows that assessments focus mainly on interpreting printed text, neglecting essential digital literacy skills like evaluating online information. A printed final exam can be seen in Figure 1.

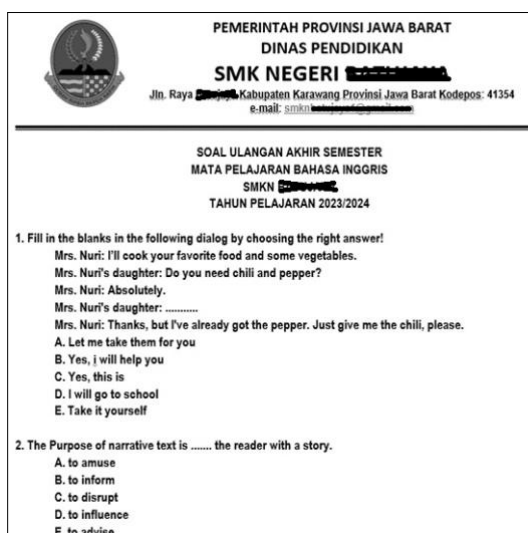


Figure 1. Printed final exam

The final exam sample from a vocational school illustrates the ongoing reliance on traditional assessment methods in vocational education. The exam focused on students' ability to understand and complete printed text through dialogue completion and multiple-choice questions, with no requirement for using digital tools or handling information online. In today's job market, skills like navigating digital platforms, evaluating online information, and creating digital content are essential. However, this exam stuck to an outdated paper-and-pencil format that does not prepare students for the digital demands of their future careers. Additionally, two out of three English teachers did not include activities that required students to search for or select digital

information before or after assessments. This lack of digital integration in the learning process fails to adequately prepare students for a workforce where digital literacy is vital.

Excerpt 1: Due to so many technical reasons, we think that it's better and more time saving if we use paper and pencil tests instead. We often faced technical problems whenever we decide to use technology, Google form for example. (TA; interview)

The teacher A's comment above sheds light on the practical challenges they face, such as technical issues that disrupt the smooth execution of digital assessments. This reluctance is understandable; when technology fails, it can waste valuable classroom time and potentially demotivate both students and teachers.

2. Creativity and analytical skill

Creativity is a crucial aspect of digital literacy that helps develop innovative thinking skills. However, assessments at the vocational school often did not encourage this creativity. Typically, these assessments focused on multiple-choice tests or simple written tests that assessed only low-level cognitive abilities, such as basic understanding.

Figure 2 illustrates the types of assessments commonly used in vocational schools, which primarily consist of multiple-choice questions aimed at testing basic understanding and recall of information. These assessments often require students to fill in blanks with the correct words or phrases, such as selecting appropriate prepositions or completing dialogues with personal pronouns. While this format is straightforward and easy to grade, it fails to encourage critical or creative thinking, as it does not require students to analyze complex texts, synthesize information, or create content that reflects a deeper understanding. Consequently, these assessments emphasize rote memorization and basic language skills, which, although important, are insufficient for preparing students for the demands of a digitalized job market.

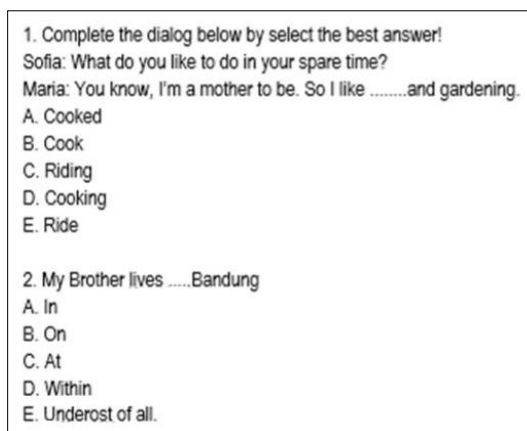


Figure 2. Multiple choice for low-level cognitive abilities

The teachers rarely incorporated tasks in their assessments that involve multimedia projects or the creation of digital content, which are crucial for students to express their creativity using digital technologies like videos, podcast, or other digital projects.

