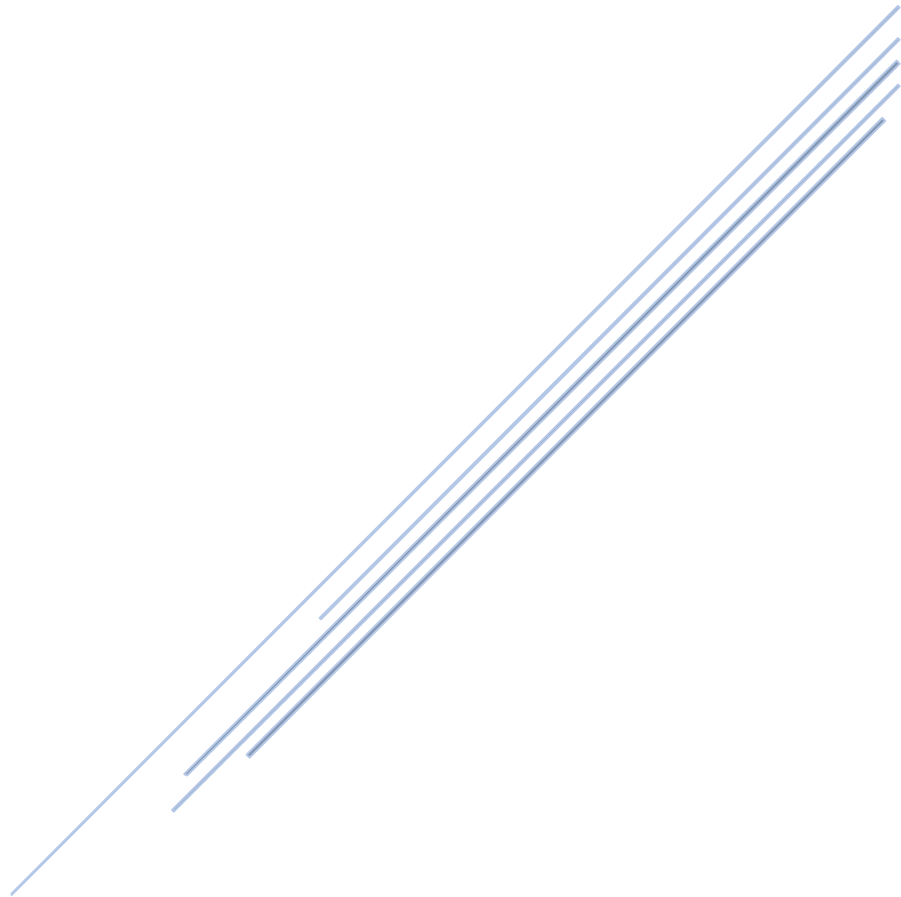


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Teaching Listening in Technology-Constrained Environments: Adaptation Strategies in an Islamic Boarding School

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Abstract

Technology integration has provided numerous benefits in English language learning, particularly in listening skills. However, in Islamic boarding schools (pesantren), limited access to technology presents unique challenges. This study aims to explore teachers' strategies in teaching listening skills in an Islamic boarding school environment with limited access to technology. A qualitative method with an exploratory approach was used through in-depth interviews with three English teachers and triangulation of data from student interviews. The results indicate that teachers employ a range of analog strategies, including listening to songs, engaging in bilingual interactions, conducting conversation activities, and organizing English clubs, to support students' listening skills. These strategies have been shown to increase student motivation and engagement, despite limitations in providing exposure to diverse accents and authentic speech as accessible through technology. Student perspectives indicate that while they benefit from interactive classroom activities, they still face limitations in independent practice. This study emphasizes the importance of teacher creativity, motivation, and adaptation of teaching strategies in technologically limited educational contexts. It demonstrates a trade-off between the depth of classroom practice and the breadth of language exposure offered by technology.

Keywords: *English listening instruction, technology-constrained environment, Islamic boarding school, adaptive teaching strategies, language learning.*

1. Introduction

Technology integration in education has fundamentally revolutionized traditional teaching methods and provided numerous benefits that have improved the teaching and learning process (Prayudi et al., 2021). Digital tools have shown extraordinary potential to increase student motivation by making learning more dynamic and engaging. Digital tools can help teachers deliver the curriculum more effectively. They include sophisticated assessment and feedback mechanisms that allow teachers to precisely track student progress and change their teaching tactics in real time (Meisuri et al., 2023). Furthermore, it personalizes learning experiences, facilitates collaborative environments, and enhances access to information (Sani et al., 2024).

Integrating technology has a favorable impact on teaching English as a Foreign Language (EFL). According to research, using technology can improve language acquisition, notably listening, writing, speaking, and reading (Ghanizadeh et al., 2015). According to a study conducted by Sari (2024), both students and lecturers see the use of technology positively, recognizing its ability to make learning more accessible, participatory, and adapted to individual requirements.

More precisely, using technology to teach listening can provide a diverse range of authentic resources and interactive activities that can help solve frequent issues for EFL students, such as difficulty understanding listening texts and new accents (Chi, 2021).

Second language acquisition is aided by learners' exposure to target language and authentic materials both within and outside the classroom (Aybİrdİ et al., 2024). Several studies have demonstrated that exposure to technology, both within and outside of the classroom, has a substantial impact on the development of listening abilities. Educators might potentially improve their students' listening abilities by adding technology-based learning activities and giving them opportunity to engage with authentic language input, resulting in more effective communication in a variety of circumstances (Abduh, 2019; Bahrani et al., 2014; Chi, 2021; Ghanizadeh et al., 2015).

While the use of technology offers numerous advantages, EFL teachers nevertheless confront obstacles, particularly in resource-constrained situations such as Islamic boarding schools (Murdianto, 2022). Islamic boarding schools, like most Islamic educational institutions in Indonesia, have restrictions that limit students' usage of digital devices. This approach is founded on a variety of principles, including a focus on character education, reducing the harmful impact of technology, and developing discipline (Arif et al., 2024). Furthermore, the lack of virtual security officers in the Islamic boarding school environment can expose children to digital infractions and inappropriate content (Cholil & Zanuddin, 2018). However, as a formal educational institution, schools in the Islamic boarding environment are still required to meet the standards of English language learning competencies, including listening skills which are one of the important components in language mastery.

A large and growing body of literature has investigated the positive impact that exposure to technology has on listening skills. Maulina et al., (2022) emphasized the practical usage of mobile devices and applications as media for teaching listening skills. As a result, technology-based media for teaching listening skills was successfully implemented, enabling teachers and students to have successful and rewarding authentic learning experiences. Furthermore, digital technology provides powerful tools for enhancing listening skills through music platforms and podcasts. These resources offer students authentic English content, enabling them to improve vocabulary, pronunciation, and comprehension by accessing millions of songs and diverse audio materials. The flexibility to pause, replay, and engage with native speaker content makes learning more interactive and practical (Salainti & Pratiwi, 2021).

A study conducted by Li (2023) revealed numerous advantages to mobile-assisted language learning (MALL) for improving EFL listening abilities. MALL's mobility makes learning omnipresent, allowing students to practice at any time and location, expanding their exposure to educational resources. Additionally, by linking verbal and non-verbal processing pathways, MALL's multimodal nature, which includes a variety of media such as films and interactive exercises, reduces working memory load and improves understanding. In the same vein, integrating technology, such as podcasts, enhances listening skills by offering flexible, engaging, and accessible audio content. It allows learners to practice at their own pace, exposing them to

authentic language, diverse accents, and speaking speeds. This approach fosters motivation and equips students with essential English communication skills (Sudewi & Isma, 2023).

To frame this study theoretically, two perspectives are particularly relevant. First, Vygotsky's sociocultural theory emphasizes that learning is inherently a social process, where knowledge is constructed through interaction with more knowledgeable others. Central to this framework is the concept of the zone of proximal development (ZPD), which highlights the importance of guidance and collaboration in moving learners from what they can do independently to what they can achieve with support. In this view, language learning is not only individual practice but also a socially mediated activity shaped by communication, cultural tools, and scaffolding from teachers and peers (Vygotsky, 1978). Second, Dörnyei's motivational framework underscores that motivation is critical for sustained engagement in language learning. Learners are more likely to persist when they perceive tasks as enjoyable, stimulating, and personally meaningful. Strategies such as breaking the monotony of classroom routines, making activities relevant to students' lives, and fostering a supportive learning environment that reduces anxiety are essential for maintaining motivation (Dörnyei, 2001). This perspective is particularly valuable in resource-constrained contexts, where teachers must rely on analog methods and classroom interactions to sustain learner enthusiasm.

However, the existing literature primarily focuses on the general application of technology in language instruction, with limited attention to the unique challenges Islamic boarding schools face, where access to technology is more constrained. This study aims to address this gap by exploring the adaptation strategies employed by teachers in Islamic boarding schools to teach listening skills to students with limited technology access effectively. Thus, there are two study questions to be proposed in this study:

- a. What challenges do teachers face in teaching listening in an Islamic boarding school environment?
- b. What are the teachers' strategies for teaching listening skills to students with limited access to technology?

2. Methods

This study used the qualitative study method to answer the study questions. It is a method to investigate and comprehend the significance of individuals or groups associated with a social human problem (Creswell, 2015). A qualitative exploratory design was used to address the research questions. An exploratory research design can be defined as research conducted to investigate an undefined problem. It is carried out to gain a better understanding of the current problem (Olawale et al., 2023). The exploratory approach is particularly suitable for investigating phenomena in contexts where limited prior research exists, allowing the researcher to capture rich, contextual insights into participants' experiences. Three English teachers from MTs Riyadlatul Ulum, Batanghari, East Lampung, were selected through purposive sampling based on their teaching experience, academic background, and willingness to participate. Data were collected

through in-depth interviews and analyzed thematically to identify challenges and strategies in teaching listening skills with limited technology access.

The subjects of this study are three English teachers who teach at MTs Riyadlatul Ulum, Batanghari, East Lampung. They were selected through a purposive sampling technique. According to Ary et al. (2019), the purposive sampling method was considered judgmental sampling since the sample elements were considered typical or representative and then selected from the population. They were selected based on the following considerations. Firstly, teachers who have taught for at least 1 year. Secondly, they who have a bachelor's degree in English language education. Thirdly, they are willing to participate in interviews. The researcher simplified the data from the interview obtained by the researcher. To enhance the credibility of the findings and provide triangulation, interviews were also conducted with students to capture their perceptions of the listening activities and evaluate whether the strategies were perceived as effective. This combination of teacher and student perspectives helped provide a more comprehensive understanding of the teaching–learning process. They were selected based on the following considerations: first, students who have studied in this school for more than one year. Second, students who live in the dormitory which are do not have access to technology, such as mobile phones, laptops, and other communication tools. Students who demonstrate varying levels of English learning motivation and achievement (based on teacher recommendation), to capture a range of perspectives. Students who are communicative and willing to participate in interviews.

The data were analyzed using thematic analysis. Thematic analysis is a qualitative research method that involves identifying, analyzing, and reporting recurring patterns or themes within textual data to understand participants' perspectives and meanings (Jason & Glenwick, 2016). The analysis followed several steps. First, the interview transcripts from teachers and students were read multiple times to ensure familiarity with the content. Second, initial codes were generated inductively to capture significant features of the data related to the research questions. Third, the codes were collated into potential themes, such as “challenges in pronunciation and accent,” “use of music-based activities,” and “bilingual interaction.” Fourth, the themes were reviewed and refined by comparing them against the coded data and the entire dataset to ensure coherence. Finally, the themes were defined and named to clearly represent the key insights, which were then reported in the findings and discussion. This systematic process enhanced the credibility and transparency of the analysis.

3. Results and Discussion

Result -

Challenges in Teaching Listening

The teachers identified several challenges in teaching listening skills in an Islamic boarding school setting, where students face limited access to technology. The restrictive policies of the Islamic boarding school environment present challenges. Teacher 3 (SM) highlighted that students cannot use smartphones or other digital devices outside class hours. These restrictions prevent

them from practicing listening skills independently. In addition, Teacher 1 (RA) said that the rural environment of the school makes it difficult to integrate modern teaching tools into daily lessons. Another challenge is students' difficulty understanding English pronunciation and differences in accents. According to Teacher 2 (NA), spelling and pronunciation of English words frequently differ significantly. Students may become confused as a result, particularly if they are exposed to different accents, such as British and American, which differ in their rhythms and sounds. Furthermore, NA noted that English vowels, absent from Indonesian, made it harder for students to pronounce the words correctly.

Strategies to Overcome Challenges

The teachers used various strategies adapted to their particular setting to address these challenges.

Within-Classroom Methods:

Teacher 1 (RA) employed music-based repetitive listening exercises. Students listened to songs several times while doing associated tasks, answering questions, and analyzing the lyrics. RA underlined that repetition is essential for younger pupils or those unfamiliar with English because it strengthens their comprehension. Teacher 2 (NA) made the lessons more interesting and understandable by emphasizing accessible and valuable resources, like audio and video content, that reflected students' everyday experiences. Since students don't have many opportunities to practice outside of school, Teacher 3 (SM) stressed the value of making the most of listening exercises during class.

