Enhancing English Vocabulary Learning through Mobile Apps: A New Paradigm in Educational Technology

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Abstract

The technological revolution, particularly pertaining to smartphones, has revitalised the means by which educational methodologies were approached and implemented, most notably with respect to English language learning. This study explores the effectiveness of mobile applications in the improvement of English vocabulary acquisition among university students. The present study is about the perception and usage of mobile application patterns used in learning English vocabulary. It is based on a structured survey carried out on undergraduate students, of which the sample was selected from various disciplines at a private University. This paper outlines a survey on preferences for mobile apps against traditional methods of learning and finds out at what frequency, duration, and even perceived benefits of such tools in language learning. These indicate a strong preference for such apps to learn vocabulary, with overwhelming numbers of students in big schools, far and near, using these apps daily or at least weekly. The results put emphasis on the fact that mobile apps provide easy ways through which students can learn vocabulary flexibly and efficiently. The features of gamification and the required pronunciation help are most appreciated when built inside mobile applications. This shows that interactive elements with audio-visual effects are doing their work in learning engagement and effectiveness.

Keywords: mobile applications, vocabulary acquisition, English language learning, educational technology, student perceptions

Introduction

In the past few years, there has been a growing popularity of and high advantage in the use of technology, such as mobile applications, for students to learn English vocabulary. The growing technology in education has led to the use of mobile applications becoming popular and useful for language learning. Some of the following are applications that offer entertaining and enjoyable ways for learners to increase their English vocabulary. The main benefit regarding mobile apps is their place of convenience for traveling students. Smartphones and tablets that enable app usage connected with building vocabulary can be accessed from such places. This not only provides them with flexibility in their schedules to study English but also opens up an opportunity for the students to expand their vocabulary. Moreover, the role of games or gamification in developing vocabulary applications cannot be underestimated, as gamified applications have made the learning experience even more interactive and fun. Most applications are in the form of games, quizzes,

flashcards, and even more activities in order to make the learner more engaged in the process. Competition and incentives will further increase their motivation and retention levels. The mobile application provides various resources in terms of audio, visual, and video specific to the taste of different learners and therefore caters to the different styles of learning. Such flexibility affords students the opportunity to opt for modes of instruction according to their personal learning styles, hence improving the effectiveness and enjoyment in the methods used to acquire vocabulary. The tendency for the current learning involving the use of mobile applications for the acquisition of English vocabulary is, in fact, a clear pointer of a massive paradigm shift in methodologies. With technology playing an ever-increasing role in education, the general acceptance of mobile apps has fundamentally changed the approach in which languages are learnt. It provides the students a lively and useful forum to increase their English vocab. Most importantly, they are very easy to use: since they can be accessed on the phone or tablet, this means that at any time, a student can literally access learning applications from wherever they are and therefore find it very easy to fit learning into their schedule. These have redefined the way students look to enhance their English vocabulary and have been one of the most interactive and useful strategies for learning. The big advantage, in this case, is a huge convenience: students may study virtually from any place and at any time that may be comfortable for them. With the widespread usage of smartphones and tablets, such apps are very accessible from anywhere, befitting any kind of study timetable, and making it quite easy for students to grow their English vocabulary.

An examination of this rapidly changing educational environment shows that mobile apps stand to offer benefits above the traditional constraints of location and time. Besides evolving to the changing needs and preferences of the learner, smooth technology infusion in language learning signals an approach shift to education. The following sections inquire into the students' perceptions and views on the effectiveness of mobile apps in teaching English vocabulary compared with the traditional method of using the classroom. The present study aims to elucidate more detail on how these technological changes affect the educational experiences of contemporary students and, thereby, result in a more informed and adjustable way of language learning, specifically directed towards English vocabulary learning, among others, as vocabulary is the basis of any language.

Literature review

The response is quite positive from the acceptance and perceptions of the students regarding Mobile Assisted Language Learning (MALL). Soleimani et al. (2014) reported that postgraduate ESL students took mobile learning to be among the tools that have a positive impact on proficiency improvement of the English language. Their reasons included an increased interaction with fellow students and accessibility to quite diverse learning materials in the process. Despite these broadly positive perceptions, Hussin et al. (2012) discovered an acceptance level variance with a low level of readiness for mobile learning integration in two institutions of higher learning. These students preferred a blended learning approach, which can be seen as a mobile learning modality. The selection of mobile applications for language learning is significantly influenced by the features they offer. Abas et al. (2009) observed that adult learners appreciate features such as events notifications, study tips, and learning modules with audio. This kind of approach to mobile learning is one that is tailored and one that takes into account the experience of adult learners. Kim and Kwon (2012) further explain that vocabulary, spelling, and pronunciation are the most targeted areas on ESL mobile applications. Also, the language skills demanded through applications are also more focused on reception rather than production. Specifically, this technology acceptance model, proposed by Davis, Bagozzi, and Warshaw (1989), has contributed largely to evaluating the acceptance of technology in education and maintains that perceived ease of use, perceived usefulness, attitudes toward using, and intention to use have great influence on technology acceptance. However, in the case of MALL, this model

was accommodated to consider self-efficacy and compatibility as two other factors determining a student's acceptance and intention to use mobile applications for vocabulary learning.

