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# Understanding behavioural intention to play online game: The case of VocBlast

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**Abstract.** Research has shown that mobile learning enables its users to learn at any time and place. The current study investigates the use of VocBlast; an app that integrates technical and engineering vocabulary, in terms of understanding the behavioural intention of its players. The study employs 129 engineering and technical students from Universiti Malaysia Pahang (UMP). Online survey was used to collect their opinions; in particular male and female students' opinions on the use of the app in the future. The results of the study indicated that there was no significant difference pertaining to their behavioural intention using VocBlast in the course of time. The study implies that more time needs to be given to the students in playing VocBlast as it is believed that playing the game repetitively would promote positive perceptions among its players.

## 1. Introduction

Mobile learning has emerged as a powerful platform for learning. A report prepared by the Educause Center for Analysis and Research in 2013 revealed that 45 percent of the students at tertiary level education used mobile devices while 37 percent of them used smartphones in their daily routine as students. With this statistic in mind, it brings a major challenge for educators to recognize the benefits that the devices can bring to the students. Numerous studies have been conducted in the use of m-learning particularly in language learning. An app namely "Remword", a free mobile English-Chinese dictionary app, integrates m-learning to enable its users to remember words they learnt [1]. All the words that have been remembered can easily be retrieved by the users if they want to revise them. This is done by clicking the search engine that is available in "New Word Book" in the app. By using the app they can search for words they have remembered and then identify new words they need to memorise. Meanwhile, the use of "English Vocabulary Crosswords" revealed that the app is useful in assisting students to know definition, terminology and lexis that consequently enables them to retain and memorise words learnt [2]. The app provides a word-rich learning for students as they can practice and review vocabulary in the app. Meanwhile, it is shown that students had positive attitudes towards mobile-assisted vocabulary exercises. More specifically they were satisfied when the teachers gave those exercises via Short Messaging System (SMS) [3]. Likewise, an app namely Kadazandusun to learn Kandazan and Dusun language; a Malayo-Polynesian language family, proved to be useful for those who were interested in learning the language [4].

On a different note, previous research comparing males and females in their behavioural intention to play online games showed that gender; as a variable, had and had not play significant roles in giving decision to its players to play or otherwise in the future. For instance, in Malaysia, a study on consumers'



behavioural intention was investigated in its relation to adopting mobile entertainment (m-entertainment) between gender. The study suggests that users' behavioural intention is related to their perceived ease of use and social influence instead of gender issues [5]. The researcher found that male and female consumers used mobile phones, tablet PCs and PDAs if the cost of adopting the services were reasonable. It seemed that there was no gender difference in the adoption of m-entertainment since Malaysian government gave equal opportunity for its citizen to use or not to use the services for entertainment if they were able to afford it. On the contrary, it was found that gender influenced players in their behavioral intention to play Social Network Game (SNG) among its players in China [6]. The variable had a significant effect in moderating other variables namely achievement, social influence, perceived enjoyment, fantasy, price value; that were experimented in the study. Interestingly, females showed stronger intention to play the game in the future than males. Such reported was due to the entertainment they obtained from the online games. Moreover, the less violent and less competitive features were the reason that SNG became popular among females. In another study, albeit comparing gender was not directly investigated in the adoption of m-learning, it was found that younger female academicians were increasingly engaging in m-learning resources compared to the older female staff [7]. Such was due to their awareness in using technology for their educational methodologies. In fact, they needed to know the nuts and bolts of using the tool in delivering contents in the 21<sup>st</sup> classroom. In addition, it was found that investigating gender differences was significant in relation to playing online games [8]. Such was the limitation in Park et. Al.'s study [8] as the researchers recommended that comparing the demographic information might enable them to predict more salient outcome of their study. The study that employed approximately equal number of male and female amounting to the total number of 1049 students did not investigate the extent as to whether gender played any roles in their study. Nevertheless, one major issue in the previous research concerned with the contents of m-learning in that researchers investigated the use of m-learning as resources, social networking and entertainment between gender. No attention has been paid to the use of m-learning in relation to learning engineering and technical vocabulary between male and female students as players. Thus, the nature of the use of m-learning between gender remains unclear. This paper, therefore, attempts to understand the behavioural intention of playing VocBlast by comparing male and female students' opinions in their adoption to use the app in the future.

