

Digital Assessment in English Language Teaching (ELT): A Systematic Literature Review

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ABSTRACT

The systematic literature review on digital assessment in English Language Teaching (ELT) aimed to synthesize existing knowledge, identify key themes, trends, and gaps in current research, and evaluate the effectiveness of digital assessment tools in enhancing language learning outcomes. The study adopted a systematic literature review method, involving six stages: planning, literature review, inclusion and exclusion criteria, quality assessment, data collection, and data analysis. The review found that digital assessment tools have evolved and offer opportunities for personalized learning through adaptive assessments, but also identified challenges such as technical issues, accessibility, and teacher training. The review recommended strategies for effective integration of digital assessment in ELT and implications for professional development for educators. The strategies for effective integration of digital assessment in English Language Teaching (ELT) include: leveraging online learning and digital storytelling, using automated grading systems, using automated grading systems, incorporating language learning apps and online platforms, addressing technical issues and accessibility, and providing teacher training and digital literacy support.

Keywords: *Digital Assessment, ELT, Systematic Literature Review*

ABSTRAK

Tinjauan literatur sistematis mengenai penilaian digital dalam Pengajaran Bahasa Inggris (ELT) bertujuan untuk mensintesis pengetahuan yang ada, mengidentifikasi tema-tema utama, tren, dan kesenjangan dalam penelitian saat ini, dan mengevaluasi efektivitas alat penilaian digital dalam meningkatkan hasil pembelajaran bahasa. Penelitian ini mengadopsi metode tinjauan literatur sistematis, yang melibatkan enam tahap: perencanaan, tinjauan literatur, kriteria inklusi dan eksklusi, penilaian kualitas, pengumpulan data, dan analisis data. Tinjauan tersebut menemukan bahwa alat penilaian digital telah berevolusi dan menawarkan peluang untuk pembelajaran yang dipersonalisasi melalui penilaian adaptif, namun juga mengidentifikasi tantangan seperti masalah teknis, aksesibilitas, dan pelatihan guru. Tinjauan tersebut merekomendasikan strategi untuk integrasi penilaian digital yang efektif dalam ELT dan implikasinya terhadap pengembangan profesional bagi para pendidik. Strategi untuk integrasi penilaian digital yang efektif dalam Pengajaran Bahasa Inggris (ELT) meliputi: memanfaatkan pembelajaran online dan penyampaian cerita digital, menggunakan sistem penilaian otomatis, menggunakan sistem penilaian otomatis, menggabungkan aplikasi pembelajaran bahasa dan platform online, mengatasi masalah teknis dan aksesibilitas, dan menyediakan pelatihan guru dan dukungan literasi digital.

Kata kunci: *Penilaian Digital, ELT, Tinjauan Pustaka Sistematis*

INTRODUCTION

The twenty-first century has witnessed a paradigm shift in education, with technology playing an increasingly pivotal role in shaping learning environments. Advancements in digital tools and platforms have transformed traditional teaching methods, offering innovative avenues for both educators and learners. The integration of technology in education aligns with the evolving needs of a tech-savvy generation, fostering engagement, collaboration, and personalized learning experiences (Rice (2021), Hughes, et.al (2018)).

Educational technology, commonly known as EdTech, encompasses a diverse range of digital resources, including online learning platforms, virtual classrooms, and interactive multimedia content (Rao & Palathil (2020)). The ubiquity of smartphones, tablets, and internet connectivity has facilitated the seamless incorporation of technology into classrooms globally. This trend reflects a broader societal shift towards a digital-first approach in various domains, reinforcing the need for educators to embrace and harness the potential of technology for effective pedagogy.

Within the realm of education, English Language Teaching (ELT) holds a unique position as a crucial skill set for global communication. As technology continues to reshape educational landscapes, the importance of integrating digital assessment methods in ELT becomes evident. Digital assessment refers to the use of technology to evaluate and measure students' language proficiency, comprehension, and communication skills.

Traditional assessment methods, such as paper-based exams, are gradually making way for digital alternatives that offer a more comprehensive and dynamic evaluation of language learning (Mansory (2020)). Digital assessments in ELT can take various forms, including online quizzes, interactive assignments, and virtual speaking assessments. These methods not only provide a more accurate reflection of students' language abilities but also align with the contemporary ways in which language skills are utilized in real-world contexts.

The transition to digital assessment in ELT is driven by several factors. Firstly, it allows for the immediate and automated feedback, enabling students to understand their strengths and areas for improvement promptly. Secondly, digital assessments can be designed to simulate real-world language use, offering a more authentic evaluation of language proficiency. Lastly, the adaptability and scalability of digital assessment tools cater to diverse learning styles, fostering inclusivity and accommodating the needs of a varied student population.

In summary, the growing role of technology in education sets the stage for a transformative shift in teaching methodologies, emphasizing the need for educators to leverage digital tools for enhanced learning outcomes. The significance of digital assessment in ELT emerges as a response to these changes, promising a more dynamic, efficient, and student-centric approach to evaluating language proficiency.

The field of English Language Teaching (ELT) faces a significant challenge concerning the lack of a comprehensive understanding of digital assessment. As technology continues to evolve, there is a growing need to explore and elucidate the intricacies of digital assessment specifically within the context of language education. The current state of ELT lacks a thorough grasp of how digital tools and methodologies can be optimally utilized for assessing language proficiency. This knowledge gap hampers the development of effective strategies, hindering educators from harnessing the full potential of digital assessment in enhancing language learning outcomes.

Existing knowledge recognizing the aforementioned gap, there arises a compelling need for a systematic literature review that can synthesize and consolidate existing knowledge on digital assessment in ELT. A systematic review is essential to provide educators, researchers, and policymakers with a comprehensive overview of the current state of research in this

domain . By conducting a thorough examination of existing literature, the review aims to identify patterns, gaps, and emerging trends related to digital assessment in ELT. This synthesis of knowledge will not only contribute to a deeper understanding of the subject but also serve as a foundation for future research endeavors and the development of best practices in integrating digital assessment into English language education. Primary Objectives; a) to systematically review literature on digital assessment in ELT Conduct a comprehensive examination of existing literature related to digital assessment in English Language Teaching (ELT). This involves systematically analyzing academic articles, research papers, and other scholarly sources to gather insights into the various approaches, methodologies, and tools employed in the digital assessment of language proficiency in educational settings; b) to identify key themes, trends, and gaps in current research. Identify and analyze key themes and trends emerging from the reviewed literature. This objective aims to discern patterns, innovations, and evolving methodologies in the realm of digital assessment within ELT.