The development of e-learning by integrating communication technology has made it possible for both synchronous and asynchronous modes of learning to take place. Blogs, wikis, and discussion boards are all asynchronous communication tools that allow learners to post their comments, share ideas, and respond to others when time allows them, not necessarily to be online simultaneously with other learners. On the other hand, synchronous tools like virtual classrooms and online chats require real-time interaction, hence the guarantee of information to be lively and instant. In the perspective of foreign language learning, learning strategies become very critical in acquisition, especially when it comes to English as a Foreign Language (EFL) learners. In general, studies have revealed that there is a consistent and positive association between the strategic use of language learning techniques and the level of English language skills development (Liu, 2004; Magno, 2010). This shift toward a learner-centric approach stresses tools and strategies that need to be concurrent with the effective acquisition of language skills.

Mobile Learning (M-learning) is the latest tool of Transformational Education, capitalizing on the proliferation of mobile phones to facilitate learning opportunities between learners and teachers, saving time and location. It is characterized by the combination of modern essential educational resources, network, and multimedia technologies, reaching levels of accessibility and flexibility never before achieved (Kukulska-Hulme, 2007; CSATA, 2004). It was, therefore, established that multimedia can enhance language learning, where several studies have actually shown that it can even reduce students' anxiety, enhance motivation, and increase communicative competence due to the interactive and engaging way in which content is relayed (Groot, 2000; Mayer, 2002). Mayer's cognitive theory for multimedia learning offers a theoretical perspective that verbal and visual presentation could help trigger double channels of information processing within the brain; hence, effective learning could be better achieved through multimedia presentations than through merely verbal or visual presentations alone. (Mayer, 2002)

The shift in pedagogy to include multimedia resources in a language teaching practice falls under the broader shift towards the application of technology in improving educational effectiveness. The revolution of the traditional textbook-based methods to the web-based, interactive, technology-supported learning environments clearly positions multimedia at the very focus of the language learning process (Nelson, 1976; Kenning & Kenning, 1984). This, therefore, means that the effectiveness of multimedia in teaching and learning a language wholly depends on the technology and the pedagogical strategies which such technologies offer (Mayer & Anderson, 1992). As educators and learners wade through the complexities of language acquisition in this digital age, strategic integration of multimedia aids holds promise in changing the educational landscape to make learning both accessible and efficient for a global audience. The confluence of communication technology, mobile learning, multimedia changes the educational arena of languages, opening new ways to increase pedagogical efficiency and raising linguistic proficiency. With these technological advances continuing, possible doors are opening for democratizing and making language experiences around the world more enriching. The new era of practices as defined by education is certainly announced by the clearer visibility of these advances (Mayer, 1997; Mayer & Anderson, 1992).

Methodology

Participants

The undergraduate students selected for this study involved colleges within a University in Türkiye; the variation was to make sure all aspects were captured in the questionnaire, hence getting a representative sample. These included students from the College of Pharmacy, Nutrition, and Engineering, along with

students belonging to the College of Education, Law, and Business. Convenience sampling method was used, and volunteers called for through an online link that had been shared over WhatsApp. At this point, there was an attempt to achieve a balance between statistical significance and practicality of getting the intended sample size. No predetermined specifications had been set for the target size or range of an intended sample at this stage.

Materials and Tools

The major primary data collection tool that was used in this research design was a structured survey questionnaire, which would allow for detailed answers to the perceptions of the mobile app versus traditional classroom-based vocabulary learning methods by the students. The questionnaire was designed with both multiple-choice and Likert-scale questions, all of which were closed-ended to solely partaking participants with low proficiency in English or low technological skills. This study questions the frequency of vocabulary learning by using the mobile app, time on-task allocation for learning vocabulary, effectiveness perceived in comparison with conventional methods, type of learning preferred, and attitudes towards the mobile device used in educational settings.

