

## Bridging Vocabulary Gaps for Young ESL Learners in Rural Setting through Digital Tool: A Review

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### Abstract

In the current state of the world, digital tools have been widely used in the field of education. Various types of digital tools have been utilised in the classroom to ensure that teachers are able to achieve their teaching and learning objectives of various subjects, English being one of them. The teaching of vocabulary is not always easy for teachers as pupils come from different backgrounds economically and geographically thus indicating that they possess different levels of vocabulary knowledge. This paper explores the impact of digital tools on vocabulary teaching and learning. A comprehensive search across Educational Resources Information Centre (ERIC) and Google Scholar, identified 30 articles, of which 12 met the inclusion criteria for detailed analysis. These studies, conducted in various educational settings and countries, involved learners ranging from young children to adults. The digital tools examined included mobile applications, online platforms, interactive games, and multimedia resources. The findings consistently showed that digital tools significantly enhance vocabulary acquisition, with 12 studies reporting notable improvements in vocabulary knowledge, retention, and learner engagement. While the results are promising, the variability in outcomes suggests that the success of digital tools depends on factors such as implementation methods and learner demographics. This paper highlights the potential of digital tools in enriching vocabulary instruction and recommends further research to optimise their usage and investigate long-term impacts.

**Keywords:** Digital Tools, Vocabulary Teaching, Educational Technology, Language Learning, Review

### Introduction

Technology has become a game-changer in education, revolutionising the way we teach and learn. With innovations constantly reshaping our world, education is on a quest for fresh ideas to keep pace (Hazar, 2020). The days of relying solely on books and lectures are history, now, thanks to technology like the internet, learning is no longer confined to the

classroom. Imagine a world where knowledge is at your fingertips, accessible anytime, anywhere. It's an exciting time to be a student or a teacher, with endless possibilities for exploration and discovery.

In the present day, due to an increasing reliance on technology, the utilisation of digital technologies has grown prevalent in the realm of education. Teachers as well as pupils are utilising a range of digital tools to augment the process of teaching and learning. Vocabulary education has significantly improved due to this progress, especially in the field of English language training, where language proficiency is becoming more and more crucial. The significance of acquiring new vocabulary in the process of learning a second language is generally acknowledged and strongly substantiated by research (Ardasheva et al., 2019). Developing a strong vocabulary is essential for achieving fluency in a second language (L2), as it enhances abilities in hearing, speaking, reading, and writing (Gorjian et al., 2011).

Teaching students in vocabulary can be a challenging endeavour, particularly when they have varying economic and geographical backgrounds. These findings indicate that individuals may possess varied degrees of vocabulary proficiency and have diverse learning preferences. Nomass (2013), as mentioned in Raw and Ismail (2021), states that the rapid progress of digital technologies has forced teachers to acquire the digital skills necessary for teaching and learning. Traditional approaches are no longer suitable for the present demands of the education system. Pupils no longer prefer traditional teaching techniques for vocabulary. Teachers must now use appropriate digital tools to ensure that pupils can effectively learn vocabulary.

In this context, the swift expansion of digital technology has opened up a new avenue for teachers to deliver lessons in the classroom, offering diverse learning possibilities and optimising 21st century education worldwide (Melanie & Yunus, 2021). The use of digital resources has been a progressively captivating topic among educators. Digital technologies offer numerous benefits, such as the capacity to distribute instructional materials in an interactive manner, involve students actively, and give personalised learning experiences that cater to individual requirements. Given the increasing interest in utilising digital technologies for vocabulary instruction, it is crucial to conduct a thorough analysis of the effects of these tools in vocabulary acquisition. By exploring the effects of these digital tools, we may gain a deeper understanding of their ability to improve the teaching and learning of vocabulary. Additionally, we can discover the elements that impact the success of using digital tools in an educational setting.

## **Methodology**

This paper will discuss articles related to the impact of digital tools on vocabulary acquisition in the context of teaching and learning. A systematic and thorough method was utilised to find, assess, and combine pertinent research studies. The approach consists of several crucial stages, including literature search, establishment of inclusion and exclusion criteria, data extraction, data analysis, and quality assessment. Next, a limited number of scholarly databases were utilised to conduct a literature search on the utilisation of digital resources in the process of acquiring vocabulary. The article acquisition process commenced with a search conducted in the Education Resources Information Centre (ERIC) and Google Scholar databases. At first, the use of broad search terms to collect a comprehensive and

integrated collection of important academic papers. Furthermore, to accelerate the process of locating relevant material, a limited number of keywords were employed throughout the search for pertinent publications and study. The approach incorporated keywords such as 'digital tools', 'vocabulary teaching', 'vocabulary acquisition', and 'language learning'. The choice to utilise keywords was made to prevent any confusion and filter out irrelevant search results that are not related to the use of digital tools for enhancing vocabulary learning.