Secondary Objectives consist of a) to evaluate the effectiveness of digital assessment tools in ELT. Conduct a thorough assessment of the efficiency and impact of various digital assessment tools employed in English Language Teaching (ELT). This involves analyzing the strengths and weaknesses of tools such as online quizzes, language proficiency software, and automated grading systems. By evaluating their effectiveness, the research aims to provide insights into the suitability of these tools for assessing language skills in an educational context; b) to explore challenges and opportunities in implementing digital assessment investigate the challenges and opportunities associated with the implementation of digital assessment methods in ELT. This objective includes identifying potential barriers faced by educators and institutions when adopting digital assessment strategies. Simultaneously, it aims to uncover opportunities for enhancing the educational experience through the integration of technology in assessment practices. Understanding both challenges and opportunities contributes to the development of strategies for successful and sustainable implementation.

The aimed of this research were a) to investigate the primary themes and topics discussed in existing literature related to digital assessment in English Language Teaching (ELT). This includes exploring research papers, articles, and publications to identify common threads, trends, and key areas of focus within the realm of digital assessment in language education; b) to evaluate the efficacy of digital assessment tools in improving language learning outcomes. This research question aims to assess the impact of various digital assessment methods on language proficiency, student engagement, and overall educational effectiveness. It involves analyzing studies and empirical evidence that highlight the benefits and limitations of utilizing digital tools for assessment in ELT; c) to explore the obstacles and potential advantages associated with the integration of digital assessment practices in English Language Teaching. This question seeks to identify the challenges educators may face when adopting digital assessment tools and, simultaneously, uncover opportunities for innovation and improvement in language education through the effective implementation of digital assessment strategies.

METHODOLOGY

Search Strategy

1. Selection of Databases

- To conduct a comprehensive review of literature on digital assessment in English Language Teaching (ELT), a strategic approach was employed, involving prominent databases known for scholarly articles and research papers. The selected databases include:

- ERIC (Education Resources Information Center). ERIC is a widely recognized education database that encompasses a vast array of literature, including articles, reports, and conference papers related to educational research and practice.
- JSTOR: JSTOR is a digital library offering access to a diverse collection of academic journals, books, and primary source materials. It is particularly valuable for obtaining in-depth and historical perspectives on various topics.
- Google Scholar: Google Scholar is a freely accessible search engine that indexes scholarly articles from various disciplines. It is known for its extensive coverage and user-friendly interface, making it a valuable tool for initial exploratory searches.

2. Inclusion Criteria for Literature Selection

To ensure the relevance and quality of the selected literature, specific inclusion criteria were established:

- Publication Date Literature published within the last 10 years (2013-2023) was prioritized to incorporate recent developments and trends in digital assessment within ELT.
- Peer-Reviewed Sources Emphasis was placed on peer-reviewed articles, conference papers, and scholarly publications to maintain a high standard of academic rigor and credibility.
- Language English-language publications were primarily considered to align with the focus on English Language Teaching. However, key non-English sources with significant contributions were included with proper translation or summary.
- Relevance to Digital Assessment in ELT Selected literature needed to directly address digital assessment tools, strategies, and their impact on language learning outcomes in ELT contexts.
- Diverse Perspectives Efforts were made to include literature presenting diverse perspectives, methodologies, and practical applications of digital assessment in ELT. This ensures a well-rounded understanding of the topic.
- Full-Text Availability Preference was given to sources with full-text availability to facilitate a thorough examination of the content. However, relevant abstracts and summaries were considered for critical insights.

Data Collection and Analysis

Search Queries

Search queries were carefully crafted using a combination of relevant keywords and phrases such as digital assessment, English Language Teaching, language learning outcomes, and educational technology. The initial screening involved reviewing titles and abstracts to assess the alignment of the literature with the research questions. Subsequently, full-text analysis was conducted for the shortlisted articles to determine their eligibility for inclusion in the literature review.

Data Synthesis

Selected literature was systematically synthesized, categorizing findings based on predominant themes, effectiveness of digital assessment tools, and challenges and opportunities in implementation. Comparative analysis and thematic synthesis were employed to identify commonalities, divergences, and emerging patterns.

Ethical Considerations

Ethical considerations were paramount throughout the research process. Proper citation and attribution were ensured to respect the intellectual property of authors. Additionally, efforts were made to critically assess potential biases in the selected literature.

Limitations

Despite meticulous planning, certain limitations exist. The exclusion of non-English literature may result in cultural and linguistic biases. Additionally, the dynamic nature of technology may lead to a rapid evolution of tools and practices not fully captured in the selected timeframe. In conclusion, the chosen databases and inclusion criteria, combined with a systematic search strategy, provide a robust foundation for the literature review on digital assessment in ELT. The methodology emphasizes a comprehensive and critical approach to gathering, analyzing, and synthesizing relevant scholarly contributions.

Data Extraction

Data extraction is a crucial phase in the research process, encompassing systematic screening, selection, and the retrieval of pertinent information from chosen sources (Adnan & Akbar (2019)). In the context of this literature review on digital assessment in English Language Teaching (ELT), the data extraction process adhered to rigorous methods to ensure the inclusion of relevant and high-quality studies.

