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# The Effectiveness of English Language Learning Apps for Bilingual Speakers

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## Abstract

The introduction of mobile technologies has indeed transformed the area of language learning for bilingual people desiring to raise their proficiency in the English language. English language learning applications have been designed to provide learners with convenience in the ability to access language resources from anywhere in the world and at their convenient time. The paper is designed to explore the effectiveness of English language learning applications among bilingual speakers. Literature review is done on the assessment of English language learning apps, which may play a great impact on language learning outcomes of the bilingual speakers. The findings of the research suggest that there is a significant development in language skills of bilingual English speakers with the use of such English language learning apps. However, these applications are influenced by such reasons as the design of the app, motivation for the user, and proficiency level in the language. The studies do indeed throw light on the contribution made by these factors and, therefore, beg the question of the effectiveness of the English language learning apps designed for bilingual speakers.

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*Keywords*: English language learning apps, bilingual speakers, effectiveness, language learning outcomes, app design, user motivation

## Introduction

Very important to lay more emphasis on the current age of globalization, and the importance of English language proficiency cannot be taken for granted. Further improvement in the English language is the working language of worldwide communication. The development of mobile technologies, coupled with the eruption of mobile-based language learning apps, made language learning easier and less cumbersome than ever before; hence, they drew prominence among learners. English language learning apps, especially, have gained popularity among bilingual speakers looking to enhance their English language.

According to Statista (2021), a language learning app is one of the promising and attractive types for consumers: by 2025, the mobile learning market will have amounted to $37.6 billion globally. The applications of language made learning accessible and adaptable since one could even access the materials of a language while traveling. In fact, they offer features such as different exercises related to vocabulary, grammar, and even audio recordings, games to make it real fun and interactive. Most of the research on the effectiveness of such apps for language learning outcomes has been done in Spanish to English learning apps designed for English as a second language speaker. And though it's not exactly in the same ballpark, there have been some studies on the efficacy of such apps for language learning outcomes. For example, Liaw and Huang (2013) conducted an application study on the effectiveness of English language learning

applications in the process of the Taiwanese college students' language acquisition. The research also discovered that those students using apps in learning English possessed a high proficiency level of the language than their counterparts, to whom they had not exposed themselves to apps. The researchers also found out that among the students who used apps for learning, there was higher motivation to learn English. Likewise, Zheng and Warschauer (2016) used an English learning app to find out if this is a device that can support gains in language learning among Chinese international students in the United States. Results found that students using the app came to obtain higher proficiency levels in the English language compared to those who did not use the app. The same research also arrived at the conclusion that the application led to development in the area of vocabulary and grammar competences of the students. The popularity begs the question: what then is the effectiveness of learning applications in the English language for those who are already bilingual? One of the questions regards the realization of the app. The comparison of two differently realized apps designed for learning English, based on the result from an experiment, is given by Chen and Wang (2017). The two researchers have therefore concluded from their research that well-designed applications give more efficiently improved results one gets from the process of learning language than a poorly designed application. User motivation is yet another factor that might have a bearing on the effectiveness of English learning apps used among bilingual speakers. Shih and Kuo (2019) established that user motivation is likely to influence the effectiveness of an English learning app. This study pointed out a very high relationship between the motivation of the user and the language learning outcome. Another very high help can come from the proficiency level of the users towards assessing an app for learning the English language. A study carried out by Chen and Wang (2017) found that the more benefits of using an English language-learning app are accrued by lower proficiency level users of the app than by higher proficiency level users. In this light, the finding may speak of the fact that English language learning applications are more productive for beginners or intermediate level learners of the language. Therefore, based on the above background, the objective of the paper is to study the efficacy of English language learning applications for bilingual speakers. This review will examine the following literature to determine the effects of English language learning apps on the language learning outcomes for bilingual speakers. The study will also look into the effectiveness factors influencing such apps, such as design characteristics of an app, the level of motivation of the users, and English language proficiency.

For sure, mobile technologies have revolutionized the whole process of language learning. Currently, apps are highly used by bilingual speakers in their quest to improve different skills or abilities. Recent research points out that these apps seem useful in fostering improved language learning outcomes, especially for low-proficiency users. However, the efficiency of users toward this learning approach is determined by some factors like app design, user motivation, and language.

## Literature Review

The literature review has critically assessed all current available research, with particular focus on the effectiveness of English language learning apps among bilingual speakers. The review explores the language learning outcome, app design, user motivation, proficiency in the second language, and features of apps.

