

THE CRUCIAL ROLE OF DICTIONARY APPLICATIONS IN ENHANCING VOCABULARY  
AND PRONUNCIATION SKILLS FOR ESL LEARNERS:  
A COMPREHENSIVE STUDY REVIEW

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**Abstract**

This article explores the role of dictionary applications in enhancing vocabulary acquisition and pronunciation accuracy for ESL learners, focusing on their impact on communicative competence and learner confidence. Dictionary apps provide immediate access to word meanings, pronunciation models, and real-time feedback through speech recognition technology, which allows learners to practice vocabulary and pronunciation in a low-pressure environment. The use of such applications contributes to improved language proficiency and boosts learners' confidence in communication. Additionally, the interactive features and gamification elements embedded in many dictionary apps promote engagement, motivation, and consistent practice. Despite these advantages, limitations include the potential over-reliance on technology, the inability of some apps to address nuances such as intonation, and technical issues like inaccurate speech recognition. While these tools support autonomous learning, challenges like over-dependence may hinder the development of spontaneous communication skills. This article underscores the effectiveness of dictionary applications in ESL education while recognizing the need for balance in their use.

**Keywords:** Dictionary Application, ESL Learner, Vocabulary, Pronunciation

## Introduction

The English language acts as a global platform for communication, education, and cultural exchange (Indra, 2024). Its function as a lingua franca enables effective interaction among people from different linguistic backgrounds, fostering collaboration and cultural understanding (Gulfiya, 2024). To be good in English, especially for ESL students, vocabulary is important to develop effective communication skills. A rich vocabulary provides learners with the words and phrases they need to express their thoughts, emotions, and ideas accurately. Wilkins (1972) stated that without an adequate word bank, even learners with strong grammar knowledge may struggle to convey their messages clearly.

However, vocabulary alone is not enough - pronunciation plays an equally vital role in mastering English communication. Muhammed & Abduljabbar, (2023) noted that clear pronunciation ensures that words are understood as intended, reducing the risk of miscommunication and enhancing the speaker's confidence. ESL students who practice proper pronunciation, including stress, rhythm, and intonation, can express themselves more naturally and be better understood in conversations. Several studies highlight that pronunciation proficiency significantly influences listening comprehension and overall communicative competence. (Nguyen et al., 2021; Srakaew, 2021; Tiu, 2023)

Based on extensive observations gathered from years of the author's experience teaching English, it is evident that learners frequently encounter difficulties stemming from a restricted lexical repertoire. This vocabulary limitation significantly impedes learners' language acquisition process. Specifically, challenges manifest as a lack of semantic understanding, uncertainty regarding syntactic placement, pronunciation inaccuracies, retention deficits, apprehension towards oral production, and particularly, mispronunciation of final consonants. These can result in semantic ambiguity, as exemplified by word sets such as 'like,' 'live,' and 'light.' Although these learners demonstrate proficiency in utilizing diverse mobile applications, they often exhibit a limited awareness of the functionalities and availability of certain electronic dictionary applications. This observation was reinforced through an informal discussion between the author and students about the applications they had installed. It revealed a gap between their technological competence and their effective use of language learning tools. Therefore, the role of dictionary applications in improving vocabulary and pronunciation skills is essential to be reviewed to understand how digital tools enhance language acquisition. Moreover, this paper also helps bridge the observed gap.

Vocabulary and pronunciation are foundation for communicative competence, yet they often lead to significant problems for ESL students, affecting their ability to express themselves accurately and confidently. Investigating previous research in this paper helps identify effective

app features, such as audio models, phonetic transcriptions, and contextual usage, that support learning outcomes. It also provides insights into how learners interact with these tools, the frequency and duration of their usage, and the impact on long-term retention and pronunciation accuracy. This review can highlight best practices for integrating dictionary apps into formal and informal learning environments. Furthermore, it guides educators in designing more personalized and flexible learning experiences. Ultimately, this paper supports the development of applications that empower ESL students to navigate the complexities of English communication with greater fluency and confidence.

### **Literature Review and Related**

This explores how dictionary apps enhance vocabulary and pronunciation, and their impact on ESL communicative competence. It reviews key features of dictionaries in language learning and traces the development of dictionary apps to understand their current role in language acquisition.

### **Paper Dictionary and Dictionary Application Background**

Trinh et al. (2021) suggested that dictionaries primarily function as detailed reference tools, offering word definitions, pronunciations, etymologies, and usage examples to help users understand and apply language effectively. Behera (2015) explained that etymology is the study of the origin and history of words, examining where they come from, how their meanings have changed over time, and how they have evolved across different languages and cultures. This aspect of dictionaries helps learners grasp the historical development of words, providing deeper linguistic insights. The format in which dictionaries are available, whether in print or online, significantly influences their ease of use, accessibility, and practicality, affecting how users interact with language resources.