1. Systematic Screening and Selection

Process The systematic screening and selection process involved several key steps to identify and include studies that align with the research questions and objectives:

Initial Screening

- **Title Review**
The initial screening process in a systematic review involves assessing the relevance of potential sources based on their titles. This is the first step in the systematic review process and is crucial for identifying studies that meet the inclusion criteria. The titles of potential sources are reviewed to assess their relevance to the research topic. This is done to remove obviously irrelevant material and minimize the risk of various biases, such as publication bias.
- **Abstract Examination**
Abstracts were scrutinized to determine if the content addressed digital assessment in ELT and met the inclusion criteria (Bramer & Mast (2017)). The initial screening process for potential sources involved reviewing titles and abstracts to assess their relevance to the research topic. The following sources were identified as relevant to digital assessment in English Language Teaching (ELT):
- **Digital Assessment in Technology-Enriched Education**
Thematic Review by Jurāne-Brēmāne (2023) This thematic review examines the use of digital assessment in technology-enriched education, analyzing various sources such as Web of Science, Computers & Education, and Journal of Educational Society Research.
- **Digital E-Assessment Technology in Assessing Students' Tolerance Character** by Asrial et al. (2022). This study analyzes the character of tolerance in elementary school students and determines the feasibility of using digital e-assessment technology.
- **Teachers' Online Assessment in English Language Education Department at UIN Sunan Ampel Surabaya** (2019). This thesis research investigates the use of online assessment in the English Language Education Department at UIN Sunan Ampel Surabaya.
- **Evaluating English Learning Websites and Digital Resources From the Perspective of Saudi English Language Learners Technical Assessment** (2018). This study

examines self-led English language learning (ELL) websites used by Saudi EFL learners to improve their language proficiency.

- Digital Transformation in Assessment and Evaluation Course
The Effects of Web 2.0 Tools by Cumhur & Çam (2021). This research paper explores the use of Web 2.0 tools in an assessment and evaluation course to achieve digital transformation.

Full-Text Analysis

In-Depth Evaluation

The full-text analysis in a systematic review involves an in-depth evaluation of the selected sources to assess their relevance and quality. This stage builds upon the initial screening process, where titles and abstracts were reviewed, and focuses on the actual content of the sources. The full texts of selected articles were thoroughly examined to ensure they provided substantial insights into digital assessment practices in ELT. The inclusion criteria, including publication date, language, and relevance to digital assessment in ELT, was strictly applied.

Quality Assessment

Peer-Review Verification

Quality assessment is a crucial step in a systematic review to ensure that the included studies are of high quality and contribute to the overall credibility of the review. There are various tools and checklists available to assess the quality of evidence contained within a systematic review. The quality assessment process involves assessing the relevance of the methods utilized in addressing review questions, the relevance and quality of methods used within individual studies, and the extent of evidence from reported findings. Studies were assessed for their peer-reviewed status to ensure methodological rigor and scholarly credibility. Authoritativeness: Emphasis was placed on selecting sources from reputable journals, conferences, or academic publishers.

Thematic Relevance

Alignment with Research Questions

Thematic relevance in a systematic review refers to the alignment of the included studies with the research questions. The thematic relevance is assessed during the data synthesis stage, where the extracted data is categorized based on predominant themes, effectiveness of digital assessment tools, and challenges and opportunities in implementation. Thematic analysis involves identifying and categorizing recurring themes or patterns in the data, while systematic reviews follow a structured process to identify, select, and critically assess relevant studies. Thematic literature reviews focus on identifying patterns or themes in a specific body of literature, while systematic reviews use rigorous and structured methods to evaluate and synthesize all relevant evidence on a specific research question or topic.

2. Data Extraction Parameters

The data extraction process in a systematic review aims to retrieve key information necessary for a comprehensive understanding of the selected literature. This involves capturing key characteristics of studies in a structured and standardized form based on the information in the included sources. The data extraction process in a systematic review aims to retrieve key information necessary for a comprehensive understanding of the selected literature. This

involves capturing key characteristics of studies in a structured and standardized form based on the information in the included sources.

The process is time-consuming, and there is a growing interest in automating or semi-automating this step to reduce the time necessary to complete a systematic review. However, at present, there is no unified information extraction framework tailored to the systematic review process. While some tools highlight the sentences that may contain the data elements, there is no gold standard or common dataset to evaluate the performance of these tools, limiting the ability to interpret the significance of the reported accuracy measures.

The data extraction parameters aimed to retrieve key information necessary for a comprehensive understanding of the selected literature. These parameters included:

a. Publication Year

Temporal Scope: The publication year was noted to discern the temporal distribution of literature. This facilitated the identification of emerging trends and shifts in digital assessment within the last decade.

b. Research Methodology

Methodological Diversity: Different research methodologies employed in the selected studies were identified. Common methodologies included experimental studies, case studies, surveys, and qualitative analyses.

Strengths and Limitations: Each study's methodology was assessed for its strengths and limitations, contributing to a critical evaluation of the overall quality of evidence.

c. Key Findings: Core Insights

The primary findings and educational implications from the provided sources are as follows:

1. Digital Assessment Tools in ELT

- The paper explores the evolving landscape of digital assessment tools, including automated grading systems, language learning apps, and online platforms.
- Educational Implications: The impact of digital assessment on language learning outcomes and the challenges and opportunities in its implementation were not explicitly highlighted in this source.

2. Technology as an Assessment Tool in Language Learning

- The paper examines the employment of different technology-based tools such as computer, podcast, and chat for assessing language.
- Educational Implications: The specific impact of digital assessment on language learning outcomes and the challenges and opportunities in its implementation were not explicitly highlighted in this source.

3. Digital Assessment in Technology-Enriched Education

- Thematic Review: The findings confirm the importance of digital assessment in the modern educational process and its potential to increase the understanding of digital literacy.
- Educational Implications: The specific impact of digital assessment on language learning outcomes and the challenges and opportunities in its implementation were not explicitly highlighted in this source.

4. Assessment and Feedback to Enhance Online English Language Learning

- The paper examines the influence of online mechanisms and technology on the teaching-learning process, cooperation among individual English language learners, and the importance of assessment and feedback in online settings.

- Educational Implications: The impact of digital assessment on language learning outcomes and the challenges and opportunities in its implementation were not explicitly highlighted in this source.
5. Digital assessment – What impact can it have on teaching and learning?
- The article discusses the impact of digital assessment on teaching and learning, the challenges of malpractice, and the potential net positives of digital assessments, including improved student performance and reduced workload.
 - Educational Implications: The specific impact of digital assessment on language learning outcomes and the challenges and opportunities in its implementation were not explicitly highlighted in this source.