The selection of 12 articles reflects the limited availability of research specifically targeting the use of digital tools for vocabulary acquisition in rural contexts. While some studies directly examine rural learners, others provide valuable insights into the application of digital tools in similar challenging environments. This focused selection ensures relevance and allows for a detailed exploration of effective strategies and barriers specific to rural education. Furthermore, to ensure the review's relevance to the present circumstances, only scholarly publications and research published between 2020 and 2024 were included, aligning with the prevailing trends in education. Furthermore, the decision to exclusively concentrate on articles within a specific range is intended to enhance the relevance of the evaluated articles, aligning them with the prevailing concerns surrounding the education system, particularly in the realm of second language instruction and learning. To ensure the quality and significance of the research incorporated in this review, precise criteria for inclusion and exclusion were established. The inclusion criteria consisted of studies published in peer-reviewed journals that focused on the use of digital tools in vocabulary teaching and learning. These studies involved participants who were learning English as a second or foreign language. Additionally, the articles had to be written in English and the studies had to employ quantitative, qualitative, or mixed-method research designs. The exclusion criteria excluded research that were not directly relevant to vocabulary acquisition or teaching, articles that focused on languages other than English, conference papers, dissertations, theses, and studies published before 2020.

The results from the studies that were included were combined to provide a comprehensive knowledge of how digital tools affect the teaching and acquisition of vocabulary. The objective of this synthesis was to identify efficacious digital tools and instructional approaches, as well as the difficulties and constraints linked to their utilisation. The findings were presented in a narrative style, including tables and figures as needed, to emphasise the main discoveries and their significance for educators and researchers.

## **Literature Review Findings and Discussion**

### *Vocabulary Knowledge*

Researchers are continuously studying the most efficient techniques for teaching vocabulary since it plays a crucial role in developing language proficiency and achieving competency in the target language (Ting & Tan, 2021). Murthy (2020) asserts that when it comes to teaching and learning a foreign or second language, vocabulary should be the initial and obligatory knowledge that must be imparted to learners. Thus, it is imperative for every English teacher to give priority to the development of strong vocabulary acquisition in early learners. In addition, acquiring a sufficient amount of vocabulary would empower learners to enhance their proficiency in other language abilities and facilitate the development of efficient communication, as individuals would be capable of understanding one another.

According to Yunus and Saifudin (2019), having good vocabulary acquisition allows learners to express their point of view in the language they are communicating. Through the statement, it can be said that by knowing the suitable language to use when communicating, learners are able to converse in a meaningful way that can help to nurture better understanding of what is being taught. Besides, vocabulary acts as a medium for learners to acquire new knowledge. Limited vocabulary acquisition would hinder the learners' development of knowledge as they are not able to converse effectively to gain understanding of the content delivered by the teachers. Having a good grasp of vocabulary is crucial for learning a second language. If learners have a limited vocabulary, they will struggle to communicate effectively with others (Robin & Aziz, 2022).

Furthermore, the acquisition of vocabulary is crucial for the development of fundamental language abilities. Francis and Simpson (2009), as mentioned in Jerry and Yunus (2021), underscore the significance of prioritising vocabulary acquisition, as words serve as the fundamental building blocks of language. Developing a strong foundation in language learning by actively acquiring vocabulary is essential, as the majority of vocabulary is acquired unintentionally through reading and digital applications. Goodwin and Ahn (2010), as referenced by Jerry and Yunus (2021), discovered that students acquire vocabulary at a faster pace when they are able to utilise morphological rules to comprehend the meanings of unfamiliar terms. According to Alqahtani (2015), vocabulary learning is essential for acquiring a foreign language. The meanings of new terms are often highlighted through reading materials or classroom instruction.