Extracurricular and Interactive Activities:

Another critical strategy is extracurricular activities. To provide a structured environment for continued practice and debate on complex topics, Teacher 1 (RA) encourages students to join the English Club. 3 (SM) advocated for a bilingual approach, enabling students to use English and their native language in daily interactions, which helped familiarize them with English in a natural context.

Interactive exercises also played a significant role. All teachers highlighted the value of conversation-based activities. RA and NA frequently encouraged students to converse in English with peers, senior students, or even teachers outside class. These interactions helped students improve their listening and speaking skills while making English feel more practical and relevant to their lives.

Alternative Methods:

Despite limited technology, teachers suggested several methods for students to practice listening outside the classroom. Teacher 1 (RA) recommended the use of songs that the lyrics memorized by students and compared them to the text. It encouraged students to practice listening and understanding actively. Teacher 2 (NA) advised students to use dictionaries with pronunciation guides to improve their knowledge of English sounds. Teacher 3 (SM) focused on

leveraging the school environment by creating bilingual settings where students could naturally hear and use English regularly.

Key Insights and Important Findings

Motivation emerged as an essential factor in enhancing students' listening skills. Teacher 1 (RA) inspired students with her personal experiences and emphasized the importance of English for education, work, and intercultural understanding. RA believed students would be more enthusiastic and motivated by creating an enjoyable learning environment. Teacher 2 (NA) encouraged students to practice frequently and told the students that English would be easier to understand if used consistently. Teacher 3 (SM) emphasized that teachers' enthusiasm greatly influenced students' attitudes and helped them to perceive that English is enjoyable rather than daunting.

The teachers reported noticeable improvements in students' listening abilities. RA observed that students were more motivated and excited about learning, especially when the lessons were fun through music-based activities. NA noted that even students struggling with English showed significant progress over time. SM found that incorporating bilingual practices in daily school helped students retain and apply their listening skills.

Student Perspectives on Listening Instruction

The student interviews highlighted that despite the restriction on technological devices, teachers adopted various strategies to make listening activities meaningful. Many students reported that they enjoyed learning through listening, whether to the teacher's explanations or to music played in class, as it helped them focus and stay engaged (NI, AN, NR, YA). Several students acknowledged the difficulty of independent listening practice without access to videos, songs, or online resources, but emphasized that classroom activities provided a substitute that kept them involved (NU, AA, MK). Teacher explanations delivered in detail, combined with varied tasks such as translation exercises, sentence construction, or interactive discussions, were seen as particularly helpful in supporting listening comprehension (NI, NU, AN, MK). Moreover, the supportive role of peers and classroom collaboration emerged as an important factor that complemented teacher strategies, allowing students to discuss and review listening tasks together (NI, AA, MK). Overall, the findings from student interviews confirm that in technology-constrained environments, listening instruction can remain effective when teachers employ interactive, varied, and supportive methods that substitute for digital input.

Recommendations for Improvement

To further enhance listening instruction, teachers proposed several recommendations. Teacher 1 (RA) suggested that the school provide more structured extracurricular programs like the English Club to give students more chances to practice. Teacher 2 (NA) suggested that teachers use relevant vocabulary and phrases with students' daily activities to make the learning more

relevant and relatable. Teacher 3 (SM) emphasized the importance of the teacher's role as a Model of bilingual communication in school settings as an integrated daily interaction with students.

Discussion

The findings of this study reveal the challenges and strategies in teaching listening skills to students with limited access to technology in an Islamic boarding school environment. These findings align with previous study on language learning in resource-limited settings, highlighting the challenges teachers face and their creative solutions to ensure effective learning outcomes.

Challenges in Teaching Listening

The challenges identified in this study emphasize the significant role of technology. The restrictive policies of Islamic boarding schools add another layer of complexity by preventing students from accessing digital devices outside the classroom, limiting students' exposure to authentic listening materials. This issue resonates with (Chi, 2021), who argued that access to technological resources can offer a wide range of authentic materials and interactive activities, which can help address the common challenges EFL students face, such as difficulty in understanding listening texts and unfamiliar accents.

Pronunciation and accent differences present additional challenges for students, especially those new to English. As Teacher 2 (NA) observed, the inconsistencies between spelling and pronunciation and variations in accents require students to rely heavily on listening practice. These challenges are consistent with studies highlighting the importance of phonological awareness and exposure to native speakers in developing listening proficiency. Phonological awareness, the ability to recognize and manipulate the sound structures of a language, allows learners to decode and process the auditory input they receive, laying the groundwork for adequate listening comprehension (Al-Nafisah, 2019).

Strategies to Overcome Challenges

The teachers' strategies demonstrate adaptability and resourcefulness in overcoming these challenges. Classroom-based approaches, such as repetitive listening exercises and relatable materials, align with project-based learning principles emphasizing active engagement and real-world application (Syarifah & Emiliasari, 2019). Teacher 1 (RA) 's use of songs and practical audiovisual materials by Teacher 2 (NA) illustrates the effectiveness of integrating contextually relevant resources to enhance comprehension.

Extracurricular activities, such as English Clubs, provide students with additional opportunities for structured practice. This aligns with the findings of (Lauwo & Gerold Mkulu, 2021), who emphasized the role of community-based learning in supplementing formal education. Teacher 3 (SM) 's incorporation of bilingual practices reflects an innovative approach to immersing students in English, promoting natural language acquisition despite technological limitations.

Interactive methods, such as conversation-based exercises, further reinforce the importance of meaningful practice in developing listening skills. These strategies echo Vygotsky's (1978) sociocultural theory, which highlights the role of social interaction in language learning. Encouraging students to converse with peers and seniors fosters a collaborative environment supporting listening and speaking development.

Motivation as a Key Factor

The findings underscore the critical role of motivation in language learning. Teachers' efforts to inspire students by emphasizing the global relevance of English and creating enjoyable learning experiences are supported by Dörnyei's (2001) motivational framework. According to this framework, learners are more likely to engage and persist in language learning when they perceive it as enjoyable and personally meaningful.

The teachers' emphasis on making English accessible and fun has positively impacted students' attitudes and performance. For example, Teacher 1 (RA) noted that students became more enthusiastic and eager to learn when music was incorporated into lessons. Similarly, Teacher 3 (SM) observed that modeling bilingual practices helped students retain and apply their listening skills more effectively.

Reflection on Analog vs. Technology-Based Strategies

While several strategies used by teachers, such as songs, bilingual contact, and conversation-based exercises, were beneficial in maintaining engagement, they also highlighted key trade-offs when compared to technological approaches. Students, for example, rated songs as both pleasurable and inspiring. Several students indicated that listening to music in class improved their ability to focus and remember terminology by breaking up the monotony of traditional instruction (NI, AN, YA). While songs give repetition and familiarity, they may not expose children to the variety of accents, speech speeds, and spontaneous discourse available through digital platforms such as podcasts, YouTube videos, or online conversations. This points to a limitation in analog methods: their reliance on curated or simplified input may not fully prepare learners for the unpredictability of real-world English.

Similarly, conversation-based classroom activities were praised by students for creating a supportive and interactive environment. They found peer and teacher collaboration helpful in clarifying listening tasks and boosting confidence (AA, MK). Yet, these exchanges typically occur among non-native speakers, meaning that while they build fluency and reduce anxiety, they cannot replicate the authentic phonological variation students would encounter when engaging with native or global English speakers. By contrast, technology provides immediate access to diverse voices, accents, and registers, which can significantly strengthen phonological awareness (Al-Nafisah, 2019).

Bilingual practices, encouraged by teachers to sustain daily exposure, also demonstrate a compromise. Students expressed that switching between English and their native language reduced the fear of misunderstanding and kept participation high. However, it also risked limiting

immersion, as frequent fallback to the first language constrained opportunities for sustained English listening practice. Here, digital environments could balance accessibility and immersion by providing scaffolded English input with adjustable difficulty levels.

Overall, these findings suggest that while analog strategies foster motivation, focus, and community, they are constrained in breadth and authenticity compared to technology. In contexts like Islamic boarding schools, where digital access is restricted, these strategies represent practical adaptations. Yet, from a critical standpoint, they also highlight a tension: students gain depth of practice within the classroom but remain limited in exposure to the wide-ranging, spontaneous, and culturally diverse input that technology could offer.

4. Conclusion

The discussion highlights the resilience and creativity of teachers in addressing the challenges of teaching listening skills in an Islamic boarding school with limited technology access. By adopting diverse strategies, fostering motivation, and leveraging available resources, the teachers have successfully supported their students' listening development. These findings contribute to the broader discourse on language teaching in resource-constrained settings, emphasizing the importance of adaptability and teacher enthusiasm in overcoming barriers to learning.

The findings of this study provide opportunities for further research. First, similar studies could be conducted in several Islamic boarding schools (pesantren) with diverse backgrounds to determine whether the patterns of strategies and challenges found are consistent across contexts. This would enrich our understanding of the variations in teacher adaptations in teaching listening skills in environments with limited technology. Second, there is a need to develop teaching models based on the identified analog strategies, such as the use of songs, bilingual practice, and English clubs, and then systematically test their effectiveness. These models could serve as practical references for English teachers in schools facing similar limitations and contribute to the literature on language pedagogy in low-technology environments.

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Digital-Based Tools for Writing Skills Assessment: A Systematic Literature Review

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Abstract

This study conducted a systematic literature review to examine digital-based tools for writing assessment. Using Google Scholar, studies were identified with the keywords [digital assessment writing skills', 'digital-based writing assessment tools', 'EFL writing assessment technology']. Peer-reviewed articles published between 2019 and 2024, written in English, and focusing on pedagogy were included, while non-English or non-educational studies were excluded. From an initial 15 results, 10 articles were selected for in-depth analysis and thematic synthesis. The findings identify three main categories: Automated Writing Evaluation (AWE) systems such as Grammarly, Pigai, Criterion, and Grammark, process and collaborative platforms including Google Docs and Learning Management Systems, and Digital Multimodal Composing (DMC) tools such as Padlet, video editors, and web page builders. Collectively, these tools streamline assessment, enhance formative and collaborative feedback, and expand multimodal expression while fostering 21st-century skills. Nonetheless, challenges remain, including surface-level focus in AWE, unequal participation in collaborative tools, and digital equity concerns in DMC.

Keywords: *Assessment, Writing Skills, Digital-Based Tools*

1. Introduction

Assessment of students' writing is an important part of the teaching and learning, as it provides both teachers and learners with valuable insights into the development of writing skills. Through assessment, teachers can identify students' strengths and areas that need improvement, which helps them to provide targeted feedback and support (Weigle, 2007). For students, writing assessment also helps to raise awareness to improve their writing skills. This further guide them to reflect on their work and make necessary revisions based on the feedback given by teacher. Moreover, it allows educators to monitor progress over time and adjust their teaching strategies accordingly (Shafiee Rad & Alipour, 2024).

In spite of its numerous importances, teachers face some challenges in assessing students' writing presents. One prevalent issue is the subjective nature of writing evaluation, which can lead to inconsistent grading and bias (Slomp, 2012). Different from multiple-choice tests, writing requires judgment on aspects like coherence, creativity, and tone, which can vary between assessors. In addition, assessing students' writing is often time-consuming, especially in large classes, making it hard for teachers to provide detailed and meaningful feedback for every student (Moses & Mohamad, 2019).

However, in this modern era, the enhancement of technology in education has significantly shifted how teachers deliver instruction and assess student performance. One area that has seen notable transformation is the assessment of writing skills, where traditional pen-and-paper methods are increasingly complemented—or even replaced—by digital-based tools (Correnti et al., 2013). The need to evaluate the role and function of these tools in the teaching and learning process, particularly in writing assessment, is increasing as they become more accessible and usable in various educational settings.

Therefore, this study focuses on digital-based tools specifically used for assessing students' writing skills. It aims to explore the role of these tools in educational contexts by addressing two key research questions: (1) What are the types of digital-based tools for writing skills assessment? and (2) What are the advantages of these digital tools? By answering these two questions, the study seeks to contribute to a better understanding of how digital tools are shaping writing assessment practices and informing educators on their effective use in classroom settings.

2. Methods

This systematic literature review followed a structured process. The identification of studies was conducted using Google Scholar with the keywords [digital assessment writing skills', 'digital-based writing assessment tools', EFL writing assessment technology']. Inclusion criteria were peer-reviewed articles (2019-2024), focus on digital writing assessment in educational contexts, and empirical or theoretical contributions. Exclusion criteria were articles not in English, not focused on pedagogy. The initial search yielded 15 results. After screening titles/abstracts and assessing full texts for eligibility, 10 articles were selected for in-depth analysis and thematic synthesis.

3. Findings and Discussion

3.1 Tools for Automated Feedback Evaluation (AWE)

As one of the widely used categories of digital tools in writing assessment, Automated Writing Evaluation (AWE) tools are designed to handle lower-order concerns such as grammar, spelling, punctuation, and sentence structure, which is time-consuming for teachers in doing the assessment. By doing these jobs, AWE tools enable teachers to focus more on higher-order aspects of writing such as organization, critical argumentation, and coherence. Some of prominent AWE tools used for assessing students' writings are Grammarly, Grammark, Pigai, and Criterion.