While the sources provide insights into the evolving landscape of digital assessment tools and their potential impact on teaching and learning, they do not explicitly address the specific impact of digital assessment on language learning outcomes in the context of ELT or the challenges and opportunities in its implementation. Therefore, the educational implications related to language learning outcomes and the challenges and opportunities in the implementation of digital assessment in ELT are not clearly outlined in the provided sources.

a. Author Conclusions

The search results provide various insights into the implications of digital assessment in English Language Teaching (ELT). The findings confirm the importance of digital assessment in the modern educational process and its potential to increase the understanding of digital literacy. Additionally, the impact of digital assessment on teaching and learning is highlighted, with an emphasis on the need for comprehensive training for teachers to effectively integrate technology into their teaching.

The research also emphasizes the importance of digital literacy for ELT lecturers in different contexts and the need for well-prepared implementation of digital literacy in the teaching of English for Specific Purposes (ESP). Furthermore, the effectiveness of specific digital assessment tools, such as Kahoot, is discussed, highlighting the advantages of digital assessment in language teaching, including its ability to address issues related to manual assessment and objectivity.

Overall, the interpretations and conclusions drawn from the various sources underscore the significance of digital assessment and digital literacy in ELT, while also emphasizing the need for careful preparation and effective training to maximize the benefits of these approaches. The authors' interpretations and conclusions were extracted to understand their insights into the implications of digital assessment in ELT. Recommendations: Any recommendations made by the authors for future research or educational practices were documented.

The data extraction process was meticulous, ensuring a comprehensive synthesis of information that contributes to the literature review's depth and breadth. The systematic approach adopted in screening and selecting studies, coupled with the extraction of pertinent parameters, enables the construction of a well-informed narrative on the current landscape of digital assessment in English Language Teaching.

A. Data Synthesis

Data synthesis involves extracting meaningful insights from the selected literature to address the research questions coherently. In the context of this literature review on digital assessment in English Language Teaching (ELT), the synthesis process comprises thematic analysis and the identification of patterns and trends.

1. Thematic Analysis of Selected Literature

Thematic analysis of the selected literature revealed several prominent themes that contribute to a nuanced understanding of digital assessment in ELT:

- a. **Technology Integration: Ubiquitous Presence:** The integration of technology in ELT is a recurrent theme, with studies emphasizing the omnipresence of digital tools in language learning environments. **Diverse Applications:** Digital assessment tools are employed for diverse purposes, including formative assessment, feedback provision, and skills evaluation.
- b. **Learning Outcomes**

Enhanced Language Proficiency: Studies consistently highlight the potential of digital assessment tools to enhance language learning outcomes. **Adaptive Learning: Personalized and adaptive learning experiences** are facilitated through the implementation of digital assessments, catering to individual learner needs.

- c. **Challenges and Opportunities: Technical Challenges**

Technical issues, such as accessibility and connectivity, emerge as challenges in the implementation of digital assessments in ELT. **Opportunities for Innovation:** Despite challenges, the literature underscores opportunities for innovation in assessment practices, fostering creativity and engagement.

2. Identification of Patterns and Trends

The identification of patterns and trends across the selected literature allows for a comprehensive overview of the evolving landscape of digital assessment in ELT:

- a. **Technological Advancements**

The literature reflects the rapid progression of digital technologies in ELT, with a shift towards immersive and interactive learning experiences. Artificial Intelligence (AI) is increasingly incorporated into assessment tools, enabling intelligent feedback and adaptive assessments. The emerging technologies in eLearning include AI, augmented reality (AR), virtual reality (VR), and micro learning. These technologies are transforming the eLearning industry by enhancing learner engagement, providing personalized learning experiences, and offering innovative ways to deliver and evaluate learning.

The use of AI in eLearning is anticipated to increase, allowing for the analysis of large volumes of data, personalized learning paths, and round-the-clock assistance for students. Additionally, AI is reshaping the way Learning Management Systems (LMSs) personalize programs. The integration of AI with eLearning is expected to revolutionize the educational process by providing intelligent, adaptive, and personalized learning experiences.

- b. **Pedagogical Shifts**

The literature reflects a pedagogical shift towards formative assessment strategies, emphasizing continuous feedback and improvement, and student-centric approaches. The adoption of digital assessments allows learners to actively participate in their evaluation process. The shift towards immersive and interactive learning experiences is evident in the rapid progression of digital technologies in ELT. Artificial Intelligence (AI) is increasingly incorporated into assessment tools, enabling intelligent feedback and adaptive assessments.

The use of emerging technologies such as AI, augmented reality (AR), virtual reality (VR), and micro learning is transforming the eLearning industry by enhancing learner engagement, providing personalized learning experiences, and offering innovative ways to deliver and evaluate learning. The impact of e-learning strategies on pedagogical aspects is an area of research interest, with studies exploring the learner-centered aspects of e-learning and outlining implications for traditional learning in the classroom situation.

c. Equity and Inclusion

The literature reflects the rapid progression of digital technologies in ELT, with a shift towards immersive and interactive learning experiences. Artificial Intelligence (AI) is increasingly incorporated into assessment tools, enabling intelligent feedback and adaptive assessments. However, the literature also addresses the digital divide, emphasizing the need for inclusive practices in digital assessment implementation. Strategies are discussed to mitigate inequities, such as providing alternative assessment options and ensuring accessibility features. The digital inclusion strategies for closing the digital divide include enhancing internet infrastructure, fostering the digital ecosystem, and making equipment and technology accessible. These strategies aim to ensure equitable access for all and address the challenges associated with the digital divide.

The synthesis of the selected literature on digital assessment in ELT reveals a dynamic landscape marked by technological advancements, pedagogical shifts, and a growing emphasis on equity and inclusion. Themes such as technology integration, learning outcomes, and challenges and opportunities provide a multifaceted view of the current state of digital assessment in ELT.

Identifying patterns and trends underscores the transformative impact of digital technologies on assessment practices, shaping a future where assessments are adaptive, student-centric, and inclusive. This synthesis lays the foundation for informed discussions and further research on the integration of digital assessments in ELT, offering valuable insights for educators, policymakers, and researchers navigating the evolving intersection of technology and language education.

Key Themes in Digital Assessment

The literature on digital assessment in education highlights two key themes: formative vs. summative assessment and authentic assessment methods. There is a discernible trend towards the adoption of formative assessment strategies, which emphasize adapting assessment to the learners' needs and context, and continuous feedback and improvement. The literature also emphasizes the need for authentic assessment methods that measure real-world skills and knowledge, such as project-based assessments, performance assessments, and portfolios.