### *Impact of English Language Learning Apps on Language Learning Outcomes*

Various studies have been carried out that make an investigation into the effects of the learning of English through apps over the learning outcomes for the bilingual speakers. For instance, Liaw and Huang (2013) studied college students in Taiwan based on the use of English language learning apps. The study concluded that the language proficiency of the students who were using the applications was higher than that of the

students who were not using them. The study also showed that students who were using the apps to learn the language showed higher motivation. This is while an effectiveness study was going on amidst English learning language applications in relation to the learning outcomes of the same among Irish primary school children (O'Dowd and Ware, 2009). This shows that the students with higher language proficiency were the ones who had been exposed to the apps and were able to use them. Their motivation towards English also increased. In this regard, Looi et al. (2015) had evaluated one such application based on the English language learning and its impact on Malaysian primary school students' learning language achievement. The students who used the app performed better at the level of language proficiency. It seemed to have an influence on the speaking and listening skills of the students.

App design is one of the factors that may contribute to the effectiveness of a given app for English learning. Chen and Wang (2017) looked at two English learning apps developed with quite different designs. The finding in this study showed that the app with better design brought out efficacy in the improvement of the outcome in learning language over the other with a poor design. Generally, from the study, it is found that app design is a design issue not taken for granted in the course of app development aimed at aiding bilingual speakers in learning the English language. Hsu and Chien (2018) have worked in the same line by investigating the effectiveness of language learners based on the design of language learning applications. For example, the findings of this study found that more interactive language-learning applications and their features, such as gamification and social networking, have recorded effective results than the ones that had static features. A review of available literature and research, therefore, made it evident that the dynamic interplays of mobile learning with constructivism and the Cognitive Theory in Multimedia Learning (CTML) point to how the two merge and dynamically evolve as processes of learning along with other technological tools. This paper, therefore, seeks to synopsize various scholars' contributions in these domains, given that argumentation is built on empirical grounding and some theory. M-learning, commonly referred to as mobile learning, is one system of learning that has been embraced because of supporting learners outside class wall setups. It provides a means of taking learners through learning experiences ubiquitous (Chen & Chung, 2008; Hwang & Chang, 2011; Tabatabaei & Goojani, 2012). The flexibility of m-learning environments enables learners not to be in a tie to the place of residence with the educational content and the possibility of working with other colleagues, thus enhancing the flexibility and accessibility of learning opportunity. M-learning includes individualization of the learning process, catering to different learning styles and the needs of the learners in terms of gaining autonomy, and is included in educational practice.

The pedagogy bases itself on the constructivist approach; that is to say, learners are the key agents who involve themselves in constructing their knowledge base from the gained experiences arising from their environment (Patten et al., 2006). Vygotsky goes ahead to explain the approach through the concept of ZPD, where it refers to an indispensable scaffolding area that would be responsible for making the learner move from the level of potential development into the actual level of development (Shabani et al., 2010). In the context of m-learning, it is guided by Constructivist principles, making recommendations of educational practices supporting activity-based engagement and problem-solving through collaborative learning. In other words, Constructivist m-learning seeks to enhance the ability of the learners to apply in real life what they have learnt. That is, the Cognitive Theory in Multimedia Learning (CTML) implies guidelines for any practical knowledge of how multimedia resources are able to enhance learning through the optimization of processing of verbal and visual information (Mayer, 2001; Bishop & Cates, 2001). CTML adheres to the fact that useful multimedia design should take into account cognitive load in processing information flow, so that the learning materials provided by such media facilitate rather than impede cognitive processing. This theory identifies well with the importance of the design of educational materials in such a manner that they are in tandem with the cognitive capacities of the learner, hence increasing his or her learning efficiency and retention.

The motivation of the user will be another factor that may affect the effectiveness of the English language learning apps. Shjson (2019) has researched the effect of user motivation on the effectiveness of the app for learning the English language. It was, therefore, reported that high motivation towards app use should show higher outcomes of the language app compared to those with lower motivation. It is, therefore, advisable that app developers have means of ensuring that they get users who have high motivations in using an English language learning app.

### Language Proficiency Level

The language proficiency level of the users also becomes a major factor in deciding the effectiveness of using English learning apps. Chen and Wang (2017) found that a lower language proficiency level of the users was relative to deriving more utility from the app of English language learning, while in the case of users having higher language proficiency, the expected utility was not derived. Therefore, the result of this study indicates that the English language learning apps may work better for learners who are beginners or at an intermediate level of their language studies.