Grammarly offers detailed grammatical corrections and stylistic suggestions that improve clarity and conciseness (Ding & Zou, 2024; Fitria, 2022; Ghafar, 2024; Ghufron, 2019; Qub'a et al., 2024). Moreover, Pigai provides sentence-level error detection and feedback specifically tailored for English as a Foreign Language (EFL) learners, making it effective for repeated grammar practice. Further, Criterion, developed by ETS, integrates automated scoring with diagnostic feedback on mechanics and usage, thus supporting both assessment and instruction in

academic writing contexts (Ding & Zou, 2024). Grammark emphasizes simplicity by identifying common grammar, style, and wordiness issues, offering straightforward feedback that promotes learner autonomy. It encourages students to self-correct by highlighting problematic areas without providing direct corrections, which makes it particularly useful for fostering critical thinking and self-editing skills (Fitria, 2022).

3.2 Tools for Process and Collaborative Assessment

Tools for Process and Collaborative Assessment are digital platforms designed to support not only the final written product but the entire writing process, from planning and drafting to revising and reflecting, while also facilitating collaboration among students and between teachers and students. Different from tools that focus mainly on lower-order concerns such as grammar and spelling, these platforms emphasize formative assessment, allowing teachers to guide students develop their ideas. Process-based assessment emphasizes drafting, revising, and collaboration, and digital platforms such as Google Docs and Learning Management Systems (LMS), including Moodle and Blackboard, are particularly effective in supporting these practices. These tools include integrated features that allow teachers and peers to engage with student writing throughout the process, rather than only at the final product stage (Cheung, 2023).

Key features of these tools include real-time commenting, revision tracking, and multimedia feedback, which allow teachers to monitor student progress, guide revisions, and assess participation in collaborative writing tasks. Using these platforms, teachers can deliver multimedia feedback, such as audio recordings or video screencasts, as well as provide direct commentary through inline comments. These tools improve the quality, clarity, and transparency of feedback while saving time during the assessment process (Altameemy & Alrefaee, 2020; Arifin, 2020; Fernando, 2020; Ghouali & Cecilia, 2021). In the same line, students benefit from peer interaction and reflective practices, which enhance both the writing process and critical thinking skills. Google Docs supports synchronous collaboration and version history tracking, while LMS platforms provide structured environments for submitting drafts, conducting peer reviews, and receiving organized, multimodal feedback. Together, these tools foster a process-oriented, interactive, and learner-centered approach to writing assessment.

3.3 Tools for Multimodal and Creative Assessment

Digital Multimodal Composing (DMC) tools provide students with opportunities to create texts that integrate multiple semiotic modes, such as written text, images, video, and audio, within a single composition. Examples of these tools include Padlet, video editing software, and web page builders, all of which allow learners to move beyond traditional essays and experiment with more innovative and multimodal forms of expression. The use of DMC has been shown to expand students' freedom of expression and enhance engagement (Hafner & Ho, 2020).

For assessment, DMC tools encourage teachers to go beyond evaluating purely linguistic aspects of writing. Instead, teachers can employ genre-based rubrics that account for students' rhetorical choices, design, and layout, as well as their creativity in combining different modes to communicate meaning. This makes it possible to assess not only the final product but also the creative process, including stages of planning, drafting, and reflection. In this way, DMC tools support the development of 21st-century skills such as critical thinking, creativity, digital literacy, and visual communication.

Among these tools, Padlet functions as an interactive bulletin board that enables students to share their writing, engage in peer review, and receive real-time feedback from teachers. Its user-friendly interface and collaborative features make it particularly effective in both online learning environments and elementary-level classrooms (Albarqi, 2023). Padlet also facilitates formative assessment, as teachers can track students' progress over time and evaluate their ability to organize and present ideas visually (Jong & Kim Hua, 2021). More than just an assignment submission platform, Padlet facilitates a reflective and collaborative writing environment in which students compose not only for teachers but also for peers, thus deepening motivation and critical engagement.

Similarly, video editing tools and web page builders allow students to demonstrate rhetorical and design choices in digital formats. These tools highlight skills such as structuring multimodal arguments, balancing visual and textual elements, and tailoring messages to specific audiences. By integrating such platforms into writing instruction, teachers can design assessments that value both linguistic accuracy and the broader multimodal competencies students need in contemporary communication contexts (Hafner & Ho, 2020).

However, while the benefits of these tools are substantial, literature also highlights several challenges. For Automated Writing Evaluation (AWE) tools, over-reliance may encourage students to focus on correcting surface-level grammatical errors rather than developing deeper content and critical thinking (Ding & Zou, 2024). In the case of process-oriented and collaborative assessment tools, issues such as unequal participation among group members and the need for sustained teacher monitoring can limit their effectiveness (Jong & Kim Hua, 2021). Similarly, digital multimodal composing tools raise concerns about digital equity, as not all students may have consistent access to devices or stable internet connections, which can hinder fair implementation (Hafner & Ho, 2020).

4. Conclusions

This review identified five key types of digital writing assessment tools: Automated Writing Evaluation (AWE) systems, plagiarism detection software, peer- and teacher-feedback platforms, process and collaborative assessment tools, and multimodal composing tools. In response to the first research question, these tools demonstrate varied strengths in supporting writing instruction, from providing immediate feedback on language accuracy to enabling collaborative learning and creative multimodal expression. Addressing the second research question, the literature indicates

that these tools not only enhance assessment practices but also shape writing pedagogy by expanding the scope of what counts as writing, from traditional essays to multimodal projects.

Beyond their immediate classroom applications, these findings underscore broader implications for the development of 21st-century skills. When integrated strategically, digital writing assessment tools promote efficiency, foster student engagement, and encourage reflective and collaborative practices. Essentially, they cultivate critical competencies such as digital literacy, creativity, and communication across multiple modes, preparing students with skills necessary for academic and professional contexts. Thus, the effective adoption of these tools allows educators to move beyond assessment as error detection, instead adapting it as a holistic practice that develops both linguistic accuracy and broader literacies essential in the digital age.

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The Influence of Technology-Driven Reading Evaluation Tools on Student Involvement and Academic Achievement: A Systematic Literature Review

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Abstract

Technology integration in English language teaching has changed paper-based reading examinations to digital-based methods. This research investigates the influence of technology-based reading assessment tools on students' engagement and academic performance. Through a systematic literature review with Preferred Reporting Items for Systematic Reviews and Meta-analysis (PRISMA), this study seeks to answer how technology-driven reading evaluation impacts student motivation compared to the traditional method and the extent to which technology contributes to students' reading skill improvement. Having applied the exclusion criteria, 20 of 101 indexed articles published between 2014 and 2025 were deemed relevant to this study's variables. The finding shows that technology-driven reading assessment tools such as computer-adaptive tests, gamified assessments, and e-portfolios significantly influence student engagement and motivation since these tools provide interactive and personalized experiences that actively involve students in the assessment process. Also, the research exposes that technology-based tools play a significant role in improving students' reading proficiency with autonomous testing conditions, real-time feedback, and continuous monitoring of advancement. The advantages of technology-based reading assessments should inspire educators, policymakers, and researchers interested in using technology to improve reading assessment and instruction in the digital age to implement the tools in various reading classrooms. Meanwhile, the authors also recognize some challenges the study raises concerning ensuring universal access and maintaining the integrity of assessments. Therefore, further research must be conducted to provide substantial data on how to deal with those challenges and constraints.

Keywords: *classroom engagement, PRISMA, reading assessment, SLR, technology-driven*

Introduction

Technology has become an essential part of teaching and learning processes in the ever-changing field of education. With the ongoing influence of digital tools on students' learning and abilities, it is essential to analyze how these technologies affect many parts of education, such as reading evaluation (Kosimov, 2022). Reading is an essential ability that is crucial for students to succeed academically in all subject areas. Hence, comprehending the impact of technology-driven reading assessment tools, including digital media, on student engagement and scholastic performance is crucial for educators, academics, and policymakers.

In recent years, there has been a notable transition from conventional paper-based reading exams to technology-driven methods. For instance, computer-adaptive examinations, e-portfolios,

and gamified assessments can revolutionize the evaluation of reading skills and enhance students' learning experiences (Lysenko & Abrami, 2014). According to Jamshidifarsani et al. (2019), reading evaluation methods driven by technology, such as prompt feedback and customized learning routes, provide several benefits, including captivating interfaces that can inspire students to actively engage in the assessment process. Consequently, the interest in employing technology for reading teaching is progressively rising.

The increasing interest among educators in technology-based reading assessments stems from the necessity to develop more captivating and interactive educational experiences for students. Conventional reading evaluations frequently do not effectively engage students or stimulate their motivation, resulting in a lack of participation and less-than-ideal performance (Myrberg & Wiberg, 2015). Nevertheless, despite the auspicious potential of technology-driven reading assessment tools, there are apprehensions and obstacles that necessitate attention and resolution. This discrepancy might result in an expanding imbalance in academic performance and perpetuate inequities in education. Thus, it is imperative to guarantee that every student has equitable access to technology-driven reading evaluations and the requisite assistance to derive advantages from these resources.

Like any evaluation technique in language teaching, it is essential to ensure that these instruments effectively gauge students' reading abilities and yield reliable outcomes in various settings and with different groups of people (Almanasreh et al., 2019). This study aims to examine the impact of technology-based reading assessment tools on student engagement and academic performance. Moreover, the present study seeks to undertake a thorough literature review to consolidate the current knowledge on this subject, pinpoint any research deficiencies, and offer suggestions for future research and application. The results of this analysis will enhance our comprehension of how technology can be utilized to facilitate reading evaluation and enhance student achievements. Therefore, to achieve the research objectives, the researcher formulated these two research questions:

1. How do technology-driven reading evaluation tools impact student engagement and motivation in reading assessment activities compared to traditional paper-based methods?
2. To what extent do technology-driven reading evaluation tools contribute to the improvement of students' reading skills and overall academic performance?

Review of Literature

1. Assessment in English Language Teaching

In English Language Teaching (ELT), assessment is an essential element to evaluate students' language proficiency and measure their development periodically. It includes a range of formal and informal methods designed to offer valuable feedback to both teachers and learners (Alizadeh, 2018). Conversely, informal assessment methods such as observation and anecdotal records offer significant insights into learners' strengths and opportunities for growth (Winna & Sabarun, 2023). On the other hand, the integration of digital assessment technologies in English Language Teaching (ELT) enhances evaluation procedures, enabling individualized learning

through adaptive tests. However, it also presents potential challenges like technical glitches and limited accessibility, necessitating a comprehensive approach.

It is necessary to be aware that the foundations of English language evaluation are based on a thorough comprehension of language instruction and acquisition, as well as the intricacies of evaluating language proficiency. Thus, research on language assessment underscores the need to incorporate principles and methodologies in the classroom, emphasizing the necessity of a comprehensive approach that considers both the theoretical underpinnings of language evaluation and the practical aspects of teaching (Joshi et al., 2023).

2. Technology-Enhanced Reading Assessment

Evaluating students' reading abilities is crucial for facilitating their academic progress and personal growth. Teachers can utilize various evaluation tools to discern students' aptitudes and deficiencies, customize their teaching methods to address specific requirements, and monitor advancements over a period of time (Afflerbach, 2016). Besides, reading assessment is also used to guide educational policy decisions and curriculum development, which helps to ensure that children receive reading instruction of the highest quality (Pearson et al., 2014).

Currently, there are two methods of students' reading skills evaluation: traditional and technology-driven assessment. Historically, the evaluation of reading skills has predominantly utilized conventional techniques using physical materials, such as standardized exams, informal reading assessments, and records of students' reading progress. Dougherty Stahl (2014) states that these techniques have been extensively employed to assess students' reading comprehension, fluency, and decoding abilities. Nevertheless, those conventional approaches are constrained by some drawbacks, including the absence of prompt feedback, limited capacity to cater to particular student requirements, and the possibility of student disinterest.

As time goes by, advancements in technology have revolutionized the process of evaluating reading skills, providing novel tools and methodologies that overcome the constraints of conventional techniques. The technology integration in reading assessment must be grounded in established learning theories to ensure pedagogical effectiveness. According to Deci and Ryan (2008), Self-Determination Theory (SDT) provides a foundational framework to understand how technology-driven assessment can enhance student motivation through three basic psychological needs, consisting of autonomy, competence, and relatedness. Meanwhile, Constructivist Learning Theory (Nesrine, 2018) supports technology-enhanced assessment by emphasizing how learners actively construct knowledge through interaction with their environment. Furthermore, the insight of the Technological Pedagogical Content Knowledge (TPACK) framework is crucial to understanding how educators integrate technology-based assessment tools effectively (Mishra & Koehler, 2011). Reading assessment strategies that are driven by technology include computer-adaptive examinations, e-portfolios, and gamified assessments (Jamshidifarsani et al., 2019). Incorporating technology in reading assessment also provides convenience and efficiency for educators and learners under constrained meeting durations.