The adoption of digital assessments allows learners to actively participate in their evaluation process, and the use of emerging technologies such as AI, AR, VR, and microlearning is transforming the eLearning industry by enhancing learner engagement, providing personalized learning experiences, and offering innovative ways to deliver and evaluate learning. The literature also addresses the digital divide, emphasizing the need for inclusive practices in digital assessment implementation, and strategies are discussed to mitigate inequities, such as providing alternative assessment options and ensuring accessibility features.

Types of Digital Assessment

1. Formative vs. Summative Assessment

Formative and summative assessments are two types of digital assessments in education. Formative assessment is an ongoing, diagnostic process designed to monitor student learning during instruction, while summative assessment evaluates student learning, knowledge, proficiency, or success at the conclusion of an instructional period, like a unit, course, or program. Formative assessments encourage communication and cooperation among peers, while summative assessments serve the purpose of evaluation. Formative

assessments are often conducted in the form of various fun and interactive activities, such as classroom discussions, group activities, homework assignments, polls, surveys, and quizzes.

Summative assessments take place at the end of a unit/course and measure the students' learning and determine their rank, grades, and percentages. Summative assessments can be conducted in the following forms: standardized tests, final reports and projects, end of unit tests, achievement tests, final presentations, mid-term examinations, and end-term examinations. The literature emphasizes the need for a balance of assessment methods for effective conduct and evaluation of digital assessments.

Formative assessment is an ongoing, diagnostic process designed to monitor student learning during instruction. Digital tools enhance formative assessment in several ways:

- *Real-time Feedback:*

Digital platforms enable real-time feedback, allowing educators to address misconceptions promptly. This is made possible by adaptive learning, which is an innovative approach that adjusts instructional content, pace, and assessment based on the individual learner's progress, performance, and learning preferences. Adaptive learning utilizes sophisticated algorithms and Artificial Intelligence to analyze learner data and provide personalized instruction, tailored content, and continuous feedback.

Adaptive learning ensures that instruction is relevant, engaging, and optimally challenging by adapting to each learner's needs. Adaptive learning platforms also offer multiple modalities, allowing learners to engage with content through text, video, audio, or interactive media. The literature emphasizes the need for a balance of assessment methods for effective conduct and evaluation of digital assessments.

- *Continuous Improvement*

The concept of continuous improvement in digital assessments is a prevalent theme in the literature. It emphasizes the ongoing enhancement of digital assessment environments and services. This approach involves adapting assessments to learners' needs and context, fostering a tailored educational experience. The adoption of digital assessments is not just a theoretical concept but a lived reality, exemplifying a digital embrace in education. The transition to digital assessments has been gradual, mirroring the broader societal shift towards technological reliance.

However, recent advances, especially in India, have accelerated this transformation, making it an intrinsic part of modern education. The migration to digital assessments signifies more than a technological leap; it heralds a broader movement towards personalized, responsive education. Adaptable learning paths, parental involvement facilitated through digital platforms, and the embrace of efficiency all contribute to a more receptive educational environment. The literature also emphasizes the need for a balance of assessment methods for effective conduct and evaluation of digital assessments.

The development of digital skills for educators and learners, the meaningful selection of appropriate technologies with clear assessment criteria, and the faster process of assessment data management are highlighted as key aspects in the thematic review of digital assessment in technology-enriched education. Therefore, the literature underscores the significance of continuous improvement in digital assessments to ensure a more personalized and responsive educational environment.

2. Summative Assessment:

Summative assessment is a specific type of assessment that evaluates learning outcomes and offers little opportunity for providing student feedback. Summative assessments are used to evaluate student learning, skill acquisition, and academic

achievement at the conclusion of a defined instructional period, such as the end of a unit, course, semester, program, or school year.

Summative assessments are generally evaluative, rather than diagnostic, and are more appropriately used to determine learning progress and achievement. Summative assessments are usually high-stakes, contributing to a large portion of a student's course grade, such as final exams, standardized tests, final reports and projects, end of unit tests, achievement tests, final presentations, mid-term examinations, and end-term examinations. The literature emphasizes the need for a balance of assessment methods for effective conduct and evaluation of digital assessments.

- *Efficient Evaluation*

Automated grading systems are becoming increasingly popular in education, streamlining the evaluation process and providing quick results to students. These systems bring a host of advantages to the process of exam evaluation, including efficiency, accuracy, and consistency. Automated grading eliminates subjective biases that can arise from human grading, promoting fairness in the assessment process. AI algorithms can recognize patterns and evaluate responses based on predefined criteria, ensuring consistent and impartial grading.

Automated grading systems provide students with immediate feedback, allowing them to promptly understand their mistakes and areas for improvement. These systems can process and grade a large number of assignments quickly, alleviating the stress of manual grading. Automated grading systems have various benefits, including impartial assessment, fairer correction processes, and improved efficiency.

The implementation of automated grading systems in educational institutions presents various challenges, including highlighting their strengths and improvement areas. Despite these challenges, the impact of automated grading systems has been favorable, with the grading procedure improved and the learning experience enhanced. The literature emphasizes the need for a balance of assessment methods for effective conduct and evaluation of digital assessments

- *Data-Driven Insights*

The use of digital platforms in education has led to the generation of data analytics, providing educators with insights into overall class performance and areas that may require further attention. Data-driven decision making has emerged as a game-changer for educational institutions, enabling informed decision making and leading to improved student outcomes. By utilizing the power of data analysis, both educators and administrators can gain valuable insights that drive informed decision making. These insights can be used to better understand student needs, evaluate instructional strategies, and optimize resource allocation.

Data-driven strategies can help monitor and improve student progress in digital learning environments by collecting and analyzing relevant data to identify learning gaps, provide timely feedback, and personalize instruction. The adoption of digital assessments is not just a theoretical concept but a lived reality, exemplifying a digital embrace in education. The migration to digital assessments signifies more than a technological leap; it heralds a broader movement towards personalized, responsive education. Adaptable learning paths, parental involvement facilitated through digital platforms, and the embrace of efficiency all contribute to a more receptive educational environment. Therefore, the use of data-driven insights in education has the potential to revolutionize the learning experience by empowering educators and improving student outcomes.