Fauzan et al. (2022) found that traditional paper dictionaries have the advantage of being accessible without an internet connection, making them a reliable, physical resource that can be used anytime. They offer a structured and comprehensive collection of words, often including grammatical information and example sentences. However, they are static, meaning their content can become outdated, and locating words may take time compared to digital alternatives. Additionally, they lack interactive elements, such as audio pronunciations, which are essential for language learners aiming to improve their spoken skills. Zorigt & Tumurbat, (2022) claimed that the paper dictionary physical size also limits the amount of information they can hold, restricting the inclusion of extensive word variations, synonyms, and multimedia features that digital dictionaries can provide.

In contrast, online dictionaries offer constantly updated content with fast, convenient search features, allowing users to quickly find words and phrases. Wulansari & Fakhurriana (2024) suggested that they often include multimedia elements, such as sound clips for pronunciation, example sentences, and images that provide visual context. Many platforms also come with additional tools, like translation services, grammar resources, and thesauruses, which enhance the learning experience by offering comprehensive language support. Nevertheless, Zorigt and Tumurbat (2022) stated that online dictionaries require internet access, which may limit availability in areas with poor connectivity, and their accuracy can vary depending on the source or the platform's editorial standards. Users must carefully evaluate the credibility of the dictionary to ensure they are receiving reliable information.

Trinh et al. (2021) suggested that a smartphone application is a software program designed for mobile devices, such as smartphones and tablets, that enhances users' ability to complete tasks, acquire knowledge, or find entertainment with ease. These applications cater to a wide range of needs, from productivity to education, making them indispensable in modern life. Indrawati et al (2024) noted that one example is a dictionary application, which provides quick and convenient access to word definitions, pronunciations, usage examples, and grammar explanations, within a single platform. Many dictionary applications offer offline functionality, allowing users to access language resources anytime and anywhere without relying on an internet connection. This feature is especially useful for learners in remote areas or those traveling without consistent internet access (Fauzan et al., 2022).

These apps often include helpful features, such as language translation, bookmarking words, and adding personalized notes for future reference. Additionally, some applications store search histories, making it easy for users to revisit previously searched words and track their learning progress over time (Senowarsito et al., 2024). Jannah et al. (2023) also suggested that more advanced dictionary applications offer enhanced learning tools, including vocabulary quizzes, random word suggestions to build vocabulary, and customizable learning goals to support individual study plans. Many also integrate with other apps or platforms, like e-readers or language learning services, for a more connected and seamless learning experience.

Overall, dictionary applications have transformed the way users engage with language. Their portability, versatility, and continuous development provide an efficient, interactive, and highly personalized approach to language learning (Wulansari & Fakhurriana, 2024). As a result, they have become an invaluable resource for students, educators, language enthusiasts, and even professionals seeking to refine their communication skills.

## The Importance of Vocabulary and Pronunciation

In many countries, English is classified as either a second language or a foreign language. When discussing English, four core skills are often highlighted: listening, speaking, reading, and writing. Haris (1969) stated that five key elements contribute to the success of these skills: knowledge of English sentence structure or grammar, vocabulary, pronunciation, fluency, and comprehension. Among five, vocabulary and pronunciation are fundamental to effective communication and language mastery. Vocabulary serves as the cornerstone of communication, enabling learners to express their thoughts and understand others, while also enhancing comprehension and fluency.

Vocabulary is the foundation of language, and without it, learners struggle to express ideas effectively. As Wilkins (1972) stated, “Without grammar, very little can be conveyed; without vocabulary, nothing can be conveyed” (p. 111). It highlights vocabulary’s importance over grammar in communication. Srakaew (2021) notes that understanding 98% of words in a text is crucial for full comprehension, as even small gaps in vocabulary knowledge can disrupt meaning. A strong vocabulary is closely linked to academic success, with research indicating that children with larger vocabularies tend to perform better across subjects, particularly in reading and writing (Yang et al., 2020). Arslan (2024) adds that vocabulary is essential for constructing meaningful sentences, enabling learners to express complex ideas and emotions with precision. Furthermore, Pratiwi and Widhiatama (2023) emphasized its role in critical thinking and cognitive development, as a rich vocabulary helps individuals analyze, interpret, and articulate nuanced concepts more effectively.