2.1 Kinds of Technology-Driven Reading Assessment Tools

Technology-based reading assessment tools are available in many formats; each of them offers distinct features and uses. Below are several prevalent categories of these instruments:

a. Computer-Adaptive Tests (CATs)

Computerized Adaptive Tests (CATs) are evaluative measures that adapt the level of question difficulty according to a student's performance. This popular technology enables a more accurate evaluation of reading abilities and offers an individualized assessment encounter (Chang, 2015; Clemens et al., 2015). Some examples of reading assessment using CATs include the STAR Reading Assessment and the Measures of Academic Progress (MAP) Reading test.

b. Gamified Assessments

Gamified assessments include game-like components, like points, badges, and leaderboards, to actively involve and inspire students throughout the assessment procedure. These techniques can enhance the experience of reading assessment by reducing stress and increasing enjoyment for children, as well as building their motivation (Kapp, 2016). Reading evaluations that incorporate gamification can be presented in different formats, including interactive quizzes, virtual treasure hunts, and role-playing situations.

c. E-Portfolios

E-portfolios refer to the electronic compilations of students' works that exhibit their reading abilities and advancement over a period of time. These tools enable students to submit a range of items, including reading logs, book reviews, and multimedia projects, to showcase their reading comprehension, fluency, and critical thinking abilities. E-portfolios offer a more thorough and genuine evaluation of reading abilities in comparison to conventional assessments (Bures et al., 2013).

d. Eye-Tracking Software

Eye-tracking software is a tool that employs specialized cameras to observe and document the eye movements of a student as they read digital documents. These tools can offer useful information about reading behaviors, including the duration of fixations, the speed of saccades, and the occurrence of regressions (Schiavo et al., 2021). Eye-tracking software can detect struggling readers and provide information for specific solutions. Two examples of eye-tracking software used for reading evaluation are Tobii Pro Lab and EyeLink.

e. Virtual Reality (VR) Assessments

As the name suggests, VR assessment provides students with immersive experiences in interactive reading settings that replicate real-life situations. These tools can evaluate reading abilities in a more genuine and captivating manner, for example, by allowing students to explore virtual libraries, engage with characters from novels, or solve reading-oriented puzzles (Gattullo et al., 2019). Some VR platforms that can be utilized for reading evaluation are Google Expeditions, Nearpod VR, and Oculus Education.

Method

1. Research Design

This study utilised a Systematic Literature Review (SLR) to objectively address the research issues about the influence of technology-driven reading evaluation tools on student involvement and academic achievement. A Systematic Literature Review is a research methodology utilised to methodically gather, identify, and critically analyse current scholarly works, encompassing articles, conference proceedings, books, and dissertations (Carrera-Rivera et al., 2022). This study employed secondary data from journal papers published between 2014 and 2025, which explored the retrieval and synthesis of knowledge in the digital age. The analysis specifically concentrated on esteemed academic journals indexed in Scopus and Google Scholar (Sinta-indexed). This approach is executed systematically by following the relevant protocols or research methodology, utilising a checklist across seven parts, addressing elements such as rationale, procedures, findings, and discussions.

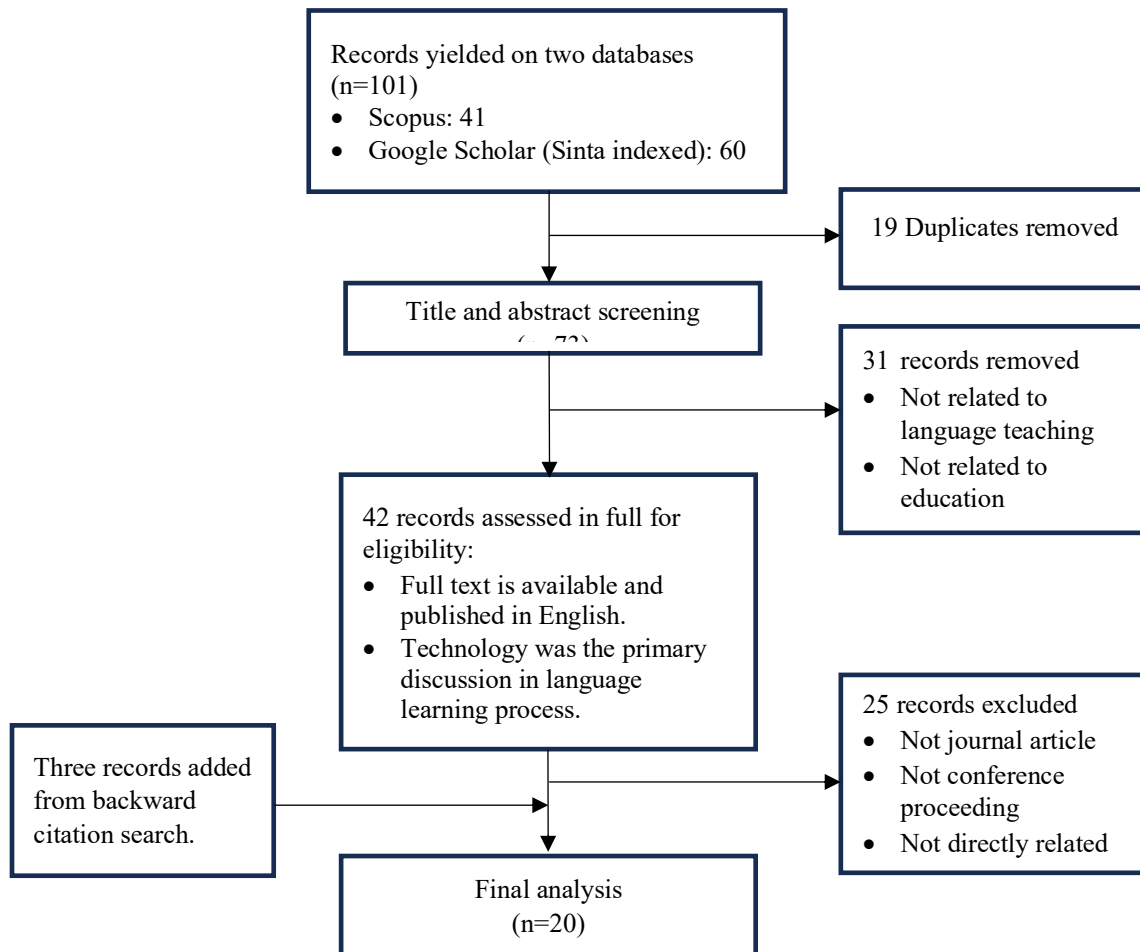


Figure 1. The PRISMA flowchart

2. Search Terms and Strings

The present systematic study employed a searching strategy with a combination of controlled keywords. The keyword for searching the articles refers to:

(TITLE-ABS-KEY (Technology AND Driven AND Reading AND Assessment) OR TITLE-ABS-KEY (Gamification AND Portfolios AND English AND Reading AND Assessment)).

3. Criteria of Inclusion and Exclusion

Several inclusion criteria are evaluated when performing this systematic literature review study. Initially, multiple sources of library materials were analysed and organised, prioritising published works from journals between 2014 and 2025. Besides, English must be employed on the selected papers. In addition, the documents must, at a minimum, incorporate issues about integrating technology in English education pertinent to the reading assessment and the learning process. Meanwhile, the exclusion criteria are that all documents not authored in English or other specified languages were systematically excluded, and the irrelevant topics and variables are also considered for exclusion. The documents that satisfied the inclusion and exclusion criteria were shortlisted and assessed for final selection.

4. Research Object

The objects of this research are twenty selected articles drawn from the table below:

Table 1. RQs and journal articles to review

RQ	Sources
The impact of technology-driven reading evaluation tools on student engagement and motivation in reading assessment activities	(Amin & Wahyudin, 2022; Cao & Phongsatha, 2025; Cheng et al., 2025; Chun et al., 2016; Fahad Alzuhair & Mohammed Alkhuzaim, 2022; Haymon & Wilson, 2020; Rudolph et al., 2023; Santosa et al., 2022; Warni et al., 2018; Zhang & Huang, 2024)
The extent to which technology-driven reading evaluation tools contribute to the improvement of students' reading skills	(Connor, 2019; Delgado et al., 2018; Grant et al., 2015; Ijiwade & Alonzo, 2023; Raj & Singh, 2023; Reed et al., 2020; Sariçoban et al., 2019; Schiavo et al., 2021; Thuan & Hanh, 2025; Zhang & Crawford, 2024)

5. Data Collection and Analysis

Data is analyzed through data reduction, display, and conclusion/verification drawing. The research procedures include formulating a review question, defining inclusion and exclusion criteria, locating relevant studies, selecting them, assessing quality, extracting data, analyzing results, and interpreting results (Lame & Guillaume, 2019).

Results and Recommendations

1. The Impact of Technology-Driven Reading Evaluation Tools on Student Engagement and Motivation in Reading Assessment Activities

The first research question is: *How do technology-driven reading evaluation tools impact student engagement and motivation in reading assessment activities compared to traditional paper-based methods?* From the reviewed studies, there are several results of the impact of technology-driven reading evaluation tools on students' engagement and motivation in reading assessment activities (Table 2).

Table 2. The impact of technology-driven on students' engagement and achievement

Result	Article
Video games like "Age of Empires 2" significantly enhance students' narrative text reading comprehension, suggesting their potential as effective learning aids for English skills. An adaptive gamified assessment can substantially raise learner motivation and promote superior language proficiency outcomes in a blended learning context.	(Amin & Wahyudin, 2022; Cheng et al., 2025; Zhang & Huang, 2024)
Language learners can utilize modern communication technology to reflect on their communicative behaviors, highlighting the influence of technologies on language usage, communicative consequences, and social implications of technology use.	(Cao & Phongsatha, 2025; Chun et al., 2016)
This study establishes a baseline for evaluating technology-driven reading programs' effectiveness in supporting advanced students in general education, emphasizing the need for further investigation and high-quality instructional techniques.	(Haymon & Wilson, 2020; Santosa et al., 2022)
This study highlights the need for students to have a better understanding of the benefits of technology and how to use it effectively to improve English learning.	(Fahad Alzuhair & Mohammed Alkhuzaim, 2022; Rudolph et al., 2023; Warni et al., 2018)

The results above show that reading assessment methods powered by technology can effectively capture students' interest and enhance their involvement in assessment tasks. It is in accordance with a study conducted by Lim and Yunus (2021) who discovered that the implementation of gamified reading assessments resulted in a notable increase in student engagement and motivation. This, in turn, led to enhanced performance and improved learning outcomes.

In addition, technology-based solutions provide interactive functionalities that encourage active engagement through modern communication methods in reading assessment tasks. For instance, e-portfolios allow students to demonstrate their reading abilities by presenting multimedia artifacts, such as audio recordings of their fluency in reading or video presentations of

their book evaluations (Bures et al., 2013). This high level of interactivity fosters student autonomy in their learning and actively involves them in the evaluation process.

Technology-driven reading evaluation methods further boost student engagement and motivation by employing adaptive evaluations and customization, as demonstrated in the gamified test. Meanwhile, computer-adaptive assessments (CATs) modify the level of difficulty of questions based on a student's performance, offering a customized assessment experience (Chang, 2015). This individualized method ensures that students remain actively involved by providing them with tasks that are appropriately challenging, striking a balance between being too simple and overly difficult. As a result, their motivation remains consistent throughout the evaluation process.

In addition, technology-driven solutions have the capability to provide instant feedback and specific recommendations tailored to a student's performance. Eye-tracking software, for example, has the capability to detect specific regions where a learner may face difficulties and offer immediate feedback or recommend customized reading tactics (Rello & Ballesteros, 2015). The personalized assistance provided ensures that students remain actively involved and driven to enhance their reading abilities. In conclusion, the adoption of technology-driven assessment enhances reading instruction and signifies progress in language learning in the 21st century.

2. The Extent to Which Technology-Driven Reading Evaluation Tools Contribute to The Improvement of Students' Reading Skills

The second research question is: To what extent do technology-driven reading evaluation tools contribute to the improvement of students' reading skills and overall academic performance? Table 3 shows the results of technology-driven reading assessment that contribute to the improvement of reading skills proposed by each article.

Table 3. Technology-driven reading assessments contribute to reading skills

Result	Article
Participants reported using technological tools to enhance their professional growth in language teaching and assist students in developing their language skills independently. Using technology and data-driven methods, personalized literacy instruction can significantly reduce reading difficulties in students from first to third grade.	(Connor, 2019; Delgado et al., 2018; Sariçoban et al., 2019)
The basic to the expert typology of CATs can optimize teacher practices and student learning by providing focused professional development and a comprehensive explanation of formative uses.	(Grant et al., 2015; Ijiwade & Alonzo, 2023; Schiavo et al., 2021)
Gamification platforms like Kahoot and Quizizz have shown promise in enhancing student motivation and engagement in ESL language learning. However, barriers were identified,	(Raj & Singh, 2023; Reed et al., 2020; Zhang & Crawford, 2024)

including instructors' value beliefs and aptitude limitations restricting technology integration in reading assessment.

The results in the table above show that using technological tools assists students in developing their language skills independently. Connor (2019) illustrates the effectiveness of technology-enhanced, personalized, data-driven literacy teaching in averting significant reading challenges. Meanwhile, Delgado et al. (2018) mentioned that digital reading is an indispensable aspect of our daily existence and a fundamental component of the educational sphere. It aligns with the study by Chang (2015) which indicates that while traditional paper-and-pencil assessments are prevalent in classrooms, Computer Adaptive Testing (CAT) possesses significant potential to transform classroom evaluation and enhance personalized learning.