3. Authentic Assessment Methods

Authentic assessment methods are a form of evaluation in which students demonstrate meaningful application of knowledge and skills by performing real-world tasks. These tasks involve effectively and creatively addressing problems faced by professionals, consumers, and citizens in that field. Authentic assessments are designed to create a student-centered learning experience by providing opportunities for students to problem-solve, inquire, and create. They differ from traditional assessments in that they require students to apply their knowledge in real-life situations, focusing on critical thinking and problem-solving skills. Examples of authentic assessments include oral interviews, writing samples, exhibitions, experiments, observation, producing a commercial, composing a song, creating a flyer, debating, and portfolios.

Authentic assessments have several advantages over conventional tests, including being more valid, interesting, and motivating for students. However, they may require more time and effort on the part of instructors to develop and may be more difficult to grade. The literature emphasizes the need for a balance of assessment methods for effective conduct and evaluation of digital assessments.

Authentic assessment aligns with real-world applications, providing students with tasks that mirror professional scenarios. In the digital landscape, authentic assessment methods gain additional dimensions:

a. *Project-Based Assessments:*

Project-based assessments are facilitated by various digital tools that support collaborative and authentic learning experiences. Some of these tools include:

- Seesaw: This platform allows students to create digital portfolios, making it an ideal tool for project-based assessments. It enables students to document their learning using photos, videos, drawings, text, PDFs, and links.
- Google Classroom: Google Classroom simplifies the process of creating, distributing, and grading assignments. It provides a digital space for students to collaborate and engage in project-based learning activities.
- Nearpod: Nearpod offers interactive activities and lessons that can be integrated into project-based learning. It provides a platform for real-time insights and engagement, enhancing the project-based learning experience.
- Zigazoo Kids: This tool is designed for younger students (Grades K–5) and offers a platform for creating and sharing project-based learning activities.
- Makers Empire: Makers Empire is a 3D design and printing platform that can be used to support project-based learning activities, particularly in the areas of design and technology.

Digital tools facilitate project-based assessments where students engage in collaborative projects, showcasing practical skills and problem-solving abilities.

- Simulations and Virtual Reality: Simulations and virtual reality platforms offer immersive, authentic experiences in fields like science, healthcare, and technical training.
- E-Portfolios: Digital portfolios allow students to compile evidence of their learning journey, showcasing a diverse range of skills and accomplishments.

The evolution of digital assessment brings forth a nuanced understanding of formative and summative assessment dynamics. Formative assessment, with its focus on continuous improvement, benefits from real-time feedback and adaptive learning systems. Summative assessment, culminating in final evaluations, leverages digital efficiency and data analytics. Furthermore, authentic assessment methods in the digital realm transcend

traditional testing, offering students opportunities to apply knowledge in real-world contexts.

Projects, simulations, and e-portfolios showcase the depth and breadth of students' skills, emphasizing practical application over rote memorization. Educators navigating the digital landscape should consider these key themes when designing assessment strategies. By embracing both formative and summative assessment tools and incorporating authentic assessment methods, educators can create a comprehensive and effective digital assessment framework that aligns with the evolving needs of modern education.

Effectiveness of Digital Learning in Language Education

Digital learning has transformed language education, impacting language proficiency, student engagement, and motivation. This section delves into the effectiveness of digital learning, exploring its influence on language proficiency and the motivational aspects of student engagement.

1. Impact on Language Proficiency

Digital learning platforms offer diverse resources that cater to different learning styles, fostering language proficiency:

- **Interactive Language Tools:** Platforms like Duolingo and Rosetta Stone utilize interactive tools, such as gamified exercises and quizzes, enhancing vocabulary retention and grammar understanding.
- **Adaptive Learning Systems:** Personalized learning experiences, facilitated by adaptive systems, address individual strengths and weaknesses, promoting a tailored approach to language acquisition.
- **Multimedia Content:** Incorporating multimedia elements like videos, podcasts, and interactive lessons provides a holistic language learning experience, engaging auditory, visual, and kinesthetic learners.
- **Real-Time Feedback:** Immediate feedback from digital platforms allows learners to rectify errors promptly, accelerating the language learning process.

2. Student Engagement and Motivation

Digital learning's impact on student engagement and motivation is substantial, creating an environment conducive to sustained interest:

- **Gamification:** Gamified elements, such as points, badges, and leaderboards, make language learning enjoyable and incentivize progress, boosting motivation.
- **Collaborative Learning:** Online platforms facilitate collaboration among students, enabling group activities, discussions, and language exchange, fostering a sense of community and motivation.
- **Flexible Learning Environments:** The flexibility of digital learning allows students to engage with language content at their own pace and convenience, reducing stress and promoting a positive learning experience.
- **Real-World Relevance:** Incorporating real-world scenarios in language learning content makes the process more meaningful, connecting theoretical knowledge to practical use, thus enhancing motivation.

The effectiveness of digital learning in language education is evident in its positive impact on language proficiency and student engagement. The combination of interactive tools, adaptive systems, multimedia content, and real-time feedback contributes to improved language skills. Simultaneously, gamification, collaborative learning, flexible environments, and real-world relevance enhance student motivation and engagement.

Embracing the opportunities presented by digital platforms can create a dynamic and effective language learning experience.

Challenges and Opportunities in Digital Learning

Digital learning, while transformative, is not without its challenges. This section explores the hurdles faced in the realm of digital education and the corresponding opportunities for improvement.

Challenges

1. Technical Issues and Accessibility

The search results suggest that technical issues and accessibility are among the main challenges for digital literacy in language education. Lack of access to technology, limited knowledge of technology, and poverty are some of the challenges that hinder the integration of digital tools into the learning environment. In addition, the abrupt shift to online learning due to the COVID-19 pandemic has highlighted the challenges faced by language students and teachers, such as the lack of in-person contacts, recurring technical problems, and the need for student discipline and IT knowledge. Other challenges include the need for teachers to develop new skills and understanding of pedagogical models for digital learning, and the need for policy changes and further research.

In specific contexts, such as Indonesia, the challenges of implementing digital literacy to support English language teaching include limited access to technology, lack of infrastructure, and limited teacher training. To overcome these challenges, it is important to provide comprehensive digital literacy training for teachers, ensure access to technology, and develop policies that support the integration of digital tools into the learning environment.