Additionally, the ability to analyze and evaluate information from various digital sources, a key component of digital literacy, was not well integrated into assessment practices. This lack of integration prevented assessments from promoting critical thinking, which is essential for helping students become more independent learners and adept digital citizens.

3. Communication and collaboration

At vocational school, there's a noticeable gap in how digital tools were used during English language assessments. Students were usually evaluated on their traditional speaking and writing skills, and any feedback sessions after tests are still held face-to-face rather than using digital platforms. This approach missed out on teaching students' crucial online communication skills and the ethical aspects of digital interactions. Face-to-face group work can be seen in [Figure 3](#).

Excerpt 2: We usually tell the exam rules and instructions orally in front of the class. We don't have access to computer lab so we only prepare our students for incoming assessment traditionally without utilizing any digital tools, such as online simulation, tutorial videos. (TB; Interview)

TB's statement underscores a critical issue: the lack of infrastructure, such as computer labs, hinders educators' ability to integrate digital tools into teaching and assessment. By relying solely on oral instructions and traditional methods, the school misses vital opportunities to enhance students' digital literacy, particularly in using online communication platforms essential for both education and the workplace. Additionally, the school has not utilized digital tools for group work; instead of collaborating on projects through platforms like Google Docs, students work together in the classroom. The absence of online project management, group coordination, simulations, and tutorial videos restrict students' exposure to diverse learning modalities that accommodate different learning styles. This lack of digital engagement not only impedes the development of essential digital skills but also limits students' ability to interact with content in meaningful ways.



[Figure 3](#). Face to face group work

4. Cultural and Safety Awareness

Digital safety, or e-safety, is a crucial aspect of technology-based assessments that often goes overlooked. It's essential that students learn how to navigate online environments safely, understanding both how to access information securely and how to interact

responsibly on digital platforms. Unfortunately, at the vocational school, the assessment practices did not incorporate digital safety measures. There's no mention of using tools like two-factor authentication or systems to prevent plagiarism, which are critical in maintaining the integrity and security of digital interactions.

Excerpt 3: To bring a compatible device with internet connection is almost impossible for some students, let alone being familiar with cybersecurity. (TC; Interview)

This statement highlights a critical barrier: not only do students struggle with basic access to necessary technology, but they also lack familiarity with essential cybersecurity practices. This gap in digital safety education is concerning, as it exposes students to potential risks in online environments and hampers their ability to engage safely and effectively with digital platforms. Such deficiencies underline the urgent need for schools to incorporate robust digital safety protocols into their curricula, ensuring students are well-equipped to protect themselves and navigate digital spaces responsibly. Furthermore, the integration of cultural awareness into the curriculum was insufficient. In English language assessments at vocational schools, students were not encouraged to consider the social and cultural implications of technology use in the workplace. Despite the potential for enhancing cross-cultural understanding through digital technology, such as videos or multimedia content, teachers at the vocational school have not incorporated these resources into their assessment strategies. This oversight restricts students' ability to fully appreciate and navigate the increasingly global and interconnected digital world they are about to enter.

Factors influence the development of digital language assessment literacy

Exploring the factors that shape digital language assessment literacy in vocational schools, significant challenges were found, particularly in rural areas where access to modern technology is severely limited.

1. Access to technology

To address the challenges faced by English teachers at a vocational school located in a rural area, it is crucial to consider the limited access to technology, which significantly impacts the implementation of digital tools in education. TA highlighted the difficulties:

Excerpt 4: Our school is situated in a remote area, leading to substantial technological constraints for our students. Many of them do not own personal devices such as laptop or smartphones, which could facilitate their learning. For those who do have devices, often these gadgets are outdated and unable to support necessary educational software. (TA; Interview)

Likewise, the school struggles to provide a reliable internet connection, forcing students to rely on their own means to access online resources. This situation makes it challenging and somewhat impractical to incorporate online platforms or digital tools into assessment practices in vocational school.

2. Training opportunities

During the interview, the English teachers highlighted the financial constraints faced by the school, which significantly affect professional development opportunities.