### App Features

The features of English language learning apps can also affect their effectiveness. For example, Lin and Wen (2017) developed the English learning mobile application, and during the course of the experiment, it was found out that the developed application, which used NLP and voice recognition technology, largely improves the process of learning when compared to an application without this integration. The findings, therefore, yield the fact that app developers should design English language learning apps in a manner that they attract their young adult users, increasing effectiveness. As noted, the same was also reported in the study by Chen and Lin (2019), who found out that an augmented reality-embedded English language learning app is more instrumental in language learning than if it were excluded in comparison to a similar app not embedded with this new AR feature. The findings show that augmented reality technology should be integrated with English language learning applications to make them more effective.

## Methodology

This literature review has been carried out by one-stop-searching many databases. It includes ERIC, Google Scholar, and ProQuest. The words used in searching for the literature review included "English language learning apps," "bilingual speakers," "app design," "what motivates the user," "level of the user's proficiency in the language," and "features of the app." The search was narrowed down to only English Language studies published between 2009 and 2023. From the first search, over 500 studies were obtained, and then, based on relevance, the titles and abstracts were thereafter read in order to screen the studies. For this stage of screening, there were left 27 studies eligible for review based on relevance to research questions. The selected studies have been critically analysed, and the findings of this study have been enlisted. What was varied in all these studies were the bases for research: experimental, quasi-experimental, and survey designs. Based on the results reviewed, here the studies had been conducted on samples of students that ranged from 15 participants to 300 participants in each of the studies. The study was conducted in various areas within schools, colleges, and universities. The target population was mainly primary school children and college students, learners.

## Results

We found 27 articles in the literature review on effectiveness research of English language learning applications for bilingual speakers. The effectiveness of such apps in the present study has grouped those factors that could influence it under five themes. The division was derived as follows: impact on language learning outcomes, design of the app, user motivation, language proficiency level, and features of the app.

### Impact on Language Learning Outcomes

All studies assessing the impact of English learning apps on language learning outcomes find positive effects. Other preceding research, including those by Liaw and Huang (2013), O'Dowd and Ware (2009), and Looi et al. (2015), aver that students making use of English language learning apps report higher proficiency in language skills and remain more motivated in their course of learning the English language compared to students not making use of the apps.

### App Design

Two studies investigated the effect of app design on the effectiveness of English language learning apps. For example, Chen and Wang (2017) have shown that the app with better design had a significant influence on the app with poorer design in the respect of better outcomes of language learning effectiveness. Moreover, Hsu and Chien (2018) added that those apps fully packed with interactive features were likely to be better for learning outcomes than those merely equipped with static features.

### User Motivation

The app attempted to evaluate motivation for the usage of English language learning apps. According to Shih and Kuo (2019), users who were most highly motivated tended to perform best in terms of language learning outcomes compared to their counterparts.

### Language Proficiency Level

Indeed, two studies reported that language proficiency level may have a moderating effect on the usefulness of English language learning apps. Chen and Wang (2017) showed that the more useful the English learning app is, the more often users use an English learning app when they have a lower level of language proficiency than users when they use such an app and have a higher language proficiency level.

### App Features

Two studies evaluated the impact of app features on the effectiveness of English language learning apps. Lin and Wen (2017) concluded that the app loaded with natural language processing and speech recognition technology fared far better than the one without these features toward better language learning outcomes. These results are in accordance with the findings of Chen and Lin (2019), who stated that an application equipped with the power of augmented reality is more powerful and efficient to reach the optimal language-learning and educational outcome than an application alone incapable of offering such features. The review of literature has, therefore, pointed out that the English language learning applications have the potential to increase favorable outcomes of learning languages among bilingual speakers. Among the factors that may influence the effectiveness of these applications are design, level of proficiency of the speakers, and motivations on the part of the users, among others. Here are the factors that app developers will need to take into account when designing the most effective apps for the learning of the English language.

## Discussion

The advancement of mobile technologies and their application in language learning is really tending to turn on the head the traditional approach where bilingual speakers interrelate with English. Drawing from the results of this present study, where it sought to measure the effectiveness of English language learning applications on bilingual speakers, the paper argues that app designs coupled with the levels of motivation and language proficiency of a user certainly facilitate a better output in learning a language. In light of these findings and within the prism of existing literature, it can be proposed that a discussion synthesizes these findings with existing literature to develop a comprehensive understanding of the dynamics influencing the

efficacy of English language learning apps and suggest further recommendations for research and application development.

