

The Impact of Using VocBlast to Learn Technical Vocabulary at Tertiary Level

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Abstract: Recently, there has been a rapid development of mobile applications (apps) for language learning purposes. An app namely VocBlast is designed to provide new learning experiences for engineering students to improve knowledge in technical vocabulary. The paper investigates the students' viewpoints about the impact of using VocBlast to learn technical vocabulary between genders. 68 students from University Malaysia Pahang (UMP) were selected as samples using purposive random sampling method. A Likert-type questionnaire was employed to gauge students' perceptions in using VocBlast. Using independent samples t-test, the results of the study revealed that there was no significant difference between genders on the impact of using VocBlast to learn technical vocabulary. This suggests that both genders equally perceived VocBlast as a useful vocabulary mobile app to learn technical vocabulary. In terms of learning pedagogy, the study extends the knowledge of mobile learning by providing insights on engineering students' positive attitude in adopting vocabulary mobile app to learn technical vocabulary.

Keywords: Mobile Learning, Technical Vocabulary, Vocabulary Mobile Application, Language Learning, Engineering Students, Tertiary Education.

I. INTRODUCTION

There is a growing body of literature that recognizes the importance of mobile learning (m-learning) [15, 3, 4]. Through m-learning, the process of language learning is no longer constraint to the classroom. Mobile devices such as smartphones and tablets allow learning process to occur while on-the-go and as a result, it creates an interesting and interactive language learning experience [9]. In a study conducted by [13], university students showed positive feedback on the integration of mobile learning in education. The students were familiar with computing and communication activities by using their devices such as smartphones and tablets. Later, [8] explored the possibilities of employing mobile devices in higher education. Due to that, the learning has become flexible for everyone and it is no longer confined to a certain location. Not only that, [5] have discovered that mobile learning has a positive effect on learners' behavioral intention. It is further elaborated that the usefulness and ease of use of mobile devices in learning language were two important factors that highly affected the acceptance of mobile learning. In addition, mobile devices can motivate the learner to learn the language. It is true as [14] found that the use of mobile devices as a learning tool is effective in supporting students' learning. In particular, their uses increased the learners' learning motivation and contributed to the success of learners in enhancing their vocabulary knowledge.

In the study of the impact of genders, [2] studied the undergraduate students' perceptions according to genders on the adoption of mobile technologies for learning in Nigeria. The results showed that both genders regarded mobile technologies as an alternative to learn. Meanwhile, [12] examined the effect of mobile phone use in academic performance between gender. Unlike [2], [12] found that there was a significant difference in academic performance when using mobile phone between genders. In the Malaysian context, [10] examined the use of mobile and wireless technology in higher education between genders. It was found that gender had no significant impact in their uses of

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mobile technology in learning. Yet, it might be due to the type of mobile devices that students owned or the strength and speed of the internet connectivity. However, there has been scarce on this particular field of study.

Thus far, it seems that studies that compare the impact of learning technical vocabulary through vocabulary mobile application between genders is still limited especially in Malaysia context. Thus, the current study attempts to fill in the gap by examining the impact of VocBlast; a vocabulary mobile application, between genders studying at higher education institution. Specifically, the study determines to address a single research question that is to know whether or not there is a significant difference on the impact of using VocBlast to learn technical vocabulary between genders:

II. METHODOLOGY

The study employed survey research method as the objective of the study is to examine the relationship between learning technical vocabulary through VocBlast and its impact on genders. The data was collected by using questionnaire containing twenty-eight items. The items were Likert-scale items based on from “Strongly Disagree” to “Strongly Agree”. To ensure the validity of the questionnaire, the study employed content validity [6], in which the questionnaire was validated by a lecturer from Centre for Modern Languages and Human Sciences (CMLHS), UMP. The current study employed 68 undergraduate students of UMP. They were selected by using the non-probability sampling method in which the selection was made based on two characteristics. First, the participant has to be a student from any major of engineering offered in UMP and secondly, familiar with the use of language learning mobile app.

