

Integrating Digital Tools in English Language Assessments: Insights From Tertiary Education

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Abstract—Assessment plays a pivotal role in instructional design, significantly influencing students' language acquisition. Effective assessment can help students identify their strengths and weaknesses. In modern education, technology's integration into pedagogy is imperative. When combined with assessment strategies, technology becomes an invaluable asset, fostering personalized and adaptive learning experiences. Recognizing its potential within assessment frameworks is essential for optimizing educational outcomes. This research article aims to examine the role of tools and technology in the assessment of English as a Second Language and their impact on higher education. The objectives of the study are to identify the role of technology in language classrooms, familiarize the students with the systematic usage of digital tools through blended classroom techniques, and enhance digital assessment methods. Assessment theories and Technology Integration Models like Theory of Task Technology-Fit (TTF), Theory of Reasoned Action (TRA), Diffusion of Innovation Theory (DOI), Technology Acceptance Model (TAM), Unified Theory of Acceptance and Use of Technology (UTATUT), and Technical, Pedagogical, and Content Knowledge (TPACK) were used as the major framework to investigate. Further, qualitative and quantitative research was undertaken and an effective assessment method through tools and technologies is suggested. Limitations and impacts are also studied.

Index Terms—assessment, technology, tools, pedagogy

I. INTRODUCTION

In the ever-evolving field of education, the integration of technology has become a driving force for transformative change, especially within the domain of language education. The integration of online resources and technological tools has revolutionized conventional teaching and learning methods, particularly in the realm of language education. This shift is exemplified by the adoption of technology-integrated assessments, which not only evaluate language proficiency but also foster active engagement with real-world contexts through innovative digital tools (Motteram, 2013). Unlike traditional assessments that often struggle to capture the multifaceted nature of language skills, technology-integrated approaches have introduced adaptive and multimodal methods, creating opportunities for individualized learning paths and fostering self-directed learning (Jurane-Bremane, 2023).

Blended learning environments, combining in-person and digital instruction, serve as a critical platform for these assessments. The effectiveness of such environments hinges on key elements such as authenticity, personalization, and scaffolding, which support self-regulation and enhance learner engagement (Wei, 2024). Moreover, the global adoption of digital technologies, accelerated by the COVID-19 pandemic, has underscored the significance of integrating technology into assessments to ensure accessibility, innovation, and inclusivity in education (Bitar & Davidovich, 2024). In culturally diverse settings, this integration has presented both opportunities and challenges, highlighting the need for culturally responsive strategies and flexible technological infrastructure.

In language education, the role of digital tools has become central, supporting both teaching and assessment practices. Technology-integrated assessments allow for authentic language applications, enabling learners to engage in immersive simulations, online discussions, and virtual collaborative projects (Warschauer, 2003). These methods not only transcend geographical boundaries but also nurture cultural competence and global collaboration—essential skills in an interconnected world (Motteram, 2013). Furthermore, the immediate feedback provided by such tools aligns with contemporary pedagogical principles, enabling iterative learning processes and continuous skill refinement (Jurane-Bremane, 2023).

The integration of technology also facilitates individualized learning paths, leveraging adaptive algorithms to address specific language proficiency gaps and accommodating diverse learning styles. Embracing a multimodal approach, these assessments go beyond written and oral evaluations, capturing a broader spectrum of language skills through audio

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recordings, video presentations, and collaborative online projects. Real-time feedback provided by digital tools offers immediate insights into language performance, fostering an iterative learning process aligned with principles of self-directed learning and skill refinement. Additionally, the integration of technology reaches across nations, promoting global collaboration in language learning through virtual classrooms, language exchange platforms, and collaborative projects. This interconnectedness not only enriches language education by exposing learners to diverse cultural contexts but also nurtures cultural competency—an essential aspect of language proficiency in an increasingly interconnected world (Fullestop, 2023). This research aims to uncover the nuanced impact of digital tools on student language proficiency, offering meaningful contributions to the ongoing discussion on the intersection of technology and language education. Through the lens of innovation and adaptability, the study seeks to understand how technology acts as a dynamic force in shaping the future of language learning and assessment.

II. LITERATURE REVIEW

Rubio and Conesa (2023) investigated the crucial role of digital education and the preparation of teachers for technology-based teaching in Spain, with a particular focus on integrating digital tools into language classrooms. They underscored the potential shortcomings of traditional teaching methods and emphasized the importance of teachers being adept at a blended teaching approach that seamlessly incorporates digital tools. Employing a qualitative research methodology, the study evaluated the existing level of digital awareness among teachers. Subsequently, the researchers designed a targeted program to enhance teachers' technical competence with practical, hands-on activities for classroom application, thereby bridging the gap between traditional and technology-based teaching methods.

Rintaningrum's study examines the integration of technology in English language learning in Indonesia, focusing on both its benefits and challenges. The research highlights several advantages, such as improved language proficiency through activities like coding, online quizzes, and collaborative learning, which foster learner autonomy and engagement. However, the study also identifies significant challenges, including the rapid advancement of technology, limited access to resources, and varying levels of technological proficiency among instructors. The data, gathered through interviews with seven participants, provides valuable insights into how these obstacles can be addressed to optimize the use of technology in language learning environments (Rintaningrum, 2023).