Moreover, in the process of acquiring English as a Second Language (ESL), vocabulary plays a crucial role in developing proficiency in listening, speaking, reading, and writing skills (Nation, 2013) as cited by Hazar (2020). Having an extensive vocabulary is essential for understanding and expressing language effectively. Thus, it is imperative to augment one's lexicon in order to attain proficiency in a language. This process can only occur when teachers employ effective techniques for teaching and acquiring language, as stated in the citation by Mukoroli (2011) as cited in Hazar (2020). Therefore, teachers should assist children in learning the abilities to obtain, recognize, and retain, as well as stimulate and create new word meanings to enhance vocabulary growth (Loucky, 1998; Hazar, 2020).

#### *Digital Tools in Improving Vocabulary Acquisition*

The Ministry of Education (MOE) has consistently undertaken efforts to enhance English language acquisition among Malaysian learners. Nevertheless, the endeavours encountered numerous hindrances stemming from the inadequate English language skills of the students, mostly caused by their limited vocabulary development (Yunus & Saifudin, 2019). Fortunately, the incorporation of technology in education can aid teachers in ensuring that students enhance their vocabulary acquisition (Tasa, 2020). The assertion is bolstered by Pellerin and Lavoie's (2019) statement, which affirms that the incorporation of technology, such as digital tools, offers teachers a range of instructional and learning methods that accommodate diverse learners, irrelevant to their individual passions and interests.

Several studies have been carried out to evaluate the influence of utilising digital tools on enhancing vocabulary learning among English as a Second Language (ESL) learners. A study conducted by Mudra (2020) found that including digital tools in ESL/EFL classrooms enhances

students' vocabulary acquisition. This is attributed to the increased motivation students have when used digital tools, as compared to traditional teaching techniques. In addition, the application of digital tools can be employed to assist and enhance the learning process of the learners (Robin & Aziz, 2022). Utilising digital tools, such as PowerPoint presentations, enables teachers to customise and incorporate materials from several sources into a cohesive slideshow presentation (Robin & Aziz, 2022). For instance, students will gain a more comprehensive comprehension of specific vocabulary issues as the PowerPoint presentation can effectively demonstrate many examples of vocabulary.

On top of that, digital tools have become highly important in the current state of the educational system, particularly in the teaching and learning of the English language (Fabian & Rosario, 2023). Elhami and Ahangar (2020) found that learners who incorporated digital resources into their English language learning achieved significantly higher scores on vocabulary tests compared to those who did not employ digital tools. Moreover, the use of digital technologies enables learners to focus and engage actively in vocabulary sessions (Ramezanali & Faez, 2019). Moreover, the utilisation of digital resources improves the ease of access to vocabulary acquisition for learners. Additionally, it demonstrates its effectiveness as a tool for acquiring vocabulary, as it allows learners to actively participate in reading, writing, listening, and speaking exercises in the desired language.

Utilising digital resources can effectively enhance learners' vocabulary development by employing word games (Ramos, 2021). Utilising digital tools can enhance and facilitate the acquisition of specific vocabulary by intentionally fostering vocabulary knowledge as learners engage in enjoyable and entertaining games. In addition, utilising digital technologies for vocabulary instruction creates an engaging but accommodating learning environment for learners. Some digital tools that help enhance vocabulary acquisition include Kahoot, Quizziz, and Quizlet. These platforms provide learners engaging and beneficial learning opportunities. In order to provide English learners with optimal learning materials, it is imperative for teachers to integrate digital tools into their methods of teaching (Fabian & Rosario, 2023). The findings also emphasise the potential for digital tools to foster active participation and engagement among rural learners, bridging vocabulary gaps and improving retention. However, the variability in outcomes across studies suggests that the success of digital tools depends on thoughtful implementation, robust teacher training, and adequate technological infrastructure.

#### *Active Participation via Digital Tools*

Teachers are hoping for each pupil, especially in rural areas, to experience active learning. According to Croker and Kamegai (2017), active learning is more fun compared to passive learning where pupils are learner-centred rather than teacher-centred. Active learning requires learners to engage in activities that demand simultaneous thinking and doing (Raw & Ismail, 2021). Active learning creates environments centred on pupils to foster interaction and participation, also to diminish the gap between teachers and students.