In addition, technology-driven solutions can provide prompt and comprehensive feedback on students' reading performance. Both CATs and eye-tracking software can be utilized to examine the reading habits of students and offer immediate feedback on several aspects, such as reading speed, fixation duration, and regressions (Rello & Ballesteros, 2015). This individualized feedback can assist students in gaining a deeper understanding of their reading patterns and cultivating techniques to enhance their reading proficiency and understanding (Biancarosa & Griffiths, 2012). Reading evaluation tools that are driven by technology also have the capacity to generate captivating and inspiring reading experiences for students. Gamified assessments, such as those involving Kahoot! and Quizizz applications, include game-like features such as points, badges, and leaderboards to enhance the enjoyment and rewards of the assessment process. Gamified reading evaluations can motivate children to continue reading and work towards progress by leveraging their inherent motivation and drive for success (Lam et al., 2018).

Moreover, the incorporation of interactive elements like multimedia information, virtual reality environments, and collaborative assignments can enhance the reading assessment experience for students, making it more engaging and significant (Candel et al., 2021). These captivating encounters can cultivate a favorable outlook on reading and inspire students to actively engage in their own learning and the development of their skills. Furthermore, technology-driven solutions can enable the continuous monitoring of children's reading development over time (Biancarosa & Griffiths, 2012). Continuously monitoring progress can guarantee that children promptly receive suitable treatments to solve any reading challenges and continue to build their skills.

Despite the findings revealing the promising benefits of technology-driven language learning, there are significant equity gaps that need to be addressed. The potential for algorithmic bias within the CAT system may reflect systemic biases that prioritize standard English dialects and cause disadvantages to marginalized student populations, particularly English learners whose cultural and linguistic background do not align with Western-designed assessment frameworks (Warschauer & Matuchniak, 2010). Furthermore, whereas gamification platforms such as Kahoot! and Quizizz demonstrate advantages in engagement, they may preferentially support competitive learning styles at the expense of collaborative methodologies esteemed in specific cultures, hence

potentially diminishing their efficacy for various student demographics. These equity concerns underlined that educational technologies should also pay deliberate attention to inclusive design implementation.

Conclusions

This research highlights the positive impact of technology-driven reading evaluation tools on student engagement and skill development. These tools, including gamified platforms, e-portfolios, and computer-adaptive tests, increase student motivation and engagement compared to traditional paper-based assessments. They foster greater student autonomy, sustained interest, and improved learning outcomes. Adaptive assessments tailor question difficulty to each student, providing personalized feedback and empowering reading experiences. The integrated use of these tools supports increased engagement and measurable gains in reading proficiency. The subsequent table presents adopted strategies for instructors to implement in technology-based reading assessment.

Table 4. Implementation guidelines for technology-driven reading evaluation tools

Tool	Best Use Case	Implementation Tip
Gamified Platforms (Kahoot!, Quizizz)	Formative assessments, vocabulary review, comprehension checks	Use leaderboards sparingly to avoid anxiety.
Computer Adaptive Tests (CATs)	Diagnostic assessment, individualized evaluation	Provide immediate feedback.
E-portfolios	Summative skill documentation	Scaffold with templates for reflection.

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Leveraging Game-Based Learning Via Kahoot! To Enhance Reading Comprehension: A Study of Students' Perceptions and Barriers

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Abstract

Gamification, or game-based learning, has gained significant attention in the educational field for its capacity to enhance student engagement and motivation compared to traditional instruction. One widely adopted gamified platform is Kahoot!, which has been shown to improve learning outcomes, particularly in reading comprehension. However, while much research focuses on its effectiveness, fewer studies explore students' perceptions and the challenges they face in its use. This study aims to investigate EFL students' perceptions and the barriers they encounter when using Kahoot! in reading comprehension activities. Using a qualitative phenomenological approach, eight senior high school students from the Oxford B class at Hero English Course were selected through purposive sampling. Findings show that students generally have positive perceptions toward Kahoot!, citing increased enjoyment, motivation, vocabulary retention, and reading fluency. However, several barriers were identified, such as time pressure, technical issues, and distraction from competition. The study concludes that while Kahoot! can enhance student engagement in reading comprehension, its implementation must be supported with pedagogical balance and infrastructure readiness.

Keywords: *Gamification, Kahoot!, Reading Comprehension, Student Perception, Educational Technology*

1. Introduction

In recent years, game-based learning (GBL) has emerged as a dynamic educational approach that integrates the principles of gaming to create a more interactive and engaging learning environment. This method is increasingly adopted in language education to foster student motivation, improve participation, and ultimately enhance learning outcomes (Zainuddin et al., 2020). Game-based learning incorporates game elements such as competition, point scoring, and immediate feedback into educational activities to encourage student involvement and facilitate knowledge retention. One of the most widely used tools in the GBL. Kahoot! has gained significant popularity among educators globally for its ability to transform traditional classroom tasks into interactive experiences.

Reading comprehension is a crucial yet challenging skill for EFL learners. Many students struggle with vocabulary limitations, lack of motivation, and ineffective reading strategies, which often reduce their ability to construct meaning from texts. To address these challenges, educators are increasingly turning to innovative approaches such as game-based learning (GBL). Kahoot! is among the most popular GBL tools, offering competition, instant feedback, and interactive design to enhance classroom engagement. Although prior studies have demonstrated the benefits of Kahoot! for motivation and participation, relatively little is known about how students perceive its

use in reading comprehension and what barriers may limit its effectiveness. This study aims to fill that gap by exploring students' perceptions and challenges when using Kahoot! in reading activities.

Reading comprehension is a complex cognitive process involving the ability to decode, interpret, and critically engage with texts. As Akyol and Altinay (2019) suggest, reading is not merely recognizing words but constructing meaning through interaction with the text and applying prior knowledge. Despite its importance, many EFL students struggle with reading comprehension due to factors such as vocabulary limitations, lack of motivation, or poor reading strategies (Komerling & Kayuagung, 2020). These challenges highlight the need for innovative instructional methods to enhance students' reading abilities. The use of Kahoot! in reading instruction has shown potential not only in increasing student motivation but also in supporting their comprehension skills. As noted by Rochimah and Muslim (2021), using Kahoot! to assess reading understanding allows students to process information more actively and reflect on their comprehension in real time. The competitive and interactive nature of the platform can drive students to focus more intently on reading materials, increasing engagement and comprehension outcomes. Furthermore, tools like Kahoot! may cater to students with different learning styles, making the learning experience more inclusive (Bouzaiane, 2024).

However, while many studies have emphasized the benefits of using Kahoot! in learning, there is still a need to examine its effectiveness specifically in the context of reading comprehension. Moreover, the use of such platforms is not without challenges. Issues such as unstable internet connections, limited time for answering questions, and pressure from competition may negatively affect students' learning experiences (Smirani & Yamani, 2024). These obstacles can create barriers to effective reading comprehension and must be explored to develop more supportive learning environments.

Reading comprehension requires not only decoding words but also critically engaging with texts and connecting them to prior knowledge. In EFL contexts, learners frequently face difficulties such as limited vocabulary, low confidence, and reliance on surface-level strategies (Akyol & Altinay, 2019; Komerling & Kayuagung, 2020). These obstacles often make reading tasks feel tedious and demotivating.

Game-based learning has been proposed as one solution, with Kahoot! widely adopted in language classrooms. Research shows that Kahoot! can increase student motivation, improve participation, and enhance vocabulary retention and fluency (Zainuddin et al., 2020; Rochimah & Muslim, 2021; Bouzaiane, 2024). However, most of these studies emphasize general benefits rather than examining its specific role in supporting reading comprehension. At the same time, the literature also notes potential drawbacks. Issues such as strict time limits, unstable internet connections, and overemphasis on competition can reduce students' focus and hinder deep understanding of texts (Smirani & Yamani, 2024; Warschauer, 2004). These findings indicate the need for research that balances the perceptions of benefits with the barriers to learning, particularly in the context of reading comprehension.

This study is guided by Self-Determination Theory (Deci & Ryan, 1985) and Cognitive Load Theory (Sweller, 1988). Self-Determination Theory explains the motivational impact of Kahoot!, as its features support autonomy (choice in participation), competence (immediate feedback and scoring), and relatedness (peer interaction). These elements clarify why students often perceive Kahoot! as enjoyable and motivating during reading tasks.

Conversely, Cognitive Load Theory highlights the potential challenges. Features such as time pressure and competition may increase extraneous cognitive load, pushing students toward scanning and guessing rather than deep comprehension. Technical issues and distracting visuals may further strain working memory and reduce learning efficiency. Together, these two frameworks provide a balanced lens: SDT explains the positive motivational perceptions, while CLT accounts for the barriers. This dual perspective enables a deeper understanding of how Kahoot! supports or hinders reading comprehension in EFL classrooms.

To address these objectives, the study poses two main research questions:

1. What are students' perceptions towards the use of Kahoot! application for improving reading comprehension?
2. What challenges do students face when using Kahoot! in reading comprehension activities?

2. Research Methods

2.1 Research Design

Qualitative research was chosen to explore phenomena that cannot be quantified. Data were collected through semi-structured interviews and classroom observations. In phenomenological research, the sufficiency of the sample size is determined by the depth and richness of the data rather than its statistical representativeness. Researchers such as Creswell (2013) and Morse (2015) propose relatively small samples, often between 5 and 15 participants, because the goal of phenomenology is to reveal the core of lived experiences rather than generalizing findings to a larger population. Eight students from Hero English Course's Oxford B class were purposefully chosen for this study. This number was deemed enough since data saturation had been achieved: by the seventh interview, no new themes or substantial variations had appeared, indicating that the fundamental structure of the phenomenon had been captured. Including more people would have likely resulted in repetition rather than fresh insights. As a result, the selection of eight participants assured both methodological sufficiency and analytical manageability, allowing for a thorough investigation of students' opinions and hurdles to using Kahoot! in reading comprehension.

2.2 Research Setting and Subject

The research was conducted at Hero English Course, specifically with students enrolled in the Oxford B class, which consisted of senior high school students. The participants were selected purposively to ensure they had prior experience using Kahoot! in reading comprehension activities. This class was chosen because the students had been consistently involved in game-based learning sessions using Kahoot! over the past three months. The participants of the study included 8 students

who met the criteria of (1) having participated in at least three Kahoot!-based reading classes, and (2) being willing to share their perceptions and experiences.

2.3 Data Collection

To document students lived experiences, two methods were used: semi-structured interviews and classroom observations. Semi-structured interviews were conducted with all participants utilizing an interview technique that included open-ended questions about their perceptions of Kahoot!, participation in reading comprehension activities, and obstacles they encountered. This adaptable approach enabled the researcher to go deeper when participants provided significant responses, ensuring that the data was rich and complex.

Additionally, classroom observations were made during Kahoot!-based reading sessions. An observation checklist was utilized to assess student behaviors such as attentiveness, interaction, emotional responses, and reading tactics when time was limited. These observations supplied contextual data to supplement the interviews by confirming, contradicting, or enriching participants' accounts. Data from the interviews and observations were then combined via triangulation. Interview transcripts were classified thematically, and observation notes were utilized to confirm and expand on emerging themes. This methodological style increased the study's credibility and ensured that the findings represented a comprehensive grasp of students' attitudes and impediments to using Kahoot! for reading comprehension.

3. Results and Discussion

3.1 Students' Perceptions of Kahoot! in Reading Comprehension

This theme captures how students view Kahoot! and its impact on their engagement, learning process, and comprehension of reading texts.

3.1.1 Engaging and Enjoyable Learning Experience

All participants reported that Kahoot! made the reading class more enjoyable and dynamic. The game-like format, bright visuals, sounds, and immediate feedback kept them alert and enthusiastic throughout the lesson.

"I never feel bored in reading class when we use Kahoot!. I wait for the game every week." (Participant 1)

Observation supported this statement. Students were seen laughing, smiling, and showing increased energy during the Kahoot! session, especially when their names appeared on the scoreboard.

3.1.2 Boost in Motivation and Confidence

Many students felt more confident answering questions in Kahoot! because of the anonymity and instant feedback features. They found the platform non-judgmental and motivating.

“Even if I’m wrong, no one laughs because it’s anonymous. So I try again next time.” (Participant 3)

Some even stated that they felt more motivated to read the texts beforehand at home because they wanted to win the game in class.

3.1.3 Improved Vocabulary and Reading Fluency

Several students mentioned that repeated exposure to vocabulary in context helped them retain new words more effectively. They also believed that their reading fluency improved due to time constraints in the game.

“Because of Kahoot!, I can read faster. I must understand quickly before time is up.” (Participant 5)

These benefits aligned with observations of students quickly scanning and identifying key ideas from texts during the game.

3.2 Barriers in Using Kahoot! for Reading

Despite the positive experiences, students also encountered difficulties while engaging in Kahoot!-based reading activities.

3.2.1 Time Pressure and Surface-Level Reading

Although Kahoot! improved speed, several students admitted that the short time limit per question often prevented them from deeply understanding the reading passages.

“I don’t read the full text. I just scan and guess sometimes.” (Participant 4)

This was especially true for longer texts or inferential comprehension questions. The pressure to answer quickly made them rely on superficial reading strategies.

3.2.2 Technical Limitations

Five out of eight participants experienced technical issues such as lagging, disconnection, or device incompatibility, particularly when using mobile phones with unstable internet.