Elmahdi and Al-Hattami (2018) conducted a comprehensive study aimed at evaluating the efficacy of *Plickers*, a technology-based formative assessment tool. Employing a descriptive mixed-method design, the researchers meticulously collected data through a structured questionnaire administered to 166 students at Bahrain Teachers College, University of Bahrain. Using a mixed-method design, they found that students had a positive perception of formative assessment and immediate feedback provided by *Plickers*. The integration of *Plickers* led to increased participation, improved time efficiency, and a more engaging learning environment. The study advocates for the strategic integration of technology tools in classrooms to optimize assessment and enhance learning outcomes.

Bahrani (2011) conducted a study exploring the integration of diverse technology-based tools, such as computers, podcasts, and chat platforms, to assess language proficiency in English as a Foreign Language (EFL) classroom. These alternative assessment methods, distinct from traditional paper-and-pencil approaches, utilize innovative techniques to measure improvements in language proficiency. Technology-based assessments are deemed effective when they provide language learners with opportunities to actively apply their acquired knowledge, in contrast to traditional methods that may fall short in showcasing practical language skills. The study elucidates various activities through which teachers can leverage technology to measure and monitor their students' achievements in language learning, highlighting a shift towards dynamic and interactive assessment strategies aligned with the evolving landscape of language education.

Potok and Spjut (2023) explored the integration of digital tools in formative assessment within English as a Foreign Language (EFL) classroom, responding to the Swedish National Agency for Education's increasing interest in their potential. The study focuses on the application of digital environments, specifically their automation, algorithms, and systems, to support formative assessment practices. By reviewing previous research, the paper provides insights into how digital tools can benefit EFL teachers in their educational endeavors. It discusses the advantages and limitations of these tools, examining their suitability for different environments and tasks. While digital tools, particularly those with automation and feedback systems, show promise in EFL classrooms, the study emphasizes the importance of pedagogical planning and teacher involvement. The human element, represented by teachers making informed choices, remains crucial for the effective use of digital tools, positioning them as valuable complements within a well-structured pedagogical framework.

Bahari (2021) reviewed 285 peer-reviewed articles (2002 – 2018) to study the mainstream tools and strategies used for language proficiency assessment in Computer-Assisted Language Learning (CALL). The study highlighted the dynamic and non-linear individual centered assessment that use adaptive and interactive approaches. Bahari also criticized the replication of traditional pencil-paper assessments in digital formats, noting their insufficiency to leverage the capabilities of technology. The findings predict a shift toward integrated skills and learner-centred, non-linear approaches, offering significant implications for pedagogy, assessment, and other broader fields of language acquisition.

The integration of technology into education has enhanced teaching and learning practices across the world. However, the use of technology in language assessment remains underexplored in specific contexts. In Tamil Nadu, Arts and Science colleges have effectively embraced technology-based education in their curriculum, but the adoption of technology-based

assessment is at a nascent stage. Given that language programs are mandatory irrespective of their core disciplines, understanding the existing state of technology-based assessment in these institutions is crucial. Existing research on technology-based language assessment mainly focuses on broader or global contexts, with limited studies examining its application within Arts and Science colleges in Tamil Nadu. This study seeks to fill this gap by analysing the extent and the effectiveness of technology-based assessments in English language classrooms, providing insights into their potential to enhance language learning outcomes in this region.

A. Role of Assessment in English Language Classrooms

Assessment plays a crucial role in the educational journey, forming an integral part of the learning process. The connection between curriculum and instruction is inseparable, with assessment serving as an ongoing procedure that not only guides instruction but also shapes the subsequent steps for students. It functions as a continuous cycle, providing valuable insights for instructors to adapt their teaching methods, guiding students toward their next learning steps, and validating the progress and achievements made as both educators and learners strive to meet the objectives outlined in the curriculum. In essence, assessment is a dynamic process that facilitates a responsive and informed approach to instruction, fostering the attainment of curriculum goals (Gafforvov & Abdulkhay, 2022). Hence, having a meaningful assessment is essential for a healthy teaching-learning to take place. Language assessments typically encompass a spectrum of skills, including reading, writing, speaking, and listening. Each of these skills plays a vital role in gauging an individual's language proficiency. The assessment process may focus on one or more of these key skills, to provide a comprehensive understanding of an individual's language abilities (Twinkl, n.d.). Over the years, language instructors have been trying various assessment techniques to bring the desired performance outcomes among the students.

In the realm of second language education, assessment becomes an essential tool that aids students in enhancing their language competence while also offering valuable insights for teachers to refine their instructional methods. Feedback, a pivotal aspect of assessment, serves not only as a necessary pedagogical strategy following evaluations but also emerges as a highly influential factor influencing students' academic success, as highlighted by Hattie and Timperley (2007). At its core, the arena of assessment and feedback is characterized by ongoing issues, with the primary concern for educators and researchers being the effective methodologies for conducting assessments and delivering feedback to optimize students' language learning experiences (Yu & Xu, 2021).

B. Technology in ELT Classrooms

In the swiftly changing educational environment, technology has become an essential element of language instruction. This integration empowers teachers to embrace inventive pedagogical methods, presenting opportunities to enhance the overall quality of their teaching. In contemporary classrooms, an extensive range of technological tools and resources has reshaped the landscape of language instruction. Teachers are actively leveraging this digital transformation to captivate students, track their advancements, and elevate the overall learning experience. Among these Artificial Intelligence (AI)-driven tools offer personalized teaching materials, automated feedback, and individualized instruction, highlighting AI's growing role in adapting education to learners' needs. The use of technology also reduces teacher workload, improves teaching quality, increases students' motivation and participation through interactive tools, offers personalized instruction, customizes feedback for improvement, fosters learner autonomy, enriches collaboration and communication, enhances creativity and critical thinking, provides access to language resources, materials and models, machine translation, and dictionary (Renandy et al., 2023).