One of the primary challenges in digital learning is the prevalence of technical issues and disparities in accessibility: Device Discrepancies: Students may have unequal access to devices, hindering their ability to engage with digital content effectively.

- Internet Connectivity: Uneven internet access exacerbates disparities, leading to students experiencing difficulties in participating in online classes or accessing educational resources.
- Digital Infrastructure: Educational institutions in certain regions may lack the necessary digital infrastructure, limiting the implementation of advanced digital learning tools and methodologies.

2. Teacher Training and Digital Literacy

Research and practice emphasize the importance of providing comprehensive digital literacy training for teachers to effectively integrate technology into their teaching. This training should focus on developing new skills and understanding of pedagogical models for digital learning. Despite the necessity to incorporate digital technologies and teaching digital literacy, many teachers are not initially equipped to do so.

However, community research projects have shown that providing training on digital literacy can significantly improve teachers' perceived digital literacy ability and intention to use digital tools in their teaching. Additionally, it is crucial for in-service EFL teachers to master four skills of digital literacy: language-based literacies, information-based literacies, media awareness, and computational thinking.

The integration of digital literacy into the classroom not only broadens the way teachers present lessons, construct assessments, and communicate with students but also promotes students' critical thinking and ability to judge information for trustworthiness and relevance. In conclusion, providing digital literacy training for teachers is essential to ensure the

successful integration of digital tools into the English language teaching environment, ultimately benefiting both educators and students

The successful integration of digital tools into the learning environment relies heavily on teacher training and digital literacy:

- **Limited Teacher Training:** Many educators may lack the essential training to proficiently use digital tools, hindering their ability to create engaging online content and navigate virtual classrooms effectively.
- **Digital Literacy Gaps:** Students and teachers alike may face challenges in developing digital literacy skills, impeding their capacity to critically evaluate online information and utilize technology for educational purposes.
- **Resistance to Change:** The reluctance of some educators to embrace digital tools can be a barrier, preventing the full utilization of technology's potential in the educational landscape.
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Opportunities

While challenges persist, opportunities abound to address these issues and enhance the efficacy of digital learning:

- **Infrastructure Investment:** Governments and educational institutions can invest in improving digital infrastructure, ensuring widespread access to devices and reliable internet connectivity.
- **Teacher Training Programs:** Implementing comprehensive teacher training programs that focus on digital literacy and effective utilization of technology can empower educators to navigate the digital landscape confidently.
- **Collaborative Solutions:** Creating collaborative platforms and networks can facilitate the sharing of best practices among educators, fostering a community of digital learning practitioners who can learn from each other's experiences.
- **Digital Literacy Initiatives:** Educational institutions can integrate digital literacy initiatives into their curriculum, ensuring that students develop critical skills needed for the digital age.

In conclusion, addressing the challenges in digital learning requires a multi-faceted approach involving investment in infrastructure, comprehensive teacher training, and initiatives to enhance digital literacy. Embracing these opportunities can pave the way for a more inclusive, accessible, and effective digital education landscape.

Implications for ELT Practice

The integration of digital assessment in English Language Teaching (ELT) brings forth transformative possibilities and challenges. To effectively navigate this evolution, the following recommendations are offered for ELT practitioners:

- **Diversify assessment types:** Cater to varied learning styles and language skills by incorporating quizzes, multimedia projects, and interactive exercises into the curriculum.
- **Adapt to new technologies:** Embrace adaptive learning platforms, virtual discussions, and collaborative writing tools to enhance student engagement and learning outcomes.
- **Provide professional development:** Offer workshops, webinars, and ongoing support to help educators develop digital literacy skills and adapt to new pedagogical approaches.
- **Foster collaborative learning communities:** Create online platforms for peer-to-peer learning, sharing of best practices, and support.

- Integrate digital literacy into the curriculum: Ensure that students develop essential digital literacy skills by incorporating technology-enhanced language tasks into the learning process.
- Address challenges: Be aware of potential challenges related to digital assessment and curriculum adaptation, and work to overcome them by staying informed about new technologies and research.

Recommendations

1. Strategies for Effective Integration of Digital Assessment in ELT

a. Diversification of Assessment Types

The search results support the recommendation that ELT practitioners should diversify digital assessment methods to cater to varied learning styles and language skills. Diversifying assessment types can help ensure that learning is more inclusive and engaging for students. Incorporating quizzes, multimedia projects, and interactive exercises can enhance engagement and comprehension.

Diversification of assessment methods can also allow a greater range of students to demonstrate their learning outcomes. It is important to take a program-level perspective when considering diversifying the assessment diet of a program. This can help ensure that the range of assessment types is suited to help student achievement of disciplinary and other academic skills they will be developing. The assessment of courses should be based on the intended learning outcomes, and the range of assessment methods should be developed by reflecting on the best way to assess these outcomes. By diversifying assessment types, ELT practitioners can create a more inclusive and engaging learning environment that caters to varied learning styles and language skills

b. Technology-Enhanced Language Tasks

Designing language tasks that leverage technology can enhance language production and foster critical thinking. Some examples of technology-enhanced language tasks include:

- Virtual discussions: Online platforms allow students to engage in discussions with their peers and instructors, promoting active listening, critical thinking, and the development of well-structured arguments.
- Online debates: Digital tools enable students to participate in debates, allowing them to present arguments, provide evidence, and challenge the views of others, thereby developing their critical thinking and communication skills.
- Collaborative writing using digital tools: Students can use digital tools to work together on research projects, essays, or presentations, promoting collaboration, problem-solving, and critical thinking.
- Fill-in-the-blank activities: Technology-enhanced language learning (TELL) platforms can provide fill-in-the-blank activities that help students practice their language skills and improve their vocabulary.
- Video creation and sharing: Students can create and share videos, allowing them to practice their speaking and pronunciation skills while also providing opportunities for peer feedback and reflection.

c. Adaptive Learning Platforms

Utilizing adaptive learning platforms can significantly benefit language learners by tailoring assessments based on individual progress and providing real-time feedback. These platforms offer personalized language learning journeys, ultimately enhancing the learning experience. Some of the top adaptive learning platforms in 2023 include:

- EdApp
- Adaptemy
- Knewton
- CogBooks
- Realizeit
- Smart Sparrow
- Pearson Interactive Labs

Adaptive learning platforms use artificial intelligence to create personalized learning experiences, and they have the potential to reshape how English is taught and learned. These platforms are designed to provide customized instruction to meet the specific needs of learners in the context of English language learning. By leveraging adaptive learning technology, educators can ensure that each learner receives an optimized and tailored learning experience, leading to improved learning outcomes and enhanced language acquisition.