“My phone is slow, and I cannot catch up with others.” (Participant 6)

During observation, one student had to leave the game midway because of network loss, showing how external factors disrupted the learning flow.

3.2.3 Distraction and Overemphasis on Competition

While most students enjoyed the competitive aspect, a few admitted that they became too focused on winning rather than learning. Some were distracted by the excitement and flashy interface.

“Sometimes I just want to be the fastest, not the best reader.” (Participant 2)

This tendency led to reduced focus on the comprehension aspect and more on beating peers, which may hinder long-term retention and deeper understanding.

3.1 Summary of Findings

STUDENTS' PERCEPTIONS	STUDENTS' BARRIERS
1. Engaging and Enjoyable Learning Experience	1. Time Pressure and Surface-Level Reading
2. Boost in Motivation and Confidence	2. Technical Limitations
3. Improved Vocabulary and Reading Fluency	3. Distraction and Overemphasis on Competition

Discussions

The findings of this study reveal the dual nature of Kahoot! in reading comprehension activities. On the one hand, students consistently perceived the platform as engaging and motivating. The game-like features, such as points, timers, and instant feedback, supported their enjoyment, enhanced vocabulary retention, and encouraged faster reading. On the other hand, these same features also introduced barriers: the time limit that improved fluency also promoted surface-level reading, while competition that boosted excitement sometimes distracted students from comprehension.

This paradox underscores the importance of balancing benefits with potential drawbacks. The time constraint, for example, encouraged students to process texts quickly, improving reading speed and fluency. However, it also increased cognitive load, leading some to scan or guess answers without fully understanding the passage. In terms of Self-Determination Theory, the timer supported competence by pushing learners to challenge themselves, yet according to Cognitive Load Theory, it risked overloading working memory and undermining deeper comprehension. Thus, the same design element can simultaneously empower and hinder learning outcomes.

Similarly, competition motivated many students by creating excitement and fostering relatedness with peers. Yet, for others, it shifted focus toward winning rather than learning, causing distractions. This finding highlights a crucial instructional implication: teachers must design

activities that harness healthy competition without letting it dominate the learning goals. Post-game reflection or guided discussion could redirect students from performance-oriented outcomes toward comprehension-oriented outcomes.

The barriers identified in this study also emphasize the need for pedagogical scaffolding. For instance, to counter surface-level reading, teachers might incorporate follow-up activities such as summarizing passages, peer discussion, or reflective questioning after Kahoot! sessions. To address the challenge of distraction, educators could explicitly debrief students on the reading strategies used during the game and connect them back to comprehension skills. Technical issues, meanwhile, call for institutional support to ensure stable internet access and compatible devices.

In sum, the findings suggest that Kahoot! is not inherently positive or negative; rather, its effectiveness depends on how it is implemented. By acknowledging and addressing the tension between its benefits and barriers, teachers can design reading lessons that maximize motivation while safeguarding comprehension depth. This nuanced perspective highlights the value of integrating gamified tools strategically, ensuring they serve as a complement to, rather than a replacement for, reflective reading instruction.

3.2 Summary of the Discussions

RQ:1	highlights that Kahoot! positively influences students' engagement, motivation, and reading performance in EFL classrooms.
RQ:2	reveals that time constraints, technical issues, and overemphasis on competition may interfere with students' ability to deeply comprehend reading texts.

These insights suggest that while Kahoot! It is a powerful tool for enhancing reading engagement; its success depends on thoughtful instructional design, flexible implementation, and adequate technological support. Teachers must strike a balance between using Kahoot! as a fun, motivating tool and ensuring that students achieve meaningful learning outcomes through guided reading strategies and reflective discussions.

Conclusion

This study aimed to explore students' perceptions and the barriers they encounter when using Kahoot! as a game-based learning tool in reading comprehension activities. Based on a qualitative phenomenological approach involving eight senior high school students from Hero English Course, the research reveals a generally positive outlook toward Kahoot!'s role in making reading more engaging, motivating, and supportive of vocabulary development and fluency.

Students reported feeling more enthusiastic and confident in participating during reading classes that incorporated Kahoot!. The interactive and competitive elements of the platform significantly enhanced classroom dynamics, contributing to increased motivation and vocabulary retention. Furthermore, the instant feedback feature helped students become more aware of their comprehension strengths and weaknesses.

However, several challenges emerged. Time constraints often pressured students to rely on superficial reading strategies, while technical limitations and device issues disrupted participation. Additionally, the competitive nature of Kahoot! occasionally shifted the focus from comprehension to simply winning the game, potentially reducing learning depth.

These findings underline the importance of thoughtful pedagogical design when incorporating game-based tools like Kahoot!. While such tools offer significant benefits, they must be complemented by strategies that promote deep, reflective reading. Teachers should balance engagement with comprehension goals, manage time pressure, ensure equitable access, and foster critical thinking through guided support.

Recommendations

Based on the findings, the following recommendations are proposed:

1. For Teachers:

- a. Use Kahoot strategically alongside other reading instruction methods.
- b. Include post-game discussions to explore the reasoning behind answers.
- c. Adjust timing and question difficulty to encourage deeper processing.

2. For Institutions:

- a. Provide access to stable internet and suitable devices.
- b. Train educators on effective GBL implementation in reading.

3. For Future Researchers:

- a. Explore long-term effects of Kahoot on reading comprehension.
- b. Investigate how different question types (inferential, analytical) influence comprehension.
- c. Conduct comparative studies with other game-based learning tools.

By understanding both the benefits and limitations of using Kahoot in EFL reading classrooms, educators can better tailor their strategies to meet the diverse needs of learners and promote meaningful, enjoyable learning experiences.

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Navigating Challenges of Blended-Learning Activity in ELT: Systematic Literature Review

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Abstract

This study presents a systematic literature review of research on blended learning in English Language Teaching (ELT) published between 2020 and 2023, following the PRISMA methodology. The review explores the benefits and challenges of implementing blended learning in ELT, particularly at the college level. Findings indicate that blended learning offers numerous advantages, including enhanced student engagement, flexibility, and personalized learning experiences. However, significant challenges were also identified, such as technological issues, the digital divide, and the need for self-discipline among students. The study reveals that while blended learning can lead to improved academic achievement and cognitive understanding, its successful implementation requires addressing issues related to internet access, teacher training, and pedagogical strategies. This review contributes to the understanding of blended learning's practical applications in ELT and identifies areas for future research and improvement in blended learning approaches.

Keywords: *Blended Learning, English Language Teaching, Systematic Review, PRISMA, Higher Education*

1. Introduction

Blended learning (BL) has emerged as a crucial instructional paradigm in English Language Teaching (ELT), especially within higher education, where the demand for flexibility and digital integration is progressively imperative. By integrating conventional in-person education with online learning elements, blended learning transforms student engagement with course material, educators, and fellow students. As educational institutions adjust to technological improvements and changing learning contexts, blended learning (BL) is acknowledged for augmenting student engagement, facilitating tailored instruction, and promoting academic outcomes.

Pardede (2012) characterizes blended learning (BL) as a methodology that integrates traditional classroom instruction with online learning activities, providing a flexible and technology-enhanced approach to attaining English competence. The growing popularity of this approach in English Language Teaching (ELT) is attributed to its capacity to foster active learning and enhance student performance.

This work is significant as it methodically examines the advantages and obstacles of integrating BL in ELT. In light of the post-pandemic transition to hybrid learning settings, comprehending the practical implementation of blended learning is crucial for educators, policymakers, and institutions seeking to enhance instructional outcomes.

The primary aim of this systematic analysis is to examine the principal advantages and significant problems associated with the implementation of blended learning in English Language

Teaching situations. This study aims to address two research questions. What obstacles emerge in the use of blended learning in English Language Teaching? What advantages does blended learning offer in English Language Teaching?

Traditionally, English Language Teaching (ELT) has utilized methodologies like Communicative Language Teaching (CLT), which prioritizes interaction as both a means of learning and an objective (Al-Madani, 2021). However, digital technology has expanded the pedagogical toolkit. Online instruction has gained traction with the rise of tools such as video conferencing, audio recordings, text-to-speech applications, and game-based learning platforms. These innovations have reshaped instructional delivery and student engagement (Al-Madani, 2021).

While some educators report confidence in their ability to use digital technologies for teaching, others prefer traditional instruction formats (Daflizar, Indrayadi, & Irawan, 2022). In this context, BL serves as a middle ground that merges interpersonal classroom interaction with digital flexibility. Students are generally familiar with the concept of BL and express strong interest in its continued use in ELT settings (Octavia, Aunurrahman, & Darajad, 2021).

A central enabler of blended learning is the Learning Management System (LMS), a platform for planning, delivering, and evaluating educational materials. Forouzesh and Darvish (2012) highlight that LMSs support instructional tasks such as content delivery, learner engagement monitoring, and performance assessment. Features like discussion boards, video conferencing, and real-time collaboration further enrich the learning experience. LMSs have become increasingly vital in supporting flexible, location-independent learning.

In ELT, platforms such as Moodle have been employed in first and foreign language instruction. For instance, Moodle has supported students in English literature classes by enabling assessments like recorded monologues (Tirtanawati & Prastiwi, 2022). However, the effectiveness of LMSs is highly influenced by instructors' digital literacy and pedagogical skills (Prasetya, 2021).

BL is frequently defined as a pedagogically balanced amalgamation of synchronous and asynchronous, formal and informal, individual and collaborative learning modes. This adaptive model seeks to address varied learner requirements through the strategic application of technology (Mintii, 2023). In higher education, blended learning has gained prominence due to its ability to enhance flexibility, engagement, and individualized learning trajectories (Nikiforova, 2021).

Although initially defined as a blend of in-person and online teaching, BL has evolved across educational contexts (Sharma, 2010). The adoption of computer-assisted language learning (CALL) has been pivotal in advancing BL in ELT by integrating information technology with traditional instruction (Ashraf et al., 2021).

The literature highlights several well-documented advantages of BL. First, it supports improved academic performance, deeper cognitive engagement, and increased learner motivation (Ashraf et al., 2022). This is achieved through a strategic mix of classroom interaction and online adaptability. Second, BL accommodates flexible scheduling and promotes continuous communication, which is particularly advantageous for adult learners or those with competing

responsibilities (Nikiforova, 2021). Third, BL supports personalized learning by enabling instructors to tailor content to learners' individual needs using digital tools (Ashraf et al., 2022).

However, implementing BL also presents considerable challenges. Key issues include limited internet access, inadequate training for both instructors and students, and insufficient technological infrastructure (Asaad Hamza Sheerah, 2020). Teachers and learners often face barriers such as unstable connectivity, lack of technical competencies, and suboptimal audio/video performance (Bux Jumani, Malik, & Akram, 2018).

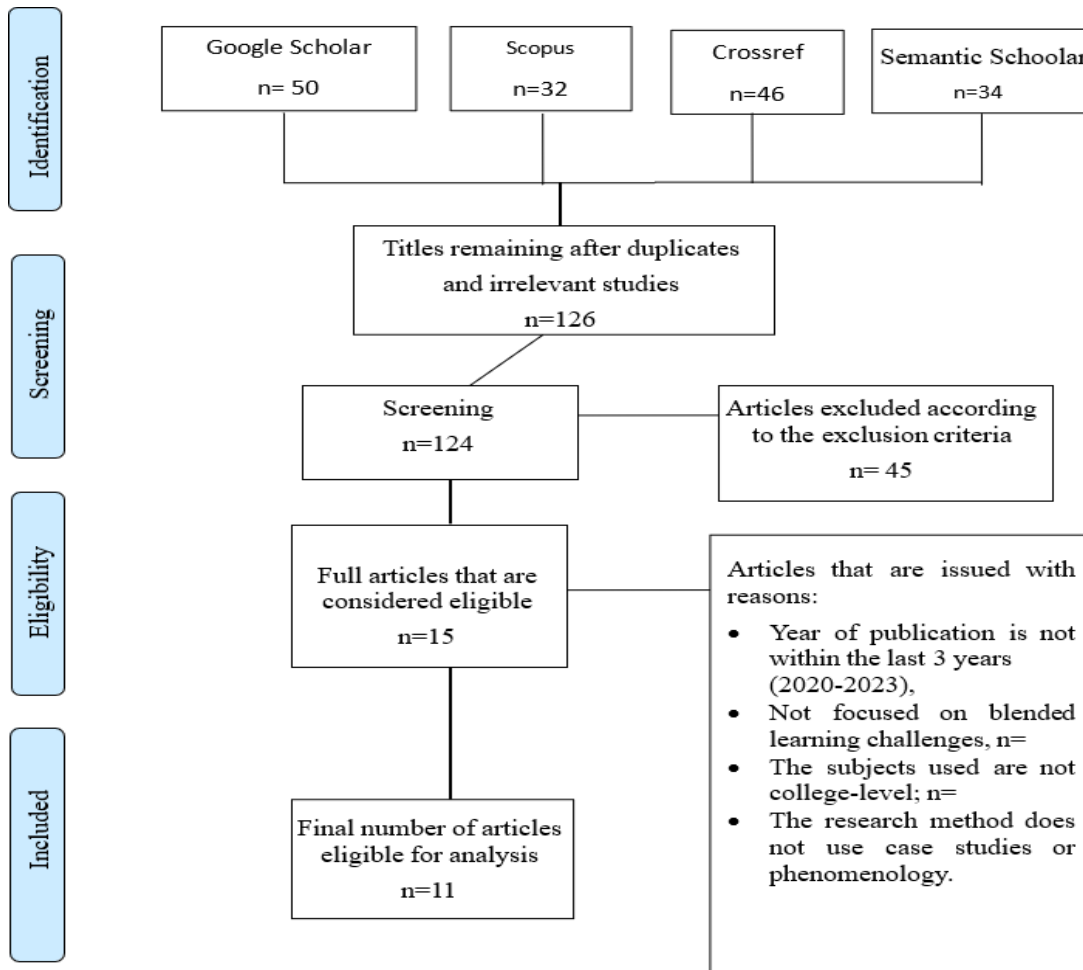
Moreover, educators may struggle to adapt pedagogical strategies to fit digital platforms due to limited training and support (Muslem, 2021). Addressing these challenges requires comprehensive planning, ongoing professional development, and institutional investment in digital infrastructure and support systems.