C. Relevance of Technology-Integrated Language Assessment

Currently, teachers are facing generation-z students who are the 'digital natives'. Technology is one of the primary means through which they express themselves and it is already an integrated part of their lives (Joshi & Poudel, 2019). After the pandemic and lockdown, even social media platforms have found a place in academic realms (Bansal et al., 2023). Hence, it is appropriate to integrate it as a part of the curricula (Celik & Baturay, 2024). Educational institutions are catering to the demanding needs of the generations for whom skills and competencies are important alongside knowledge (Pedagoo, n.d.). Teachers now have a multifaceted role, increasingly depending on technology for efficient task completion. It is accurate to assert that the educational landscape has undergone a paradigmatic shift. Therefore, there is a pressing need to systematically integrate and normalize the use of technology-infused assessment tools, incorporating them into pedagogy. Leveraging technology in assessments enhances their purpose and benefits. Teachers can utilize digital tools to determine whether to proceed to a new topic or further develop students' understanding of the current one. These tools also aid in collecting real-time evidence of students' comprehension of objectives and the practical application of knowledge. Digital technologies serve as powerful instruments for analyzing, interpreting, and presenting data comprehensively and transparently, potentially improving the efficiency, precision, and effectiveness of classroom assessments. It is essential to underscore that technology should always have a supportive role in content delivery, with its design aligning with and reinforcing learning goals instead of dictating them (Digital Promise, n.d.).

(a). Adaptive Learning

Educators have been actively incorporating technology into education since its inception. Adaptive learning stands out as a method that tailors the course content to each learner, offering a distinctive experience not found in traditional

classrooms. Systems like technology-based adaptive learning or e-learning platforms can furnish students with immediate support, resources customized to their learning requirements, and pertinent feedback. Adaptive learning software encompasses all essential class-related information, guiding students through their learning process. As students engage with the platform, the software makes informed decisions on the most effective path for each student. This personalized journey is uniquely crafted based on the individual needs of each learner (Kurt, 2021). As put by McGuire (2021), adaptive learning enhances students' success and self-direction by providing data on mastered and unmastered skills, enabling self-paced learning, skipping mastered concepts and focusing on others, boosting engagement with tailored lessons matching students' needs, establishing a structured alignment of course elements with objectives, offering timely data for faculty and administrators to identify and address equity barriers, enabling targeted support by identifying individual students or sections needing attention, facilitating continuous improvement through data comparison across semesters and in addition they are also cost-effective compared to expensive textbooks (McGuire, 2021).

(b). Personalised Learning

Assessments made through digital platforms are of many types like quizzes, surveys, presentations, videos-based submissions, group projects, etc. The results of using these digital tools have increased students' capacity to personalize their learning. Digital tools help the students to track their progress, speed, and time required to acquire specific knowledge and adapt a learning style. These tools also help students to identify their strengths and weaknesses. They provide immediate and real-time feedback. This enables the students to identify where they stand and correct their mistakes. Moreover, digital tools or software ensures equity in assessment as it delivers unbiased and uniform grading. They are an effective method when it comes to aiding students who have special needs and impairments (Magic Box, 2023). If the digital tools are chosen by carefully analyzing the learner's needs and course objectives, they can greatly serve students for personalized learning and increased learner autonomy. Using digital tools for assessment is a two-way process between the teachers and students. Unless the students are carefully instructed and trained by the instructor to use them, it will not serve the purpose. Hence, a teacher's role in facilitating a student plays an important role.

III. THEORETICAL MODELS

A. Theory of Task-Technology Fit (TTF)

Task-Technology Fit (TTF) encompasses the intricate connection among an individual as the technology user, the technological elements, including data, hardware, software tools and services, and the attributes of the task at hand. The TTF model is represented in Fig. 1. The effectiveness of technology in executing user tasks depends on the alignment of individual abilities, task requirements, and the inherent functionalities of the technology, as outlined by Goodhue and Thompson in 1995. Davis in 1989 and Thompson, Higgins, and Howell in 1994 underlined that the utilization aspect within the TTF framework relates to active engagement with the system, evaluated through factors such as usage frequency and diversity. Utilization is influenced by various attitudinal and belief factors, extending beyond functionality to social norms, behavioral attitudes, and anticipated consequences. These influencing factors, as studied by Bagozzi in 1982 and Fishbein and Ajzen in 1975, significantly contribute to technology adoption in both obligatory and voluntary contexts. Moreover, the performance impact element within the TTF framework explores the tangible outcomes achievable through the execution of a portfolio of tasks. Recognizing the inherent complexity of the Task-Technology Fit model, empirical testing proves challenging. Therefore, a practical approach involves relying on core components and underlying assumptions to develop a simplified yet measurable TTF model, capturing the nuanced dynamics in the intricate relationship between individuals, technology, and the tasks they collectively undertake (Marikyan & Papagiannidis, 2023).