Nguyen et al. (2021) noted that clear pronunciation, in turn, is essential for intelligibility and effective oral communication. Even with an extensive vocabulary, unclear pronunciation can create barriers to understanding, leading to frequent misunderstandings, communication breakdowns, and reduced confidence in speaking. Besides, Adinda & Ahmad, (2024) found that as a key element of communicative competence, pronunciation influences not only how well speaker expresses ideas but also how their messages are perceived by listeners.

Tiu (2023) highlighted its importance in all areas of interaction, from casual conversations to academic discussions and professional exchanges. Learners with pronunciation difficulties may struggle to be understood, even when their grammar and vocabulary are strong, which can impact their willingness to participate in conversations and limit their overall communicative success.

Pronunciation is closely linked to vocabulary but presents unique challenges, particularly with difficult sounds, word stress patterns, or varying phonetic contexts (Hidayatulloh, 2023). For example, words with similar spellings but different pronunciations can confuse learners, making consistent practice essential. Nguyen et al. (2021) argued that effective pronunciation

instruction not only enhances speaking skills but also sharpens listening abilities, as learners become more accustomed to sound patterns and rhythm. Srakaew (2021) noted that accurate pronunciation reduces anxiety, fostering a more confident and positive speaking environment where learners are more willing to engage in conversations. Both teachers and students recognize the significance of pronunciation in ESL learning, though their perspectives may differ. Educators often view pronunciation instruction as essential for their students' success in various communicative settings, recognizing its impact on overall fluency. Adinda and Ahmad (2024) revealed that many teachers consider proper pronunciation crucial for achieving clarity, natural speech flow, and communication efficiency. However, Srakaew (2021) suggested that learners tend to undervalue its importance, often prioritizing grammar and vocabulary instead, sometimes unaware of how pronunciation issues can undermine their ability to convey meaning effectively.

Erizara and Wijirahayu (2024) found that vocabulary and pronunciation are key for developing listening, speaking, and reading skills, which subsequently influence writing proficiency through a solid grasp of grammar and word usage. To achieve language success, these two elements must be learned and practiced in tandem, as they complement each other in building well-rounded communicative competence. According to Priya and Kumar (2022), vocabulary and pronunciation play a critical role in English language proficiency, shaping how learners understand and produce language in real-world contexts. Haris (1969) claimed that employing effective vocabulary learning strategies improves comprehension and expression across listening, speaking, reading, and writing. While accurate pronunciation enhances communication clarity, enabling better interaction and reducing the risk of misunderstandings. Prioritizing pronunciation in language instruction is crucial for enhancing both linguistic proficiency and interactive confidence, making it a keystone of successful language acquisition and long-term communicative success (Tiu, (2023).

### **Related Studies**

Many studies indicate that mobile-assisted language learning (MALL) significantly improves vocabulary acquisition and pronunciation skills.

Arslan (2024) reviewed innovative methods for enhancing English vocabulary acquisition, showing they surpass traditional approaches. The study found that technology-based tools, such as apps and VR games that make learning more interactive and adaptable to individual needs; contextualized learning, using real-life examples and stories to help learners understand words in meaningful situations; and personalized strategies that customizing lessons to fit each student's learning style and pace, improve retention, deepen understanding, and boost engagement. The research highlights the importance of integrating these methods into teaching to enhance language skills and promote lifelong learning.

Similarly, Senowarsito et al. (2024) studied the effectiveness of the Record, Listen, Revise (RLR) method using the ELSA Speak app to improve junior high school students' pronunciation. Using a mixed-method design, the study assessed 34 students through pretest and posttest. The quantitative findings revealed notable improvement, while the qualitative data showed consistent progress as students advanced through the RLR phases, with better results after repeated practice and self-correction. In the same vein, Susanto et al. (2024) explored the effectiveness of the Dictionary Speech Assistant in the ELSA Speak app for improving pronunciation among students. The tool, equipped with Automatic Speech Recognition, provides real-time feedback to help learners refine their pronunciation. Using a pre-experimental design with pre- and post-tests, the study found a significant improvement in students' pronunciation ability after using the app. It means that the tool's success was largely driven by students' increased engagement and interest in the learning process, highlighting its value in supporting pronunciation mastery through mobile-assisted language learning.

Furthermore, Wulansari and Fakhurriana (2024) highlight the significant impact of using the online Oxford Advanced Learners' Dictionary on students' pronunciation and vocabulary mastery at the State Islamic Institute of Kediri. The study revealed that the dictionary serves as an effective tool for addressing common challenges in language learning. The digital format provides accessible resources, including pronunciation guides and word definitions, helping students practice and refine their speaking skills. Additionally, the platform supports vocabulary enrichment by offering clear explanations and contextual examples, making it easier for students to understand and retain new words. Overall, the findings suggest that online dictionaries enhance language learning by promoting independent study and providing practical support for pronunciation and vocabulary development. Researches showed that engaging with English-speaking applications online or offline fosters practical language use, while AI-driven voice assistants facilitate pronunciation practice. Establishing clear goals and maintaining a daily practice routine are essential for consistent progress.