2. Research Method

The literature search yielded 162 initial results from four databases: Google Scholar (n=50), Scopus (n=32), Crossref (n=46), and Semantic Scholar (n=34). After removing duplicates and irrelevant studies, 126 unique titles were retained for screening. A total of 124 articles proceeded to the screening phase, during which 45 articles were excluded based on predetermined criteria, such as lack of relevance to blended learning or ELT, and unavailability of full text.

From the remaining pool, 15 full-text articles were assessed for eligibility. Four articles were excluded at this stage for not meeting the inclusion criteria: (1) publication outside the 2020–2023 window, (2) not focused on BL challenges or benefits in ELT, (3) non-college-level participants, or (4) use of non-qualitative methodologies (e.g., not case study or phenomenological). Ultimately, **11 studies** were included in the final synthesis.

Figure 1: PRISMA Flow Diagram of Systematic Review Stages



Source: Moher, Liberati, Tetzlaff, & Altman (2010)

3. Results and Discussion

The analysis of the 11 selected studies revealed several key themes pertaining to the research questions. The challenges (RQ1) and benefits (RQ2) of blended learning (BL) in English Language Teaching (ELT) are categorized thematically below.

3.1. Thematic Analysis of Challenges (RQ1)

3.1.1. Technological and Infrastructural Barriers

Seven studies identified technical limitations as primary constraints during the implementation of BL, particularly in the early stages. Unstable internet connectivity, insufficient access to compatible devices, and a lack of institutional digital infrastructure were the most cited issues (Gqokonqana et al., 2022; Sheerah, 2020). These problems were especially critical during the first two weeks of deployment, often impeding both teaching and learning activities. Though some obstacles diminished over time with adaptation, the persistence of infrastructural gaps underscored the necessity for institutional interventions such as system upgrades and improved access to digital tools.

3.1.2. Pedagogical and Instructional Challenges

Five studies highlighted the pedagogical complexity involved in adapting traditional classroom practices to digital environments. Teachers frequently lacked adequate training in digital pedagogy, leading to ineffective course design and delivery (Muslem, 2021; Ashraf et al., 2022). Limited instructional time, large class sizes, and rigid curricular structures further complicated the implementation. Moreover, there was often an absence of meaningful online interaction, which weakened student engagement and reduced the effectiveness of BL environments.

3.1.3. Student-Related Challenges

Six studies reported student-related obstacles, including low motivation, poor self-regulation, and insufficient digital literacy (Namysova et al., 2019; Daflizar et al., 2022). Without the structured environment of a traditional classroom, many students found it difficult to manage their time, remain focused, or engage consistently with the material. Additionally, disparities in access to technology contributed to unequal learning opportunities, particularly for students from under-resourced backgrounds.

3.2. Thematic Analysis of Benefits (RQ2)

3.2.1. Enhanced Engagement and Performance

According to five studies, BL had a positive impact on student engagement and academic performance. The integration of multimedia tools and interactive platforms facilitated deeper cognitive processing and made learning more engaging (Ashraf et al., 2022; Octavia et al., 2021). Notably, flipped classroom models were associated with improved or equivalent learning outcomes when compared to traditional settings.

3.2.2. Flexibility and Accessibility

Six studies emphasized the flexibility offered by BL models, especially for university-level learners balancing academic and personal responsibilities (Nikiforova, 2021; Sheerah, 2020). The asynchronous components allowed students to access materials at their own pace, while synchronous sessions preserved real-time interaction. This duality enabled broader accessibility, particularly for adults or working students.

3.2.3. Personalized Learning Pathways

Three studies identified that BL facilitated personalized learning through the use of adaptive tools and learning management systems (LMSs). Instructors were able to tailor instruction to accommodate diverse learning styles and paces (Tirtanawati & Prastiwi, 2022; Prasetya, 2021). This adaptability supported learner autonomy and contributed to more meaningful educational experiences.

4. Conclusion

This systematic literature review confirms that blended learning (BL) in English Language Teaching (ELT) presents numerous advantages—such as increased student engagement, improved academic performance, and flexible learning pathways. However, these benefits are accompanied by ongoing challenges, particularly related to technological access, digital literacy, and the requirement for self-directed learning, particularly in higher education contexts.

Despite these limitations, the evidence suggests that many implementation barriers can be addressed through proactive strategies. These include strategic institutional planning, strong administrative support, and sustained professional development for instructors. An effective BL environment depends not only on access to technology and infrastructure but also on pedagogical approaches that are responsive to diverse learner needs.

In summary, BL holds substantial promise for enhancing ELT when supported by appropriate guidance, institutional systems, and innovative teaching practices. Future research should investigate scalable and context-sensitive approaches that promote equity, long-term sustainability, and active learner participation in varied educational environments.

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A Needs-Responsive Approach to an English Language Course for an Early Childhood Education Major in Indonesia

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Abstract

This paper reports on a needs analysis underlying an English for early education course using a need-based learning approach designed to enhance the English abilities of undergraduate students in early childhood education. Employing a mixed method, the needs analysis was done prior to the course design through questionnaire responses and an interview with their English lecturer. The questionnaire, featuring 14 Likert scale items, covered students' expectations, course desires, motivations, proficiency levels, and learning methods. Results show a unanimous agreement on the necessity of English, with a strong emphasis on speaking skills. Students expect the course to enhance both their teaching skills and their language proficiency, driven primarily by professional motivations. The interview reveals the course's main objective: preparing students to teach English to young learners. However, students also seek to improve their English skills. Thus, the curriculum should integrate pedagogical instruction with language enrichment, ensuring relevance to future teaching contexts. These findings highlight the critical role of English proficiency in Early Childhood Education and the need for a balanced instructional approach. Based on these insights, this research informs the development of a syllabus that effectively combines pedagogical strategies with language skill enhancement.

Keywords: *curriculum development, English for early education, English language teaching, ESP, needs analysis*

Introduction

The English language has become a fundamental component of educational systems worldwide, with instruction beginning at increasingly early stages and continuing through higher education. From kindergarten classrooms to university levels, English proficiency is recognized as a crucial skill for global citizenship and academic achievement (Crystal, 2021; Dearden, 2022). This widespread and multisite implementation reflects the language's role as a lingua franca in international communication, scientific research, and digital connectivity (Jenkins & Panero, 2024). In Indonesia, English language instruction has been systematically integrated as an obligatory lesson across educational levels, beginning with early childhood programs and extending through tertiary education, acknowledging its critical importance for students' future academic and professional endeavors in an increasingly interconnected world.

Moreover, the significance of English language proficiency becomes particularly pronounced for university students pursuing early childhood education (ECE) majors, who will ultimately shape the linguistic foundations of future generations. Those prospective educators

require not only personal English competency but also the pedagogical knowledge and skills necessary to introduce young learners to a foreign language effectively and appropriately (Butler & Le, 2018). Concerning the benefits of acquiring a foreign language throughout early childhood, research has demonstrated that early English language learning can provide measurable benefits for children without measurable downsides, particularly when implemented through age-appropriate instructional approaches (Chen et al., 2022). Furthermore, limited exposure to English before elementary school does not harm native language development, while providing advantages in both English and first language achievement (Chen et al., 2022). Given these findings, students of ECE majors must be equipped with a sophisticated understanding of bilingual system implementation, culturally responsive teaching methods, and age-appropriate English instruction techniques that align with contemporary research on early childhood language acquisition (García & Wei, 2014).

Subsequently, despite the growing body of international research on early childhood English education, significant gaps remain in understanding how to prepare ECE teachers in diverse cultural and linguistic contexts effectively (Su et al., 2023; Sulistiyo et al., 2021; Urban et al., 2023). Previous research has predominantly focused on contexts of developed countries and urban metropolitan areas, but there is limited attention to Southeast Asian contexts, particularly Indonesia, with its unique cultural, linguistic, and socioeconomic characteristics (Aukerman & Chambers Schuldt, 2016; Niehaus & Adelson, 2014). Additionally, existing studies lack comprehensive, culturally responsive needs assessment frameworks specifically designed for Indonesian ECE contexts, where English is regarded as a foreign language with limited environmental exposure. The existing challenge is further compounded by insufficient understanding of how to adapt English language curricula to diverse Indonesian contexts, including rural and resource-constrained environments where access to native speakers, technological resources, and specialized materials may be limited. This gap represents a critical oversight, as Indonesia's status is the world's fourth most populous country, and its growing emphasis on early childhood education quality improvement (UNICEF, 2023).

The present study tries to address these gaps by conducting a comprehensive investigation specifically focusing on English language course design for ECE majors in Indonesian higher education. This research introduces a needs-responsive approach that systematically incorporates both learners and instructors to inform curriculum development decisions (Brown & Brown, 2018). Unlike previous studies that have primarily examined either English language teaching or ECE pedagogy in isolation, this investigation explores their intersection within the specific context of Indonesian teacher preparation programs. The study's methodological innovation lies in its development of a culturally responsive needs assessment framework that accounts for Indonesia's diverse linguistic landscape, varying socioeconomic conditions, and distinct cultural values regarding early childhood development and language learning.

This research makes a significant contribution to the field by addressing the unique Indonesian context where English is taught as a foreign language with limited natural exposure, requiring specialized pedagogical approaches and careful consideration of local implementation

challenges. The study's findings will inform evidence-based curriculum design that bridges international best practices with local realities, ultimately supporting the preparation of ECE teachers who can effectively introduce English to young Indonesian learners while respecting cultural values and working within existing resource constraints (Nunan, 2022). By establishing a replicable framework for needs-responsive curriculum development, this research provides a model that can be adapted to similar contexts across Southeast Asia and other regions facing comparable challenges in preparing ECE teachers for multilingual classroom environments. Therefore, the researchers formulated two research questions:

1. What are the English language needs of undergraduate students majoring in Early Childhood Education in Indonesia?
2. How can a needs-responsive English course be designed to integrate pedagogical content with language skill development for Early Childhood Education students?

Research Method

Research Design

The present study employed a mixed-methods research design, which combines quantitative and qualitative methods to conduct a comprehensive analysis for developing an English language course for undergraduate students majoring in early childhood education. The form of mixed methods used is a quantitative survey supplemented by a lecturer interview. The quantitative phase involved distributing a structured questionnaire containing 14 Likert-scale items to capture students' expectations, motivations, current proficiency levels, preferred learning methods, and specific course desires. Subsequently, the qualitative phase involved a semi-structured interview to provide deeper insights into the course objectives and the lecturer's perspective on students' needs and readiness. By integrating both quantitative and qualitative data, this research ensured a more holistic understanding of learner needs, which in turn informed the design of a balanced and relevant syllabus combining pedagogical instruction with English language proficiency development.

Prior to implementation, the present study also involved experts in the related field in designing the research instruments. It was conducted at a state university in Malang, Indonesia. The first step in collecting data involved analyzing and exploring the students' needs in detail for the English for Early Childhood Education course. Afterwards, the analysis process focused on the students' basic English competence prior to starting the course, the preferred and necessary English skills for teaching English in early childhood schools, and the modes of material preferred by the students for learning English.

Research Participants

The participants of this study were an English lecturer for early childhood education from a state university in Malang and 24 students from the class. The rationale is that the class is open to research to assist in developing an appropriate syllabus for the students.

Research Instrument and Data Collection

There were two main instruments used to collect the data. The primary instrument was a questionnaire consisting of 14 Likert-scale items, designed to capture undergraduate students' expectations, desired course content, motivations, self-assessed English proficiency levels, and preferred learning methods. This questionnaire was distributed to all participating students prior to course design to ensure their genuine needs and perspectives were documented. In addition to the student survey, qualitative data were collected through an in-depth interview with the students' English lecturer. This interview lasted about thirty minutes to one hour and aimed to provide contextual insights about course objectives and student abilities from the instructor's perspective, thereby supplementing and enriching the student questionnaire data.

The data collection process was structured in a sequential manner: first, the questionnaire was administered, allowing researchers to aggregate broad, quantifiable data regarding student needs and interests. Subsequently, the interview with the English lecturer was conducted to delve deeply into themes and ambiguities arising from the survey responses. Both instruments were piloted to ensure clarity and reliability prior to full implementation. The combination of these instruments enabled comprehensive triangulation of data sources, increasing the validity and depth of the needs analysis.