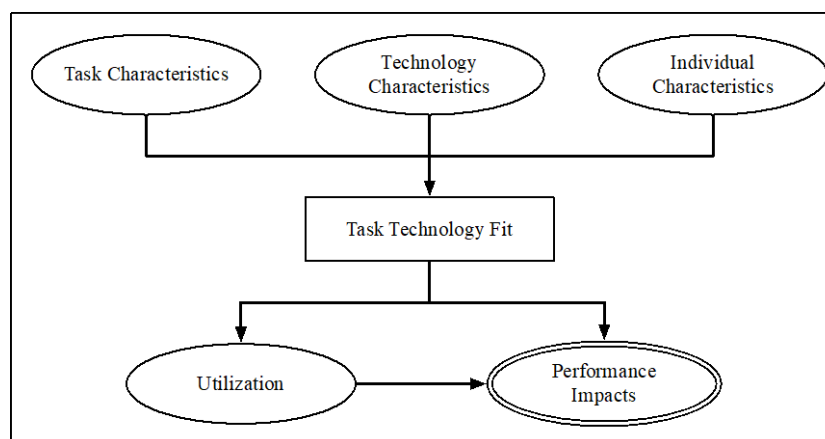


Figure 1. The Task-Technology Fit Model

B. Technical, Pedagogical, and Content Knowledge (TPACK)

The TPACK framework illuminates the intricate connections and intricacies among the fundamental elements of knowledge, namely technology, pedagogy, and content as postulated by Koehler and Mishra (2008). This framework emphasizes the convergence of these three types of knowledge, fostering a seamless grasp of how to teach content effectively by incorporating suitable pedagogical methods and technologies. As shown in Fig. 2, the elements of the TPACK framework are as follows: Technological Knowledge (TK) refers to the understanding of a wide range of technologies, from conventional instruments like writing materials to contemporary digital advancements, including online platforms, multimedia tools, interactive displays, and specialized software. Content Knowledge (CK) involves understanding the core content intended for learning or teaching. Educators need to possess knowledge about the content they are imparting, recognizing the distinctions like knowledge across diverse subject areas. Pedagogical Knowledge (PK) refers to the comprehension of teaching strategies and methodologies, including expertise in managing classrooms, designing assessments, developing lesson plans, and facilitating student learning. Pedagogical Content Knowledge (PCK) integrates subject matter expertise with effective instructional practices, ensuring that content is delivered in a way that enhances student understanding. This knowledge varies across content areas, blending both content and pedagogy to enhance teaching practices. Technology and Content Knowledge (TCK) focuses on the strategic use of technology to enhance and adapt subject matter, enabling innovative and effective content delivery. Technological Pedagogical Knowledge (TPK) refers to the understanding of how technology can be integrated into teaching to transform instructional methods. Technological Pedagogical Content Knowledge (TPACK) represents the fundamental expertise educators require to effectively blend technology with pedagogy and subject matter, ensuring meaningful learning experiences across different disciplines. Educators possess an innate comprehension of the intricate interrelationships among the three foundational knowledge components (CK, PK, TK) when they teach using appropriate teaching strategies and technological tools (Schmidt & Baran, 2010).

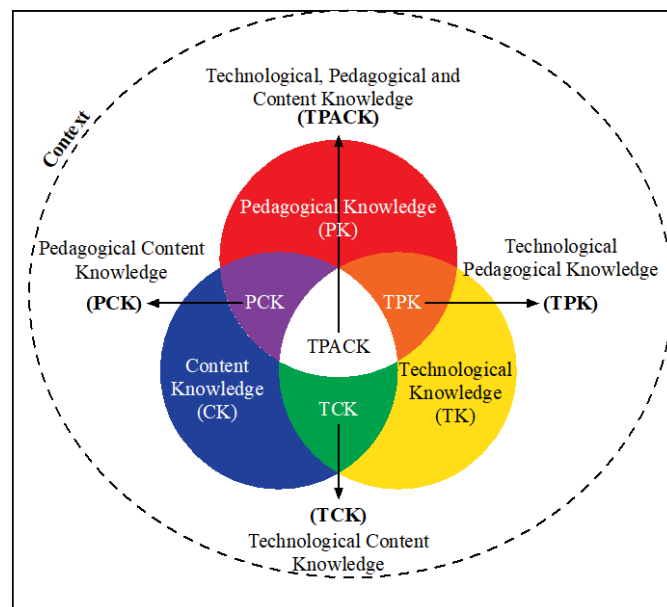


Figure 2. The TPACK Model

C. Theory of Reasoned Action (TRA) and Technology Acceptance Model

Developed by Ajzen and Fishbein in 1980, the Theory of Reasoned Action (TRA) suggests that an individual's actions are driven by their intentions and willingness to act. This theory asserts that people are more likely to engage in a particular behavior if they hold a favorable attitude toward it and feel social pressure or expectations from others to do so, known as the subjective norm. This leads to a heightened intention (motivation), enhancing the probability of performing behaviour. TRA is based on two variables: attitude and subjective norm. Attitude is either a positive or negative feeling about attaining the objective and subjective norm is how the individual perceives the relation in achieving those objectives with the product (Mimiaga & Safren, 2009).