El-Sawy (2019) also discovered that integrating electronic and student-created dictionaries enhanced students' pronunciation and vocabulary proficiency. Notably, electronic dictionaries offered immediate, accurate pronunciation, enabling learners to practice without pressure. This supportive environment helped build their confidence and motivated them to continue using these resources for language development.

Munirah and Sahriani (2024) found that mobile dictionary apps can enhance student motivation and engagement, especially through gamified features like points, badges, and leaderboards. Their study showed that students using platforms like Quizizz participated more actively and maintained higher motivation throughout the semester compared to those in

traditional classrooms. The interactive nature of these apps makes learning more enjoyable, particularly for younger learners. Similarly, Pham (2022) explored university students' attitudes toward using Quizizz for English language learning through surveys and interviews with students. The findings showed positive attitudes and high satisfaction, with a strong correlation between the two, especially in students' behavior. Quizizz was praised for boosting motivation, engagement, and memory, though students noted areas for improvement. Overall, the study recommends Quizizz as a valuable tool for English learning and teaching.

Xu and Richardson (2024) found that learners who use self-regulated learning (SRL) strategies tend to achieve better language outcomes. Their study examined the impact of Shanbay Danci (SBDC), a vocabulary app with a badge-sharing system, on learners' SRL, persistence, and overall learning experience. The app lets users earn and share badges for completing tasks or reaching milestones, boosting motivation and accountability by allowing them to showcase achievements to peers. Students using the badge-sharing feature showed stronger SRL behaviors, including time management, goal setting, and progress tracking. Qualitative findings also revealed that badge sharing supported both individual and collaborative learning, helping learners stay consistent and engaged over time. Whereas, Yu (2023) studied the impact of gamification on English vocabulary learning by dividing participants into treatment and control groups. Through experiments and interviews, the study found that gamified learning significantly improves learning outcomes, boosts motivation, and increases satisfaction compared to non-gamified methods.

Dictionary applications with features like automatic speech recognition, real-time feedback, and gamification play a crucial role in enhancing students' vocabulary and pronunciation skills. These tools provide quick access to word meanings, accurate pronunciation models, and interactive elements that boost motivation and engagement. The studies showed that using such apps improves language accuracy, builds confidence, reduces anxiety and makes learning more enjoyable.

## Conclusion and Discussion

From the recent studies, mobile apps are shown to effectively support vocabulary learning, pronunciation, and learner motivation through interactive and personalized features and those can be classified as the following.

For vocabulary acquisition and retention, Arslan (2024) found that innovative vocabulary learning methods outperform traditional approaches. Similarly, Xu and Richardson (2024) emphasized the role of the Shanbay Danci app in promoting vocabulary learning persistence, while Wulansari and Fakhurriana (2024) demonstrated how the Oxford Dictionary app supports vocabulary mastery. El-Sawy (2019) also noted that dictionary use significantly enhances

vocabulary development. In addition, Yu (2023) showed that gamification can lead to improved vocabulary outcomes. The studies indicated that vocabulary apps using contextualized and personalized strategies enhance retention. These technology-based tools adapt to learners' individual styles and needs, and their gamified, interactive features contribute to long-term memory and increased learner satisfaction.

For pronunciation improvement through apps, Senowarsito et al. (2024) explored the Record, Listen, Revise (RLR) method using ELSA Speak, showing how repetition enhances pronunciation progress. Susanto et al. (2024) also examined the Speech Assistant feature in ELSA Speak, which uses Automatic Speech Recognition (ASR) to provide real-time feedback. Wulansari and Fakhurriana (2024) emphasized the role of the Oxford Advanced Learner's Dictionary in pronunciation practice. While El-Sawy (2019) highlighted the benefits of both electronic and student-created dictionaries. These demonstrated the effectiveness of mobile and electronic tools in supporting accurate, reducing learners' fear, building confidence, and promoting steady improvement through repeated, interactive practice.

For integrating pronunciation skills and autonomous learning, Jannah et al. (2023) showed that media immersion enhances rhythm and intonation, while Arslan (2024) highlighted the role of technology in fostering lifelong learning. Susanto et al. (2024) found that mobile-assisted tools significantly support pronunciation improvement, and El-Sawy (2019) reported increased learner confidence and autonomy through pronunciation-focused apps. Overall, the findings suggest that media and mobile tools not only improve rhythm and intonation but also encourage independent learning, greater engagement, and continuous language development.