Data Analysis

The analysis of the collected data followed a systematic, multi-step approach. The quantitative questionnaire responses were aggregated and analyzed statistically using SPSS, with frequency counts and means calculated for each Likert-scale item to identify prevailing trends, levels of agreement, and priorities among the students regarding English needs, preferred skills, and course expectations. This statistical analysis allowed the research team to pinpoint consensus areas, such as the unanimous emphasis on the importance of English, especially speaking skills, and the desire for professional and pedagogical enrichment.

For the qualitative data gathered through the instructor interview, thematic analysis was employed. The interview transcript was examined to extract recurring themes and specific needs related to teaching English to young learners and to illuminate the broader professional expectations for early childhood educators. Triangulating these quantitative and qualitative findings provided a holistic understanding of the target group's needs. Results from both sources were integrated to guide the development of a balanced syllabus that blends language proficiency enhancement with pedagogical skills, ensuring the course is directly aligned with student aspirations and the demands of early childhood English education.

Results and Discussions

The English Language Skills Needed by Undergraduate Students Majoring in Early Childhood Education in Indonesia

The first research question is "What are the English language needs of undergraduate students majoring in Early Childhood Education in Indonesia?". To answer this research question, the researchers conducted data collection through distributing questionnaires to the students. Table

1 below displays the results of 14 Likert-scale questionnaire regarding the students' need analysis of English skills.

Table 1. Students' needs analysis questionnaire result

Question	Strongly Disagree	Disagree	Agree	Strongly Agree	Mean	SD
English language skills are essential in early childhood education courses.	0	0	29.2%	70.8%	3.71	0.464
I am taking this English course because it is required, but I do not particularly like English.	20.8%	50%	29.2%	0	2.92	0.717
I am taking this English course because it is relevant to my future needs as an early childhood educator.	0	0	41.7%	58.3%	3.58	0.504
I need to master English vocabulary to teach early childhood education students.	0	0	25%	75%	3.75	0.442
I need to master English listening skills to teach early childhood education students.	0	0	33.3%	66.7%	3.67	0.482
I need to master English writing skills to teach early childhood education students.	0	4.2%	20.8%	75%	3.71	0.550
I need to master English-speaking skills to teach early childhood education students.	0	0	16.7%	83.3%	3.83	0.381
I must be able to explain English material in early childhood education to be ready to become a teacher.	0	0	33.3%	66.7%	3.67	0.482
I have experience learning English for early childhood education.	0	41.7%	45.8%	12.5%	2.71	0.690
I got good English grades in my previous lessons.	0	37.5%	54.2%	8.3%	2.71	0.624
I have an English proficiency certificate.	12.5%	62.5%	20.8%	4.2%	2.17	0.702
I enjoy learning English in a fun classroom.	0	4.2%	41.7%	54.2%	3.50	0.590

I find it easier to learn English using various media (pictures, videos, games, songs, etc.).	0	0	41.7%	58.3%	3.58	0.504
I will be satisfied if this English course improves my English proficiency and pedagogical skills.	0	8.3%	25%	66.7%	3.58	0.654

Table 1 reveals compelling insights into the English language needs of Indonesian Early Childhood Education students, demonstrating consensus regarding the importance of English proficiency in their future professional roles. The data shows remarkably strong agreement across all four language skills among students, with speaking skills receiving the highest priority (83.3% strongly agree), followed by vocabulary and writing skill mastery (both 75% strongly agree). It is in accordance with research by Copland et al. (2014), who found that early childhood educators require sophisticated oral communication skills to effectively model language use for young learners. The emphasis on speaking skills reflects the interactive nature of early childhood pedagogy, where teachers must demonstrate clear pronunciation, intonation, and communicative competence to support children's language acquisition processes.

However, a striking and concerning contradiction emerges between students' recognition of English's importance and their actual proficiency levels. Although 100% of respondents acknowledge English as essential for ECE, only 25% of them have obtained English proficiency certificates, and merely 62.5% obtained good grades in their previous English course material. This disparity highlights the fundamental challenge of developing practical English proficiency within Indonesia's limited English-exposure environment. This proficiency gap primarily reflects the constrained opportunities for authentic English language practice in Indonesian daily life, where English functions as a foreign language rather than a second language. This also corroborates findings by Zein (2022) in her comprehensive study of English education in Indonesian primary schools, where she identified significant disparities between policy expectations and actual teacher preparedness. The implications of this limited exposure are significant for ECE course design, in which the course must compensate for the lack of natural English immersion by creating intensive, authentic language use opportunities within the academic environment.

Meanwhile, the high rate of satisfaction expectation (66.7% strongly agree) with courses that improve both English proficiency and pedagogical skills supports the effectiveness of Content and Language Integrated Learning (CLIL) approaches. This finding resonates with Cenoz (2015) framework for successful CLIL implementation, which emphasizes the symbiotic relationship between content mastery and language development. The students' preference for multimedia learning approaches (100% agree or strongly agree) aligns with contemporary research on multimodal pedagogy by Yelland (2018), who argues that diverse representational modes enhance both comprehension and retention, particularly crucial for non-native English speakers.

Subsequently, the strong agreement (58.3% strongly agree, 41.7% agree) that the English course aligns with future professional needs indicates successful needs-responsive design. This professional relevance perception supports Hutchinson and Waters' foundational ESP principles, where language learning motivation increases when students perceive direct connections to their professional contexts. The recognition that ECE teachers' English skills significantly influence their readiness as the teachers of children (66.7% strongly agree and 33.3% agree) demonstrates a sophisticated understanding of their role as language models, reflecting what Koshyk et al. (2021) describes as the "ripple effect" of teacher language competence on young learners' linguistic development. These results strongly advocate for needs-responsive English courses that prioritize oral communication skills while maintaining integrated pedagogical content. The data suggests that effective ECE English programs should address the confidence gap through scaffolded learning experiences, leverage multimedia approaches for enhanced engagement, and maintain explicit connections between language learning and professional practice. The relatively positive response to fun learning environments (41.7% agree and 54.2% strongly agree) supports the implementation of play-based methodologies that mirror ECE teaching principles, creating authentic learning contexts that prepare students for their future classrooms.

In conclusion, the students overall demonstrate positive perspectives of learning English for teaching their future childhood students. The most required professional skills are speaking and vocabulary. However, a significant gap exists between students' recognition of English's importance and their actual proficiency levels. Only 25% of students have obtained English proficiency certificates, and a total of 62.5% express excellent performance in mastering the previous course material. The students' satisfaction with courses that improve both English proficiency and pedagogical skills supports the effectiveness of Content and Language Integrated Learning (CLIL) approaches. The students' preference for multimedia learning approaches aligns with contemporary research on multimodal pedagogy. The study suggests that effective ECE English programs should address the confidence gap through scaffolded learning experiences, leverage multimedia approaches, and maintain explicit connections between language learning and professional practice.

A Needs-Responsive English Course Design Integrating Pedagogical Content with Language Skill Development for Early Childhood Education Students

The second research question is "How can a needs-responsive English course be designed to integrate pedagogical content with language skill development for Early Childhood Education students?" The instructor mentioned that the results of the students' needs analysis inform the syllabus design, which emphasizes motivational components. The students are perceived as novices in English, although they are at the university level.

"Because I teach students who aren't particularly skilled at English, I motivate them. The initial meeting is consistent with it. They naturally want to enhance their English. They don't know where to begin, and they're full

of doubt, so I prioritized motivation in learning. The initial meeting undoubtedly improves motivation.”(Interview 1; 05.01-05.03)

Regarding the learning objectives and outcomes put in the syllabus, the lecturer should integrate with the specified objectives from the university.

“The learning objectives were adopted from the campus vision and missions.”(Interview 1; 05.01-05.03)

Subsequently, the most crucial English skills put in the syllabus are speaking, since the students are going to teach children in the future.

“Because the target is early childhood, the important thing is that they can speak. The words can't be complicated for small children. I also understand their basic vocabulary. They just need to practice speaking.” (Interview 2; 10.04-11.30)

Going on to the content of the syllabus, it is imperative to teach the students about the ways of teaching children, such as how to introduce a foreign language to the children to prevent speech delay, etc.

“In the initial weeks, we learn about the basic theory of how to teach a foreign language to children. It is important because if we teach the children in the wrong way, it can cause speech delay or other language disorders.” (Interview 1; 09.16-10.12)

Upon mastering the theory of language instruction for children, the syllabus progresses to strategies for teaching English to young learners, followed by the mastery of English language skills, culminating in the development of effective lesson plans for early childhood English education.

“After mastering the correct way to teach a foreign language or English, I begin to learn about the various learning approaches in English, the materials that must be taught in English, how to create a lesson plan, and finally, I give them a test to create a lesson plan before the midterm exam. After that, I offer them genuine instruction.” (Interview 1; 09.16-10.12)

When the lecturer was asked about the idea of appropriate assessments, she explained that the assessment should cover both testing English proficiency and teaching English proficiency.

“The assessments are designed in two forms. The first is to examine their theoretical mastery, asking about how to be an English teacher of children,

the way to entertain young learners before teaching, the appropriate teaching strategies to teach them, etc. The second form of assessment is to examine their own English skills, such as examining the structures, vocabulary, writing, listening, and speaking.” (Interview 2; 07.09-10.12)

The findings from this study reveal several important insights regarding the design of needs-responsive English courses for early childhood education students that merit theoretical and practical consideration. The instructor's emphasis on prioritizing motivation in the initial meeting aligns with established principles of language teaching. This approach reflects contemporary understanding of culturally responsive teaching, which validates and affirms the cultures of the students and incorporates their cultures in multiple aspects of learning and the environment in meaningful ways (Dickson et al., 2016). The focus on speaking skills demonstrates pedagogical soundness, as teacher communication-facilitating behaviors, those that create and sustain engagement in conversational turns, are the most powerful predictor of growth in children's vocabulary from preschool to kindergarten (Hindman et al., 2022). Furthermore, the curriculum structure moving from theoretical foundations to practical application represents what curriculum design literature identifies as a forward systematic progression that ensures proper grounding before implementation (Justice et al., 2018).

The instructor's dual assessment framework, evaluating both theoretical mastery and practical English skills, represents contemporary best practices in early childhood assessment, which emphasize that different purposes require different types of assessments, and the evidentiary base that supports the use of an assessment for one purpose may not be suitable for another. This approach acknowledges the complex competency requirements for early childhood English educators and reflects the need for consistent training on language and literacy content and the benefits of teacher talk for children's language development in educator preparation programs (Weadman et al., 2021). The emphasis on preventing speech delay through proper teaching methods demonstrates understanding that educators' language and literacy knowledge has been shown to be correlated with more desirable classroom practices and children's (Piasta et al., 2020). This needs-responsive approach represents a promising model for preparing early childhood educators who can effectively integrate English language instruction with developmentally appropriate practices, addressing both the linguistic and pedagogical demands of contemporary early childhood education while ensuring that future teachers possess both theoretical knowledge and practical skills necessary for effective instruction.

Conclusions

These comprehensive needs analysis study represents a significant advancement in understanding how to design culturally responsive English language curricula for Early Childhood Education (ECE) majors in Indonesian higher education contexts. Findings reveal critical insights regarding English for Specific Purposes (ESP) frameworks to encompass the complex intersection of language proficiency development, pedagogical content knowledge, and culturally sensitive

teacher preparation. The unanimous recognition among students that English proficiency is essential for ECE practice (100% agreement), coupled with their prioritization of speaking skills (83.3% strongly agree), demonstrates sophisticated awareness of their future professional responsibilities as language models for young learners. However, the striking disparity between students' acknowledgment of English importance and their actual proficiency levels, with only 25% in total holding English proficiency certificates and merely 62.5% expressing excellent performance in mastering the previous course material, illuminates a fundamental challenge facing Indonesian ECE teacher preparation programs. This proficiency gap reflects broader systemic issues in English language education within Indonesian higher education, where policy expectations often exceed institutional capacity and student preparedness, thereby necessitating innovative pedagogical approaches that bridge theoretical knowledge with practical language competency development.

The study's methodological contribution lies in its development of a comprehensive needs-responsive framework that integrates both learners' and instructors' perspectives while accounting for Indonesia's unique linguistic, cultural, and socioeconomic context as the world's fourth most populous nation with limited English environmental exposure. The instructor's dual assessment approach, evaluating both theoretical mastery of early childhood English pedagogy and practical language skills, represents a paradigmatic shift toward authentic assessment practices that recognize the multifaceted competencies required for effective ECE English instruction. The curriculum progression from foundational theories of child language development to practical lesson planning exemplifies what curriculum design literature terms "forward design," ensuring systematic scaffolding that prevents potential language disorders while building pedagogical confidence. The emphasis on motivation-centered instruction, multimedia learning approaches, and Content and Language Integrated Learning (CLIL) methodologies aligns with contemporary research on multimodal pedagogy and culturally responsive teaching practices. These findings have profound implications for ECE teacher preparation programs across Southeast Asia and similar contexts, suggesting that effective English curricula must address not only linguistic competencies but also cultural sensitivity, developmental appropriateness, and professional identity formation. The research establishes a replicable model for needs-responsive curriculum development that can be adapted to diverse contexts while maintaining rigorous standards for teacher preparation, ultimately contributing to improved English language learning outcomes for young children and enhanced professional competency for ECE educators in multilingual environments.

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