Technology Acceptance Model (TAM) proposed by Davis in 1989, aimed to provide a theoretical foundation for predicting user behavior. TAM, rooted in the Theory of Reasoned Action, which examines the cognitive aspect of individual behavior, posits that the acceptance of technology is gauged by the user's behavioral intention (BI). Behavioral Intention (BI) is shaped by the perceived effectiveness of technology in completing tasks (Perceived Usefulness – PU) and the degree of effort required to use it (Perceived Ease of Use – PEOU) (Davis, 1989). The user's attitude toward technology usage further impacts behavioral intention. Perceived usefulness refers to the user's conviction that a specific technology improves job performance, whereas perceived ease of use reflects the belief that the technology minimizes the effort required. These factors collectively contribute to a positive behavioral intention among users. The process of technology acceptance unfolds in three stages, wherein external factors influence cognitive responses, leading to affective

responses that, in turn, shape user behavior (Marikyan & Papagiannidis, 2022).

D. *The Unified Theory of Acceptance and Use of Technology (UTAUT)*

The UTAUT model, which combines eight theories of technology acceptance such as TAM (Technology Acceptance Model), IDT (Innovation Diffusion Theory), TRA (Theory of Reasoned Action), the motivational model, TPB (Theory of Planned Behaviour), PC utilization, SCT (Social Cognitive Theory), and a hybrid of TAM and TPB, emphasizes that for a technology to succeed and secure ongoing investments after initial acceptance, it must satisfy the needs of its users (Marikyan & Papagiannidis, 2022). User behavior, a pivotal factor in technology adoption, has been scrutinized through various theories, each with its strengths and limitations. In 2003, Venkatesh et al. conducted empirical research and identified four key factors that influence behavioral intention and usage: Performance Expectancy, Effort Expectancy, Social Influence, and Facilitating Conditions. Specifically, Performance Expectancy assesses how effectively a technology enhances performance according to user expectations, with its impact on behavioral intention varying by age. Effort Expectancy measures a consumer's anticipation of technology's ease of use, with moderation influenced by age, and prior experience. The impact of others within the organization on continued usage, particularly in the early stages, is examined through Social Influence, with moderation influenced by factors such as age, and prior experience. Facilitating Conditions assess the support provided by the organization's infrastructure to users in utilizing technology, moderated by age and experience (Venkatesh et al., 2003).

IV. METHODOLOGY

This paper aims to analyze the role of tools and technology in language assessment among English language learners of tertiary-level education. The main objectives of this study are to examine the role of technology in enhancing language classrooms, particularly in the context of digital assessments. First, the study aims to explore how the integration of digital tools and blended learning approaches can improve English language proficiency among tertiary-level learners. Second, it seeks to evaluate the effectiveness of technology as a tool for assessing language skills, with a focus on its ability to provide reliable and accurate evaluations. Third, the study investigates the significance of feedback within digital assessment environments and its role in promoting self-directed learning and improving language learning outcomes. It attempts to answer the following research questions:

- 1) How does the use of digital assessments enhance English language proficiency among learners in tertiary education?
- 2) What is the significance of feedback in improving English language learning outcomes in digital assessment environments?
- 3) In what ways do technology-integrated assessments promote self-directed learning among English language learners?

To gain a comprehensive understanding of the use of digital tools for assessment in language classes, both quantitative and qualitative methodologies were employed. A descriptive research questionnaire was created after reviewing relevant literature and distributed to undergraduate students across various departments in three selected colleges in Madurai. The questionnaire included both closed and open-ended questions. The Likert scale was also used for certain questions. Semi-structured interviews and focus group discussions were held with both teachers and students to gather their perspectives, challenges, and suggestions.

A. *Purpose and Participants*

A group of 110 first-year graduates, belonging to the science and humanities stream of Lady Doak college, Madurai, Tamil Nadu was chosen for the survey. This college regularly uses digital tools for teaching and assessment. *Edpuzzle, Google Workspace, Kahoot, Lecture Capturing, LMS Moodle, Loom, Mentimeter, Nearpod, OER Commons, Padlet, Plickers, Plunker, Prezi, Quizizz, Testmoz, WhatsApp, WordPress, and YouTube* are common digital technologies that are used on an everyday basis. Apart from this, they also prescribe various e-books, e-content, and journals as a part of their syllabus. Virtual labs and digital libraries are also commonly used. Hence, the students and the teachers are familiar with using them. These students were selected as they learn English in their first and second semesters as a mandatory course. Though the students come to tertiary-level education with a basic knowledge of the English language, most of them are not fluent. The college streamlines the students into Advanced Level (A-Level) and Basic Level (B-Level), based on their performance in an entry test. The study focused on B-Level students who had hands-on training and experience using digital tools for learning and assessment. These participants were ideal for the study as they represented a group with practical exposure to both traditional and digital assessment methods, allowing for a comprehensive comparison and evaluation. Table 1 shows the distribution of participants based on their category.

TABLE 1
PARTICIPANTS DISTRIBUTION

Category	Subcategory	Number of Participants	Percentage (%)
Economic Category	Upper Class	15	13.6
	Upper Middle Class	35	31.8
	Middle Class	40	36.4
	Lower Class	20	18.2
Age Group	18-19	40	36.4
	20-21	55	50.0
	22-23	15	13.6
Academic Performance	High Achievers	30	27.3
	Average	60	54.5
	Below Average	20	18.2
Digital Literacy	Advanced	40	36.4
	Intermediate	50	45.5
	Basic	20	18.2

Note. This table demonstrates the number of participants who took part in the survey based on economic category, age, performance, and digital literacy