Procedures

Survey Development

The questions of the questionnaire were developed after the objectives of the study were formulated and after asking some starting questions. An early version of the questionnaire was piloted on a small group of students (four from our team) to get their views on comprehensibility, clarity, and relevance. Feedback from this pilot was highly instrumental in refining the wording of the survey questions for clarity and relevance to the purpose of the survey.

Administering the Survey

The survey was conducted through electronic means: Google Forms. The forms clearly contained explanations about the nature of the research, the need to maintain the confidentiality of responses, and freedom for each participant to discontinue with the research at any point. The questionnaire was open for an approximate fixed period of two weeks to get the highest possible response rates, while still being able to efficiently collect data, which would be closed after completion of the desired number of respondents. The WhatsApp group should be reminded within a few days so they can be able to participate in the survey.

Data Gathering

Data collection was done to measure responses to Likert scale statements and multiple choices. It allowed the data collector the opportunity to make sure there was a sample representative per allocated time. The survey went live, with reminders at intervals following up to get maximum response rates.

Data Analysis

Using raw data from Google Forms, the survey results in their entirety were subjected to descriptive statistics in the form of an initial assessment of general trends. This analysis, therefore, set the pace for an exploration of patterns, correlations, and insight into students' perceptions of mobile app-based vocabulary learning to be given later on in the results and discussion sections of the report.

Design

This study will adopt a cross-sectional design, which will be able to capture current perceptions of students and further allow the investigation of relationships and differences among variables, particularly in evaluating the efficacy of mobile apps for vocabulary learning versus traditional methods. The design was used because it was able to take a snapshot of the attitudes and preferences at a point in time, improving the ability to make comprehensive analysis both through multiple-choice and Likert-scale questions. Therefore, the quantitative nature of the research design provided an opportunity for statistical analysis, and generalisation of the obtained findings could be made towards the wider population of undergraduate students at a private University.

Ethical Considerations

Ethical considerations in this study took precedence, and all participants were fully apprised of the aims of the study, their right to be confidential, and that their participation was voluntary. The study was approved by the respective university Ethics Committee, with the view of adhering to ethical standards in research involving human beings. These changes bring in better clarity to the section by presenting a clear, detailed view of how research design and processes take shape in the study.

Results

Data were gathered from thirty undergraduate students enrolled in the English 2 class, encompassing a broad spectrum of educational backgrounds. These students were selected randomly based on their willingness to participate in the survey. A considerable portion, 70%, were categorised as young adults aged 18-25, with the remainder distributed between the ages of 25-30 and those exceeding 30 years. Usage of English vocabulary applications revealed diverse patterns among the respondents. Daily usage was reported by 30%, weekly by 16.7%, monthly by 26.7%, and a notable 26.7% had not engaged with such applications at all. In terms of time allocation, 70% dedicated less than 15 minutes daily, while 23.3% utilised these applications for 15-30 minutes each day. When evaluating the applications' effectiveness, 33.3% assigned a middling score of 3 out of 5, 28.7% lauded them as highly effective, and a small fraction of 6.7% found them to be entirely ineffectual. Preferences between mobile applications and traditional textbook exercises for studying vocabulary were divided, with 60% favouring the former and 40% the latter. A significant majority, 63.3%, expressed interest in incorporating mobile applications into classroom language learning, in contrast to a minimal 3.4% who opposed such integration. Gamification in vocabulary learning was appreciated by 36.7% of participants, whereas a marginal 3.3% did not value this approach. Dialogue with AI for vocabulary enhancement was deemed moderately effective (3 out of 5) by 40%, with a scant 3.3% dismissing its effectiveness. The utility of mobile applications in teaching pronunciation was highly rated (5 out of 5) by 43.3%, with subsequent ratings of beneficial (4 out of 5) by 30%, moderately beneficial (3 out of 5) by 20%, and less beneficial (2 out of 5) by 6.7%. Similarly, for teaching spelling and writing, 30% rated these applications as highly beneficial (5 out of 5), 40% as beneficial (4 out of 5), 26.7% as moderately beneficial (3 out of 5), and a minimal 3.3% as less beneficial (2 out of 5). 30% of students perceive mobile application-based activities as superior (5 out of 5) to traditional methods for acquiring new vocabulary, 26.7% consider them effective (4 out of 5), 36.7% view both traditional methods and mobile application usage as effective (3 out of 5), and 6.7% believe traditional methods are more efficacious. This data underscores a nuanced perspective on the role of technology in enhancing vocabulary learning, indicating a general receptiveness to integrating mobile applications with conventional learning methods for a more comprehensive educational approach.