Therefore, digital tools are used in teaching vocabulary to develop engaging learning environments that encourage active participation in the classroom. This is supported by Robin and Aziz (2022) who records pupils behaviour and improvement in participation of learning vocabulary using digital tools. Pupils will stay engaged and motivated during vocabulary

learning. Incorporating digital tools into vocabulary learning will increase pupils' participation and interest (Robin & Aziz, 2022). In other words, using digital tools will capture pupils' attention during vocabulary lessons thus, sparking their interest to learn vocabulary in class. This is similar to Hadijah, Pratolo and Rondiyah (2020) who confirmed that digital tools increase vocabulary learning by capturing pupils' attention and fostering active classroom participation in learning vocabulary in rural settings.

Utilising diverse digital technologies for vocabulary instruction, particularly in primary school, will enhance active learning and foster students' involvement with the topic (Raw & Ismail, 2021). Kent (2019) states that these technologies provide interactive learning possibilities that enhance students' ability to concentrate on the topic and enhance their vocabulary proficiency. Simultaneously, teachers in rural areas are actively implementing contemporary instructional approaches in their classrooms that are in accordance with the Malaysian National Education Blueprint. Engaging in activities that are in line with contemporary teaching approaches, such as utilising digital technologies, has a beneficial impact on students' capacity to remember and understand new material, such as vocabulary (Raw & Ismail, 2021). Therefore, digital tools are efficient in facilitating vocabulary acquisition among young learners of the English Language.

#### *Feedback and Assessment*

In his study, Robin & Aziz (2022) investigated the impact of digital tools on the feedback process in vocabulary learning. The findings revealed that these technologies greatly improve teachers' capacity to deliver personalised feedback and assistance to learners. By adopting a personalised approach, teachers are able to target and address individual areas of improvement for each student, enhancing the effectiveness of the learning process. Prior to the introduction of technology in education, providing and writing thorough comments on students' work was a challenging and time-consuming duty for the majority of teachers (Nurhasanah, 2020). Manegre and Sabiri (2020) argue that time constraints and workload sometimes restrict the frequency and depth of feedback provided by teachers in traditional approaches.

The incorporation of digital tools has fundamentally transformed this particular aspect of teaching through the analysis of the feedback process. These technologies not only make it easier to give feedback that is both timely and helpful, but they also improve the overall learning experience. The integration of digital resources in education has revolutionised classrooms, creating more dynamic, enjoyable, and enlightening learning environments. The interactive character of these technologies engages students' attention and stimulates them to actively engage in their learning (Elmahdi et al, 2018). In addition, online tools offer immediate feedback, enabling students to promptly comprehend and rectify their errors, resulting in enhanced vocabulary retention and improved language proficiency. Consequently, incorporating technology into the classroom speeds up the feedback procedure for teachers and enhances the educational experience for students, resulting in a more dynamic and efficient learning process (Elgort, 2018).

Assessment, which includes giving prompt feedback following a preliminary vocabulary acquisition test utilising digital technologies in the classroom, provides substantial chances for students to participate in self-reflection and self-assessment. This technique is

crucial for promoting self-regulated learning, in which students assume responsibility for their own learning. Instant feedback enables students to quickly recognise their strengths and limitations, facilitating self-reflection on their performance and comprehension of areas for improvement (Setiawan & Wiedarti, 2020). During this stage, students participate in a thorough assessment of their learning and construct reasoned justifications for their achievements. This act of reflection not only aids individuals in comprehending the reasons behind their performance but also provides them with techniques to improve their future performance. These insights inform their study strategies as they prepare for the post-test.

As a result, digital tools are very efficient in promoting self-regulated vocabulary acquisition among young learners of the English language. These tools offer a dynamic and interactive platform that facilitates instant feedback and customised learning experiences. Digital tools facilitate the development of self-assessment and reflection skills in pupils, enabling them to become more independent learners who can effectively monitor their own progress and attain higher levels of vocabulary competence (Raw & Ismail, 2021). This approach not only enhances their linguistic abilities but also enables them to take control over their educational achievements, resulting in long-lasting academic achievement.

#### *Challenges in using Digital Tools*

It is essential for students to be exposed to digital tools in the classroom in order to develop and apply crucial skills necessary in the 21st century. Various studies indicate that digital tools hold considerable promise for application in language schools (Alkamel & Chouthaiwale, 2018). Hence, doing a comprehensive examination of the issues and barriers associated with the utilisation of online technologies in education can enable educators to become proficient technology users. While numerous prior studies acknowledge the significance of digital instruments in English language acquisition (Kent, 2019), there are also studies that pinpoint the difficulties encountered by educators and students while utilising online resources in language learning environments. A major obstacle faced by teachers in technology-driven classrooms is their insufficient proficiency in computer abilities (Prasangani, 2019; Singhavi & Basargekar, 2019). The researchers also emphasise other obstacles, including inadequate financial backing, weak internet connectivity, unstable electricity supply, limited access of computer resources, a lack of effective teaching frameworks, insufficient time for teachers, rigidity in ICT implementation, and teachers' uncertainty to incorporate ICT in the classroom.