Participants were categorized into upper class (13.6%), upper middle class (31.8%), middle class (36.4%), and lower class (18.2%), providing insights into the economic backgrounds of the students. This distribution highlights the socio-economic diversity and its possible impact on access to technology and attitudes towards digital tools. Majority of participants were aged between 18-21 years, with 36.4% in the 18-19 age group, 50.0% in the 20-21 age group, and 13.6% in the 22-23 age group. This age distribution helps in understanding the familiarity and comfort levels with technology, which are often higher in younger students. Academic performance was categorized into high achievers (27.3%), average (54.5%), and below average (18.2%), allowing for an analysis of how performance levels correlate with technology use. This categorization is crucial for identifying whether digital tools are more beneficial for certain academic levels. Participants' digital literacy levels were classified as advanced (36.4%), intermediate (45.5%), and basic (18.2%), highlighting their proficiency with digital tools. This information is vital for tailoring digital assessments to the appropriate skill levels. These categorizations provided a comprehensive understanding of the participants' backgrounds, which was crucial for analyzing the study's findings. The diversity in economic status, age, academic performance, and digital literacy levels ensured that the results were representative and could be generalized to a broader population. By understanding these demographics, the study could better interpret how different factors influence the use and effectiveness of digital tools in language assessment.

B. Sampling Technique and Rationale

The sampling technique employed for this study is purposive sampling, which is a non-probability sampling method where participants are selected based on specific characteristics or criteria that align with the research objectives. In this case, the study aimed to focus on first-year undergraduate students (B-Level) who were actively exposed to digital tools for learning and assessment. This sampling method was chosen to ensure that the participants had practical experience with both traditional and digital assessment methods, making them ideal for the comparison and evaluation of these two approaches.

The rationale for using purposive sampling is that it allows the researcher to target a specific group of individuals who possess relevant knowledge and experience, thus enhancing the relevance and depth of the data collected. The participants selected for the study were drawn from three colleges in Madurai where digital tools such as Edpuzzle, Google Workspace, and other educational platforms are commonly used. These colleges were chosen because they have integrated technology into their teaching and assessment practices, making the students familiar with the tools being studied.

Additionally, the purposive sampling technique ensures that the study captures a diverse range of perspectives by including participants from different academic streams (science and humanities), economic backgrounds, age groups, and varying levels of digital literacy. This diversity is critical to understanding how factors such as socio-economic status, age, and digital proficiency influence the perception and use of digital tools in assessments.

By targeting first-year students who are already familiar with digital tools and enrolled in courses where digital assessments are a part of the curriculum, the study gathers an in-depth insight into how these students interact with technology in their academic assessments. This specific focus helps to address the research questions effectively and ensures that the findings are directly relevant to the study's objectives.

C. Research Design

Quantitative Component

- Survey: A descriptive-style questionnaire was distributed to 110 first-year undergraduate students.
- Likert Scale: Used to gather data on students' preferences, opinions, and behavioral intentions.
- Statistical Data: Findings were presented in percentages to measure student agreement on various aspects, such as the usefulness of digital tools and their effectiveness in assessments.

Qualitative Component

- Semi-Structured Interviews: Conducted with both students and teachers to gather in-depth insights into their

experiences, challenges, and suggestions.

- Focus Group Discussions: Explored detailed perspectives, allowing participants to elaborate on their views regarding digital assessments and feedback methods.

Tools and Instruments

- A combination of closed-ended and open-ended questions in the survey.
- Semi-structured interview guides and focus group protocols.

Context and Setting

- The study is situated in a specific context: three colleges in Madurai, with students familiar with digital tools like Edpuzzle, Google Workspace, and others.

Purpose of the Design

- The design is exploratory and evaluative, aiming to understand the role of digital tools in assessments, measure behavioral intentions (BI), perceived usefulness (PU), and perceived ease of usefulness (PEOU), and compare digital and traditional assessment methods.

V. FINDINGS AND DISCUSSIONS

After orienting the students about the questionnaire, a descriptive-style questionnaire was circulated online. The findings from the survey are presented and analyzed below.

A. Preference of Assessment Method

The analysis of assessment method preferences among the 110 respondents reveals insightful trends regarding students' attitudes towards traditional and digital assessment methods. A substantial 87% of students reported that their teachers employed both traditional paper-pen and digital methods for assessments, indicating a blended approach to evaluation within the educational environment as shown in Table 2.

TABLE 2
STUDENTS' PREFERENCE FOR DIGITAL ASSESSMENT

Method	Number of Participants	Percentage (%)
Digital Method	64	58
Paper-Pen Method	46	42

As shown in Table 2, when delving into students' preferences, 58% expressed a preference for digital assessment methods, while 42% favored the traditional paper-pen method. This preference distribution suggests a significant inclination towards digital assessments among students, reflecting their comfort and familiarity with digital tools. The preference for digital methods can be attributed to several factors, including the immediate feedback provided by digital tools, the flexibility and accessibility of online assessments, and the interactive and engaging nature of digital platforms.

Despite the clear preference for digital assessments, a notable portion of students (42%) still values traditional paper-pen methods. This indicates that traditional assessments retain their relevance and importance, likely due to the tactile and tangible aspects of paper-based evaluations, which some students might find reassuring and easier to navigate.

The preference for digital methods among majority of students highlights the transformative potential of technology in educational assessments. Digital assessments offer several advantages, such as real-time feedback, personalized learning paths, and the ability to engage with a broader range of assessment formats (e.g., video submissions, interactive simulations). These features align well with the learning preferences of today's digital-native students, who are accustomed to using technology in various aspects of their lives.