Discussion

The present research sheds light on the perceptions of undergraduate students in the context of the use of mobile applications in comparison to the method of vocabulary acquisition against the traditional methodologies adopted in classrooms. The data were obtained from 30 students who enrolled in an English course for beginners at a private university—who come from diverse educational backgrounds. The respondents' majority, 70%, fall in the youthful life stage category of 18-25 years, while 23.3% fall in the 25-30 age category, and the remaining are above the age of 30 years. This justifies the demographic representation diversity for getting a full perspective on the research question. Analysis of usage patterns shows varied engagement with the English vocabulary applications among the students surveyed. Notably, the participants reported to be using the apps on a daily use at 30%, whereas an impressive 26.7% are yet to adopt them at all. This dichotomy in the frequency of use may tip off to a digital divide, which is underscored by disparities in the high and low numbers in the incorporation of mobile applications into the students' vocabulary learning routines. 70% of students also use applications to study vocabularies for less than 15 minutes a day, supporting other students' preferences in learning by shortening practice periods of mobile learning.

In terms of effectiveness, perceptions amongst students vary. Approximately 28.7% deem the applications highly effective, while 33.3% rate them as moderately effective, and a minor 6.7% consider them ineffective. These findings underline the subjective nature of app effectiveness, influenced by individual learning styles and preferences. Regarding educational approach preferences, a majority (60%) perceive apps as more efficacious compared to traditional school exercises, though some hold the contrary view. A significant two-thirds preference for mobile apps over textbook exercises signals a shift towards technology-enhanced learning modalities. Moreover, a notable 63.3% express interest in integrating mobile apps into classroom settings, aligning with the broader trend of leveraging technology to augment language-learning environments. When examining specific app features, students display a predilection for certain functionalities. Pronunciation assistance is highly valued by 43.3% of respondents, evidencing the perceived utility of apps in enhancing oral proficiency. Additionally, 30% find the writing and spelling components extremely beneficial, highlighting the apps' diverse advantages in fostering improved linguistic skills. The integration of AI and gamification also garners interest, with 40% finding engagement with AI chatbots moderately effective and 36.7% lauding the use of games for vocabulary learning. These insights suggest an openness to exploring innovative, engaging methods for vocabulary enhancement.

The overall effectiveness of activities based on mobile applications would suggest that 30% of the students sharply affirm the efficacy, and around 36.7% are neutral to this view and tend to have some inclination towards blending mobile applications with traditional techniques of learning. These are neutral stances that bring out both the effectiveness of the mainstream methodologies and the technology-based methodologies in language learning. This then implies gigantic future research, calling on curriculum developers and educators to consider adopting mobile apps within the frameworks of language learning for the likely increased benefit in student engagement and achievement. Further inquiry could delineate what exact features of the app that support perceived effectiveness are, and how the digital divide could be narrowed down in order to make the most of the vocabulary acquisition strategies by all students. Such an approach could disentangle the complexities of age and educational background effects on app use and thereafter inform the adaptation of language learning approaches to be deployed, considering that the learners are not homogenous in needs.

Conclusion

That is the peak of this research, where mobile applications vividly influence university-level English vocabulary learning and bring out an important paradigm shift in the educational practices of using digital tools. The outcome, therefore, reveals an interesting trend where students prefer to use mobile technology in their efforts to learn vocabularies, since there is access, flexibility, and the interactivity brought about by mobile applications. Such preferences are reflective of a bigger digital trend that ekes out of traditional learning boundaries, offering the learner comfort in studying from his preferred time and place, hence fitting into his routine comfortably. Most of the students practiced vocabulary through a mobile application, which could reveal a trend of independence and personal learning environments, backed by the ubiquity of smartphones. This becomes further manifest when the students value particular app benefits, including gamification and features for assisting learners in pronunciation. This does not only improve the learning experience on the whole but also caters to the different modes of learning and requirements. The openness to mobile apps for formal educational settings points to the emerging educational landscape where technology and traditional methods shake hands for an amalgamated learning experience. Further, the way the study sheds light on the varied effectiveness of these tools, as seen by students, really drives home just how subjective learning tools are and how educational technologies need to be tailored to the profile of every individual learner. Those subtle clues on students' preferences and effectiveness of the mobile apps for vocabulary learning build a bottom for future studies and curriculum developments to argue in favor of a balanced integration of technological innovations with conventional educational methodologies. As such, educators and developers of educational frameworks are positioned to turn English vocabulary teaching and learning into a new frontier in the use of mobile applications to bridge the digital divide and harness the power of mobile applications in maximizing language learning outcomes. This research illuminated not only the current state of mobile learning in vocabulary acquisition but also really carved out an opening to guide future investigations into optimizing digital tools towards educational excellence, which enriches language learning for students across varied demographics.

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