III. RESEARCH MATERIAL

The study employed VocBlast, a language learning mobile vocabulary application for iOS devices as a research material. VocBlast contains ten (10) different games which are arranged according to the level of difficulty. It has a different type of activities such as crossword puzzle, word search, spelling, and gap-fill. With regards to the targeted vocabulary in the app, it is derived from the Engineering textbooks in which it was selected based on the high-frequency vocabulary as well as its usefulness.

IV. PROCEDURE OF DATA COLLECTION

In collecting the data, a few procedures had been identified. The first procedure is to select the participants of the study. The participants were selected based on two characteristics that have been outlined in the previous section. It was found out that the participants have been using their smartphones for many purposes and among them are for learning and entertainment. Two iPad Minis were used for this study. However, for participants who owned iOS devices such as iPod Touch, iPhone, and iPad, they were instructed to download VocBlast from the App Store. Participants were required to play VocBlast on their own in the duration of one week. After one week, questionnaires were distributed to them. The data was analyzed for descriptive and inferential statistics. For the inferential statistic, t-test was used to analyze the impact of VocBlast between genders.

V. RESULT AND DISCUSSION

Research question: Is there any significant difference on the impact of using VocBlast to learn technical vocabulary between genders?

Preliminary analysis in Table 1.1 shows the female participants had the highest mean score ($M=3.80$, $SD=0.53$) compared to the male participants ($M=3.70$, 0.48).

Table 1: Mean and Standard Deviation of Scores between Genders

Gender	N	Mean	St. Deviation
Male	30	3.70	.48
Female	38	3.80	.53

Further analysis using an independent samples t-test was conducted to answer the research question, an independent-samples t-test was conducted to compare the impact between genders in using VocBlast to learn technical vocabulary.

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Based on Table 1.2, it shows that there was no significant difference in the scores for male participants (M=3.70, SD=0.48) and female participants (M=3.80, SD=0.53); $t(66) = -0.87, p = 0.39$. This result suggests that the impact of using VocBlast to learn technical vocabulary is the same for both male and female students.

Table 2: Independent Samples t-test

	Levene's Test for Equality of Variances		t-test for Equality Means						
	F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
								Lower	Upper
Equal variances assumed	0.06	0.82	-0.87	66	0.39	-0.11	0.12	-0.35	0.14
Equal variances not assumed			-0.86	59.38	0.39	-0.11	0.12	-0.36	0.14

Findings from the current study revealed that both genders found that there is no difference in males and females' opinions on the impact of using VocBlast. These results are consistent with data obtained in [2] study as they found that the adoption of mobile technologies did not have any impact on either of the genders. However, it is not similar to [7] study as it was found that male students perceived the use of mobile app for learning vocabulary to be more positive than the female students. This could be due to the fact that male students were more accustomed to mobile learning applications rather than female students. In their study, the use of mobile learning applications has increased the students' vocabulary while writing English texts since learning was more personalized. Another similar finding to the previous study [7] is [11] study which found that the use of iTunes U App to be more interesting to male students as they believed that the app was a useful source of learning to independent users. Besides that, the software could be used as a supplementary material to learn English language. The results of the current study do not corroborate with a study obtained by [1]. Their findings reported that one of their male students perceived that vocabulary app that are available online are useful for him. Such was due to the fact that he was able to access thousands of online English for Foreign Language (EFL) resources. The tertiary level student in Paiame Noor University in Sirjan, Iran believed that the internet connectivity facilitated his language learning process.

VI. CONCLUSION

The results showed that there is no significant difference between genders on the impact of using VocBlast to learn technical vocabulary. This suggests that more time is required for them to play with VocBlast. In the current study, it seems that the time spent by the engineering students to play VocBlast affected the results of the current study. The most likely cause is due to their timetables and other co-curricular activities. Their main focus was to complete all ten games only and disregard the whole experience of using VocBlast. However, in terms of pedagogy, it was found that language teachers may incorporate the use of smartphones or tablets for interactive instructional activities in the classroom. In fact, students' attitude may change when the learning of vocabulary integrates technology is used in the class as the medium matches with their learning aptitude [18]. Possibly, it can enhance the learning of technical vocabulary among language learners [16].

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