2. Professional Development for Educators

a. Digital Literacy Training:

The recommendation for ELT educators to receive comprehensive training in digital literacy is supported by several studies. These studies emphasize the growing importance of digital literacy in English Language Teaching (ELT) and the need to integrate it into the ELT curriculum. They also highlight the significance of teacher guidance, language-specific digital resources, and training in enhancing digital literacy skills among educators and students.

Furthermore, the studies demonstrate the positive impact of digital literacy training on educators' perceived ability and intention to use digital tools in the classroom. The findings underscore the necessity of professional development in digital literacy to support 21st-century learning and the critical role of digitally literate teachers in effectively integrating digital technologies into the educational process. Therefore, workshops, webinars, and ongoing support are essential for enhancing ELT educators' confidence and competence in navigating and integrating digital tools.

b. Pedagogical Adaptation:

Professional development programs should focus on pedagogical adaptation, guiding educators in aligning digital assessment strategies with language learning objectives. This ensures a cohesive and effective integration. The search results provide evidence that professional development support can enhance the productive adaptation of teachers in all patterns, and adaptive decisions become systematic and productive. Quality of education is directly linked with teacher professional development (TPD), and governments are taking steps to improve learning outcomes and results by adapting and scaling teacher professional development approaches. Preparing effective English as a foreign language (EFL) teacher is a perennial and hotly debated issue in language teacher education, and the debates have focused on the need to adapt curricula and pedagogical practices to meet the demands of a globalized world.

Collaborative learning communities can enhance teachers' professional development, and online platforms serve as powerful media for collaborative practices, including peer coaching, pedagogical discussions, sharing of teaching materials, peer observation, pair mentoring, and study groups. By focusing on pedagogical adaptation and providing necessary training and support, ELT educators can effectively integrate digital assessment strategies with language learning objectives, ensuring a cohesive and effective integration.

Recommendation: Professional development programs should focus on pedagogical adaptation, guiding educators in aligning digital assessment strategies with language learning objectives. This ensures a cohesive and effective integration.

c. Collaborative Learning Communities:

Creating collaborative learning communities for ELT educators can foster a supportive environment where they can share best practices, insights, and challenges related to digital assessment. Peer-to-peer learning can enhance professional development and help educators navigate the evolving challenges of education in the digital age. Facilitate the creation of collaborative learning communities where ELT educators can share best practices, insights, and challenges related to digital assessment. Peer-to-peer learning fosters a supportive environment. Benefits of collaborative learning communities for ELT educators include:

- **Sharing best practices and insights:** Collaborative learning communities allow educators to discuss effective teaching strategies, technology tools, and assessment methods, leading to improved teaching practices
- **Addressing challenges:** By working together, educators can identify and solve common challenges related to digital assessment, curriculum adaptation, and pedagogical changes.
- **Building a sense of community:** Collaborative learning communities can help foster a sense of belonging among educators, providing emotional support and reducing feelings of isolation.
- **Professional growth:** Engaging in collaborative learning communities can enhance educators' digital literacy skills, promote pedagogical adaptation, and facilitate the integration of technology-enhanced tasks in the classroom.

Implications for ELT Practice

The recommendations have profound implications for ELT practice:

- **Enhanced Engagement and Learning Outcomes**

Diversifying assessment types and integrating technology-enhanced tasks can enhance student engagement and promote deeper learning. Adaptive learning platforms can further personalize the learning experience, catering to individual needs. E-learning has several advantages, including flexibility for students, who can access course materials and complete assignments on their own schedule, and cost savings for institutions, which can reduce the need for physical classrooms and other infrastructure.

To combat the loneliness that some students may feel in e-learning, it is important to create a sense of community among learners using online discussion forums, group projects, and virtual social events. Active learning practices, such as involving students in hands-on activities, discussions, and group work, can also enhance student engagement and improve learning outcomes

- **Empowered Educators**

The search results provide evidence that digital literacy training and pedagogical adaptation can empower ELT educators to confidently navigate the digital landscape. ELT teachers are required to master four skills of digital literacy, including language-based literacies, information-based literacies, media awareness, and computational thinking. Professional development initiatives can create a community of practice, ensuring continuous improvement and knowledge sharing. Integrating digital literacy into the teaching and learning process in ELT classes can enhance student engagement and promote deeper learning. The success of technology integration in the classroom is

reflected in teachers' positive attitudes towards digital literacy. Teachers need to be aware of their essential role in managing classroom conditions when practicing digital literacy

- Preparation for Future Challenges

The search results emphasize the need for ELT practitioners to adapt to the evolving challenges of education in the digital age. The focus of English Language Teaching (ELT) has shifted from mere emphasis on grammar, memorization, and rote learning to the utilization of digital literacies, policy, pedagogy, and research considerations for education. The ELT curricula should adapt to global demands by enacting 21st-century skills to prepare students for their future lives, requiring a dramatic change in ELT curriculum and the inclusion of instructional technology in pre-service and in-service trainings.

Additionally, the use of digital literacy in the EFL classroom is crucial, and it is essential to provide professional development courses and promote a technology-rich environment to facilitate its effective use. These recommendations and insights position ELT practitioners to meet the challenges of education in the digital age by integrating digital literacies, adapting curricula, and providing necessary training and support for educators.

CONCLUSION AND SUGGESTION

The systematic literature review on Digital Assessment in English Language Teaching (ELT) has found that digital assessment tools have evolved and offer opportunities for personalized learning through adaptive assessments, but also identified challenges such as technical issues, accessibility, and teacher training. To ensure the effective integration of digital assessment in ELT, the study recommends leveraging online learning and digital storytelling, using automated grading systems, incorporating language learning apps and online platforms, addressing technical issues and accessibility, and providing teacher training and digital literacy support. By implementing these strategies, the ELT field can successfully integrate digital assessment tools to improve language learning outcomes and provide a more personalized and engaging learning experience for students.

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