Conversely, the significant percentage of students who prefer traditional paper-pen methods underscores the importance of maintaining a balanced approach to assessment. Educators should consider integrating both traditional and digital methods to cater to diverse student preferences and learning styles. This hybrid approach can ensure that the benefits of digital tools are leveraged while preserving the familiarity and comfort associated with traditional methods.

In summary, the analysis of assessment method preferences reveals a clear trend towards digital assessments, reflecting the evolving landscape of education in the digital age. However, the continued value placed on traditional methods suggests that a blended approach to assessment is likely the most effective strategy for meeting the diverse needs of students.

B. Perception of Digital Assessment

A substantial 92% of the students found digital assessments helpful. The majority used presentation software, online collaboration tools, and assessment platforms, along with word processing software and other educational apps. The advantages of digital tools, as highlighted by the students, include faster feedback, customization of assessments, enhanced interactivity, real-time collaboration, flexibility in accessing learning materials, customization of learning paths, exposure to diverse perspectives, and accessibility.

The results of the study indicate that a significant majority of students perceive digital tools positively in the context of language assessment. Specifically, 83% of students agreed that digital tools facilitated self-learning, highlighting their potential to promote independent study habits. Furthermore, 61% of students acknowledged that teachers used these

digital tools effectively within classrooms, suggesting that educators are proficient in integrating technology into their teaching methods. A notable 87% of students expressed comfort with using technology for academic purposes, underscoring the widespread acceptance and ease of use of digital tools among the student population. Additionally, 89% believed that digital assessments were unbiased, pointing to the fairness and objectivity of technology-based evaluations. In terms of academic benefits, 82% of students reported that digital assessments helped them improve their knowledge, demonstrating the educational value of these tools. Lastly, 53% of students felt that online tests reduced their anxiety and stress compared to traditional paper-based methods, indicating that digital assessments can create a more relaxed and supportive testing environment. These findings collectively emphasize the effectiveness and acceptance of digital tools in enhancing the learning and assessment experiences of students.

C. Challenges Faced

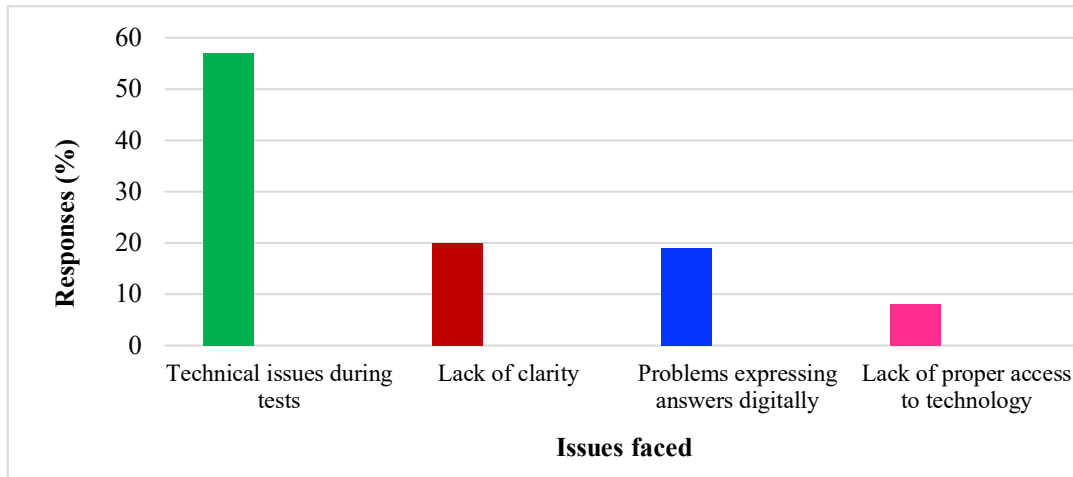


Figure 3. Challenges Faced by the Students

The study identified several challenges faced by students during digital assessments. A significant 57% of students reported encountering technical issues during tests, highlighting the need for reliable technology and robust technical support. Additionally, 20% mentioned a lack of clarity in instructions, indicating that clearer guidance from educators is essential. Furthermore, 19% of students had difficulties expressing their answers digitally, suggesting a need for improved digital literacy and possibly more intuitive assessment platforms. Lastly, 8% of students lacked proper access to technology, underscoring the importance of ensuring all students have the necessary tools and resources to participate fully in digital assessments. Addressing these challenges is crucial to enhancing the overall effectiveness and accessibility of digital assessments.

D. Suggested Improvements

The study's findings also highlighted several areas for improvement based on student feedback.