Excerpt 5: We're working with a very tight budget, which usually goes to what the administration considers more critical areas. Unfortunately, English and digital literacy often fall lower on the list, so opportunities for training in these areas are rare and, when they do happen, they don't often cover the digital skills we really need. (TA; Interview)

The teachers further noted that the training they do receive is generally focused on broad teaching methodologies rather than specific skills such as integrating digital tools into the classroom. This lack of focused training on digital competencies hinders their ability to enhance their teaching practices, let alone assessment, with modern educational technologies.

3. Pedagogical beliefs

The primary goal of vocational schools is to equip students with the skills necessary to compete effectively in the workforce. Consequently, while English teachers acknowledge the importance of English communication skills, they also recognize the need to prioritize students' training in specialized technical areas such as operating heavy machinery, welding, engine diagnostics, fuel injection, and vehicle modification. This approach ensures that students do not become overwhelmed and can focus on acquiring the technical expertise required in their specific fields. Moreover, English teachers at the vocational school prefer traditional methods for assessing English skills, believing them to be more accurate for their students, who are often not well-versed in using technology and artificial intelligence. The teachers expressed concerns about the ease with which students could engage in plagiarism when using digital tools, attributing this to the students' lack of familiarity with ethical practices in digital environments. One teacher noted,

Excerpt 6: It's actually easier for students to plagiarize with digital tools because they're not very familiar with how to use them properly. We stick to paper and pencil for tests because throwing in technology could complicate things. (TB; Interview)

This highlights a critical gap in digital literacy that needs addressing to ensure students can utilize technology effectively and ethically in their future careers.

Discussion

The integration of digital tools in language assessment within Indonesian vocational schools is significantly lagging, impacting students' readiness for a workforce that increasingly demands digital competence. This gap aligns with the broader discourse on digital literacy in vocational education, as highlighted by the Hague and Payton framework, which categorizes digital competencies into technical skills, creativity and analytical skills, communication and collaboration, and cultural and safety awareness. The observed reliance on traditional assessment methods underscores a disconnect

between current teaching practices and the needs of a digitalized job market, supporting Jenkins's assertion that fostering creativity and analytical skills through digital platforms is essential for developing innovative thinking in students [7].

The findings emphasize the critical need for professional development, as several studies [9] and [10] suggested that continuous teacher training on digital tools and assessment strategies is vital for effective education delivery. Many teachers in Indonesian vocational schools struggle to integrate new digital methods due to inadequate training, which hinders the adoption of innovative assessment techniques [2]. Additionally, limited access to technology, especially in rural areas, exacerbates these challenges, reflecting the digital divide where students in less affluent regions have fewer opportunities to engage with advanced digital tools [11]. This divide restricts students' ability to acquire new digital skills and limits their exposure to global perspectives [9].

The findings suggest a clear direction for future research and educational practice. Policymakers and school administrators must integrate digital literacy into the curriculum, improve technological infrastructure, and revise assessment methods to include digital tools. This approach will ensure equitable learning opportunities and better prepare students for the demands of the modern job market, moving beyond traditional assessment methods to provide a more comprehensive evaluation of students' skills and competencies.

Conclusion

This study examined the digital language assessment literacy of English teachers in Indonesian vocational high schools, focusing on how well they integrate digital tools into their assessment practices and the factors that affect this integration. The findings highlight a significant gap in digital assessment literacy across four main areas: technical skills, creativity and analytical skills, communication and collaboration, and cultural and safety awareness. This gap is worsened by limited access to technology, a lack of training opportunities, and traditional teaching beliefs that prioritize conventional assessment methods.

The research provides important evidence about the challenges and barriers to digital assessment literacy in vocational education, underscoring the need for reforms in educational policy that emphasize digital literacy. These reforms should aim to improve technological infrastructure and offer professional development for teachers, helping them prepare students for the digital economy and the demands of modern workplaces. However, the study's focus on a specific rural area may limit the applicability of the findings, suggesting that future research should include a broader range of schools and consider student perspectives to enhance the analysis. Additionally, investigating how cultural factors influence digital assessment practices and attitudes toward technology in education could yield further insights.

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