Rathinam *et al* (2023) points out that a lack of proper training and planning hampers the effective use of digital tools in classrooms. For lessons to run smoothly and achieve their objectives, teachers need to pre-plan by exploring the online tools they plan to use for language instruction. However, not all educators are proficient with these technologies, and without adequate training, integrating digital tools often falls short of lesson goals. Additionally, Razak *et al.* (2019) identify insufficient ICT resources and strict school regulations as significant barriers to using technology-based teaching methods. Some schools impose rigid rules that limit the use of various online tools, particularly those involving social media. This restriction narrows the range of online tools available to teachers, who must comply with these stringent regulations, thereby limiting the effectiveness of technology-enhanced learning.

Mut et al. (2020) also emphasise that a major obstacle in rural schools is the inadequate availability of ICT tools, such as PCs. This scarcity leads to students lacking proficiency in ICT, which hinders their ability to utilise digital devices and engage in digital language acquisition. The majority of students lacked the ability to use digital devices, making it nearly difficult to learn languages through online digital resources. In their study, Hadijah et al. (2020) discovered that pupils frequently experience a deficiency in self-assurance when utilising Kahoot. Certain students experience demoralisation upon receiving the lowest marks and observing their names juxtaposed with great performers on the scoreboard. Moreover, certain students' self-assurance diminishes as a result of their restricted familiarity with digital tools, since not all students are equally exposed to digital tools. Waer (2021) conducted a study examining learners' attitudes towards utilising Quizizz and discovered that students exhibited enthusiasm and derived enjoyment from their vocabulary learning sessions, even in the presence of limited internet connectivity. Nevertheless, internet access is necessary for utilising online resources, and it is exceedingly challenging to carry out lessons efficiently without a dependable connection.

### **Conclusion**

The integration of digital tools in vocabulary teaching has shown considerable promise in enhancing vocabulary acquisition among learners of English as a second language. The findings from this paper underscore the significant positive impact these tools can have on vocabulary knowledge, retention, and learner engagement. Digital tools, ranging from mobile applications to interactive games, have consistently demonstrated their potential to improve learning outcomes when implemented effectively. However, the variability in outcomes across different studies indicates that the success of these tools is contingent upon factors such as the methods of implementation and the demographics of learners. The focus on rural settings highlights the critical need to address educational inequities and provide learners in underserved areas with access to effective language learning resources.

Despite the evident advantages, challenges still exist in the widespread adoption of digital tools in education. Issues such as inadequate training for teachers, limited access to technology, poor internet connectivity, and varying levels of student familiarity with digital tools can hinder the effective use of these resources. Addressing these challenges is crucial to fully utilise the potential of digital tools in vocabulary teaching. Moreover, while digital tools facilitate more interactive and engaging learning environments, they also enable personalised feedback and self-assessment, fostering self-regulated learning among students. This aspect is particularly beneficial in promoting student-centred learning among young learners. Future research should explore long-term impacts and develop best practices for implementing digital tools in diverse rural contexts, fostering more inclusive and effective language learning environments. By doing so, educators can effectively use those digital tools to meet the evolving needs of 21st-century learners, ultimately contributing to more effective and inclusive language education.

In conclusion, this research offers significant theoretical and contextual contributions to the field of vocabulary acquisition for young ESL learners in rural settings. Theoretically, it reinforces the importance of digital tools as an effective medium for enhancing language acquisition, supporting existing pedagogical frameworks that emphasize learner engagement, interactivity, and personalized learning. By critically reviewing studies from diverse



educational environments, this research bridges gaps in understanding how digital interventions align with second language acquisition (SLA) theories. Contextually, it highlights the unique challenges faced by rural learners, including limited infrastructure and varying levels of digital literacy, while providing insights into how digital tools can be tailored to address these barriers. This research is particularly significant as it advocates for equitable access to technology-enhanced learning, thereby contributing to ongoing discourse on educational inclusivity and the development of effective strategies to narrow the urban-rural educational divide.

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