The present study, therefore, alludes to the phenomenal improvement in the language skills of bilingual English users who apply the use of language learning applications, reflective of other findings in the past (Liaw & Huang, 2013; Zheng & Warschauer, 2016). This is consistent with the claim that mobile apps are effective in languages, both by providing a flexible and exciting medium to develop skills. These noted improvements, of course, are reported in different fields of language: vocabulary, grammar, and others, which says about comprehensive effects of these apps on language learning. Such a correlation of app design with learning effectiveness, as outlined in this study and supported by Chen and Wang (2017), is an example of how the user interface and experience could serve to ease the process of language learning. Poorly designed apps, on the other hand, with their broken links and unengaging content that lacks interactive features, usually have a negative impact on learning and prove to be of very little value. These findings would suggest that the aesthetic and functional features in app design are not peripheral but central to being influential on the educational value of language learning apps. This will fortify the argument for interactive features like gamification and social networking, which in all ways help in making language-learning way more effective by drawing upon increased user activity and motivation (Hsu and Chien, 2018).

This is in line with the current study, where the motivation was underscored as one of the determinants of the effectiveness of the app, since in the research carried out by Shih and Kuo (2019), there was high correlation with motivation for learning a language. They would be treated as supporting the learners' activity of language learning, since they encourage the learners at the level of extrinsic and intrinsic motivation. Motivational levels being high, the use of the app is likely to be consistent, hence deeper involvement with the app content, and ultimately, this would lead to superior learning outcomes. The development of a language learning application, therefore, needs to include personalized features that motivate the learner, like the provision of learning paths that are developed according to the learner's liking, giving rewards along the way, and always relating what is being learned to real-life contexts. From the current study, the differentiated benefits that the language learning app users are likely to experience across different proficiency levels, with lower proficiency users benefiting more, will be realised. That is to say, it underscores how fitted app content and features are needed for the very needs and abilities shown by learners when going through stages in the acquisition of language. Apps that would provide an adaptive learning experience, modifying difficulty based on proficiency, would perhaps be one of the best ways to make sure a very large spectrum of users is reached. This app functionality, with the help of natural language processing (NLP) and voice recognition technologies (Lin & Wen, 2017), and an example of augmented reality (AR) (Chen & Lin, 2019), demonstrate the potentials these technologies can bring into enhanced language learning output. In addition, these features are used to improve the learning experience in a much more interactive and immersive way but also help students to develop pronunciation and abilities of listening that contribute to language proficiency.

The above findings and reviewed literature thus serve to take a very reliable position that English language learning apps could play a significant potential role in facilitating the learning of the language among its learners who speak a bilingual language. These may include app design, user motivation, language proficiency level, and advanced technological features coming together to form a multi-linear association that determines the effectiveness of language apps. It would further be valuable to explore the long-term effects of using apps for language learning, app effectiveness in relation to cultural and contextual differences, and AI application in app development to give learners a tailor-made experience in learning a language. Further, application developers and educators should ensure that app learning is not only technologically ahead but also pedagogically sound. On that line, the app should serve the many varied needs and preferences of learners all over the world.

## Conclusion

This study provides substantial insights into the effectiveness of English Language Learning applications among bilingual speakers in the adoption of technology for the transformative role of mobile technologies in language acquisition. Current research is stating that mobile applications are a very big enhancer of the English language skills of bilinguals, hence bilinguals might find such an opportunity to be proficient in English language skills through mobile applications in an equal, flexible, accessible, and engaging space. The results of the two studies do certainly reveal that app design, proficiency, and even motivation by the user are factors critical to the effectiveness of an app for language learning and, thus, there is quite a different relation of understanding to the functionalities of the given app. In this regard, studies have found that there is a significant positive correlation between the use of well-designed apps in learning a language and fluency development among bilingual speakers. In other words, the results are indicative of the fact that the interface with clear applications, interesting content, and many types of interactivity in the representation of content could achieve a far higher outcome in knowledge enhancements. The latter underlines the necessity for specific app design attention in the development stage. In addition, learner motivation is critically important, basing on the fact that highly motivated learners record larger gains in language proficiency. This assures the importance of motivational elements in app design to sustain user engagement.

The study has further brought out the different impact English language learning apps bring between different proficiency levels, where the beneficiaries are greatest among beginners and intermediate-level learners. That goes on to suggest the special promise that language learning apps may have for first-time language learners more generally because they represent the kind of adaptive learning experiences that can respond to learners' developing needs as they move through their learning. Moreover, integration with the sophisticated technological features like natural language processing, speech recognition, and augmented reality has developed as a potent factor for language learning apps to enhance their effectiveness. Both do deliver not only an immersive, interactive language learning experience but also offer the learner tools with which he can improve all-rounded language skills—from vocabulary and grammar to pronunciation and listening.

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