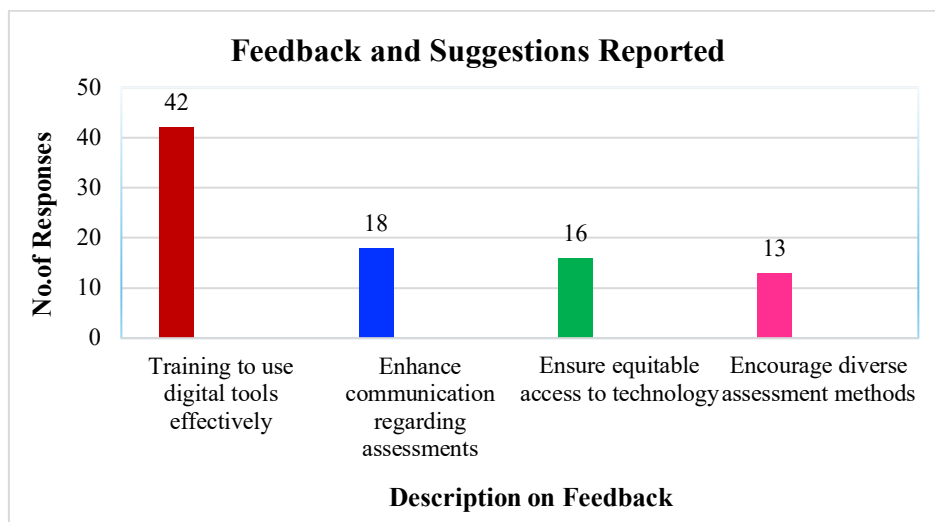


Figure 4. Feedback and Suggestions Reported

Notably, 42% of students felt that they should be trained to use digital tools effectively, indicating a need for more comprehensive training programs to enhance their technical proficiency. Additionally, 18% suggested that better

communication regarding assessment expectations is necessary, pointing to the importance of clear and consistent guidelines from educators. Furthermore, 16% emphasized the need for equitable access to technology, underscoring the importance of ensuring that all students have the necessary resources to fully participate in digital assessments. Lastly, 13% recommended encouraging diverse assessment methods, suggesting that a variety of evaluation techniques could better cater to different learning styles and preferences. These insights suggest that addressing these key areas could significantly enhance the effectiveness and inclusivity of digital assessments in educational settings.

The overall survey indicates that students regularly use digital tools and have a positive behavioral intention (BI) towards using technology. The Perceived Usefulness (PU) and Perceived Ease of Use (PEOU) significantly influenced their preference for digital methods over traditional ones. Despite this, some students still preferred the traditional paper-pen method, valuing handwritten comments from teachers, which they felt created a positive attitude and motivation for improvement. The collaborative nature of preparing for online assessments also actively engaged students, with video presentations being particularly effective. Students acknowledged the importance of feedback, listing faster feedback as the top advantage of using digital tools. Flexibility in assessments allowed them to be creative and unique in their responses, and the ability to store and access work at any time was highly valued. The use of digital tools also facilitated customized learning styles, enabling students to learn autonomously and construct their knowledge rather than merely consuming content. A large percentage of students expressed comfort with using digital technologies, indicating a high PEOU. Students felt that online assessments were unbiased compared to traditional methods. After the pandemic, teachers have become more adept at using technology, with many students noting that their teachers use these tools regularly and effectively. Social media platforms like WhatsApp and Instagram are increasingly being used for academic purposes, demonstrating the expanding scope of these tools beyond entertainment.

Despite the benefits, the usage of technology-integrated assessments has its shortcomings. Technical glitches during assessments cause stress and anxiety among students. Issues like inadequate internet access and reluctance from parents to provide digital devices also pose challenges. Many students felt that they needed better training to use certain tools effectively. While Generation Z is familiar with digital technologies, proper orientation and support from teachers are still necessary. Teachers must ensure clear instructions and be prepared to assist students with any technical issues they may face during assessments.

The findings highlight the importance of continuous support, training, and infrastructure development to enhance the effectiveness and accessibility of technology-integrated assessments. While digital tools offer numerous advantages for language assessment, addressing the challenges faced by students is crucial for optimizing the use of these technologies in educational settings. The study underscores the need for a balanced approach that incorporates both traditional and digital assessment methods to cater to diverse student preferences and needs.

VI. CONCLUSION

In conclusion, this study has illuminated the significant role that technology-integrated assessments play in enhancing English language proficiency among tertiary-level learners. The findings have shown that digital assessments are not only making learning more interactive and related, but also helping students to master language skills needed for the real use of language in society. Through immediate feedback, the students become equipped to review and manage their work effectively, therefore, they are more focusing on the process of learning and creating a continuous improvement tendency. The study puts forward the crucial role of feedback in language learning contexts. It also reveals that students need on-time, and effective feedback via technology tools to comprehend their strengths and weaknesses. These grounds not only give them a sense of responsibility towards their own learning but also build their motivation and propensity to wage in the learning process that is essential to the concept of lifelong learning. Moreover, the research sells the idea that digital examinations will indirectly promote independent learning. The digital platform is offering a lot of benefits for students working alone through personalized learning pathways and adaptive tools. The possibility for students to make decisions about how and when they personally prefer to work is the first step in the development of students who are not only competent in English but also capable of functioning in an ever-sophisticated digital and interconnected society.

This study gives valuable insights into the relationship of technology and language education. It suggests that successful incorporation of technological tools can really transform educational assessment processes. As teachers and policymakers are set to optimize technology's potential in the educational environment, it is inevitable to make priorities in staff and student training and allocate resources that would support them in this transition. Further research could be done on the usage of digital technologies specific to gender and age, attitudinal and motivational aspects of using digital tools, and challenges involved in using digital tools for assessments. It is also recommended to further investigate tech entailing of language examination and make it a tool to boost educational outcomes and solve emerging problems in various learning environments.

ACKNOWLEDGEMENTS

The authors would like to express their sincere gratitude to the Department of English and Foreign Languages, College of Engineering and Technology, SRM Institute of Science and Technology, Kattankulathur, and Lady Doak College, Madurai, for their valuable support and encouragement throughout the course of this research.

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