Additionally, studies on gamification and motivation reveal that game-like elements in educational apps significantly enhance learner engagement and outcomes. Munirah and Sahriani (2024) found that using Quizizz boosted students' motivation, while Pham (2022) reported positive attitudes toward the platform. Yu (2023) showed that gamified vocabulary learning leads to better results than non-gamified methods. Xu and Richardson (2024) highlighted the motivational impact of badge-sharing in the Shanbay Danci app, which also supports self-regulated and socially driven learning. Features like badges, points, and leaderboards increase participation, persistence, and enjoyment, making learning more interactive and effective.

Across the studies, several key similarities emerge. All studies support the effectiveness of technology in enhancing English language learning. Gamification, personalized feedback, and interactive features consistently boost learner engagement and motivation. Additionally, mobile apps and dictionaries contribute to measurable improvements in both pronunciation and vocabulary. Most importantly, these tools promote student-centered learning by fostering autonomy, goal-setting, and self-paced progress.

## Limitation and Challenge

The following discusses the limitations of the reviewed studies. These elements are essential for understanding both the potential benefits and challenges associated with incorporating technology into language education.

One key limitation of each study is that it was conducted at a single institution. For example, Wulansari and Fakhurriana (2024) conducted their study at the State Islamic Institute of Kediri, which may not represent the diverse educational settings found in other institutions. Different schools may have varying teaching methods and student demographics. All can impact how well students respond to language learning tools. As a result, the findings may not be generalizable to broader student populations in different contexts.

Another limitation is the small sample size. For example, in the study by Senowarsito et al. (2024), only 34 students were tested, which limits the ability to draw conclusions applicable to a larger, more diverse group of learners. A study with a larger sample size could provide more reliable data and offer a clearer picture of how effective dictionary applications are in various educational contexts.

Some of the studies, such as Xu and Richardson (2024) and Yu (2023), focused on isolated vocabulary, neglected other crucial aspects of language development, such as fluency and contextual usage, which are essential for real-world communication. Moreover, while dictionary applications promote independent learning, there is a risk that some learners may become overly reliant on the equipment, which could hinder their ability to develop more spontaneous communication skills. This limitation highlights the importance of balancing technology use with other language learning strategies to ensure well-rounded language development.

## Recommendation and Future research

The use of dictionary applications has significant potential to enhance students' vocabulary and pronunciation skills. It is recommended for language instructors to incorporate gamification into their teaching practices could significantly boost student motivation and engagement. Gamified learning environments are interactive and enjoyable, and they can encourage students to practice consistently. Educators should also focus on tailoring their instructional methods to the diverse needs and interests of their students, offering personalized learning experiences that promote active engagement.

Moreover, educators should foster an environment of self-reliance and autonomy in learning, encouraging students to set their own language learning goals, track their progress, and take ownership of their development. Providing students with opportunities for rewards and

incentives can also be an effective way to maintain motivation. It is also recommended that instructors create a collaborative and supportive learning environment in which students can exchange feedback, share resources, and learn from each other. By emphasizing these factors, language learning becomes more engaging, dynamic, and supportive, ultimately improving learning outcomes.

Additionally, more attention should be given to the quality and feedback provided by the applications. It is essential to ensure that feedback is constructive, specific, and addresses students' individual needs, as this can have a more significant impact on their improvement in pronunciation and vocabulary acquisition.

Future research in this area should focus on expanding the study period to evaluate the long-term retention of pronunciation and vocabulary skills. While these studies provide insight into the short-term benefits, a longer duration would help assess whether the improvements achieved through dictionary applications are sustained over time or if students revert to their previous level of proficiency. A longitudinal study would provide more valuable data on the lasting impact of these tools on language learning.

Furthermore, research should broaden its scope to include other aspects of language learning beyond pronunciation and vocabulary, such as fluency, intonation, and contextual usage. These elements are critical for effective communication, and their inclusion would offer a more comprehensive understanding of how dictionary applications contribute to overall language proficiency.

It would also be beneficial to investigate how varying levels of student interest and motivation can influence the effectiveness of language learning tools. Motivation is a key factor in language acquisition, and future studies could explore whether students with high motivation show greater improvement than those with lower motivation.

Another area of further research is the exploration of gamification in language learning apps. Understanding how elements like points, levels, and rewards affect student engagement, retention, and overall language acquisition would provide valuable insights. Researchers should also focus on understanding the experiences and perceptions of both learners and instructors to determine how gamification impacts language learning in practical, real-world contexts.

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