## 2. Methodology

The current study involved 129 engineering and technical students from Universiti Malaysia Pahang (UMP) as its participants. The study employed VocBlast as a research material in investigating its adoption in the future between male and female students. The app consists of ten (10) games; crossword puzzle, matching, word search; to name a few, that are arranged according to its level of difficulty. The target vocabularies selected in the app are derived from students' course books. Meanwhile, an online questionnaire was prepared for the purpose of collecting data for the study. In designing the tool, Likert scales from 1 (strongly disagree) to 5 (strongly agree) were formulated. Participants were required to give their opinions on their behavioural intention when using VocBlast. It is worth to report that during the collection of data, it was found that majority of them used Android and due to the limitation in having only two (2) iPads, they were required to share the gadgets and play in groups of five members. They took about 30 minutes to play all the games in VocBlast. Once they completed playing, they were required to answer the online questionnaire. After completing the game, they were informed to answer 24 items in the questionnaire. They took about 10-15 minutes to answer the items in the questionnaire. In analysing the data for the study, t- test was used to compare male and female students' behaviour intention in using the app; VocBlast.

## 3. Results and Discussion

An independent sample t-test was conducted to compare students' behavioural intention scores in using VocBlast between male and female students. Results from Table 3.1 and Table 3.2 show that there were no significant differences in scores for males ( $M=3.81$ ,  $SD=.83$ ) and females ( $M=3.78$ ,  $SD=.62$ ,  $t(127) = .22$ ,  $p.82 < .0005$ ).

**Table 3.1.** Mean and Standard Deviation of students' behavioural intention of using VocBlast.

Variables	Gender	N	Mean	Std. Deviation	Std. Error Mean
Mean Behavioural Intention		81	3.8086	.82585	.09176
	Female	48	3.7778	.61917	.08937

**Table 3.2.** Independent Sample t-test pertaining to students' behavioural intention in using VocBlast.

	Levene's Test for Equality of Variances		t-test for Equality of Means				
	F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference
Mean Behavioural Intention	4.614		.224	127	.823	.03	.14

From the results of the study, it was found that male and female students did not show positive remarks in their behavioural intention to use VocBlast. This may be due to the fact that they played VocBlast in the class. Grouping them was another barrier in getting their positive intention when they were asked of the possibility of playing VocBlast in the future. In the online questionnaire, many of the students chose scales from one (1) to three (3); having 1 as Disagree Strongly, 2 as Disagree and 3 as Neutral; when they were asked pertaining to their opinions on their intention to use VocBlast to improve technical and engineering vocabulary. This result may be explained by the fact that they need to complete each level of the game before they get to another level. In other words, they were required to complete playing ten (10) levels of the game in VocBlast. This may cause a hindrance for them to enjoy playing the game at the time that was requested by the researchers. This result is consistent with data obtained in a study that showed that behaviour intention of purchasing an app is due to its playfulness; among others [9]. Enjoyment serves as an emotional value when players play games. And as such, it is a contributing factor that makes an app to be purchased or otherwise by its players and non-players. To ensure enjoyment in playing VocBlast, therefore, it can thus be suggested that students need to play the game according to their free time. Moreover, they need to be playing the game alone as they may have the chance to think of the answers in each of the level they play in VocBlast.

The current study also found that participants gave low consideration in downloading the application in their devices. This result matched with an earlier study showing that smartphone users' in-game purchase intention was due to their perceived added values on the game itself [10]. Nevertheless, habit in the first place, is the determiner that makes ones to use in-app purchase in mobile games [11]. In fact, it is argued that habit needs to be considered when conducting research concerning online games [10]. In the previous study conducted, it was found that players need to play a particular game repetitively to promote positive perceptions with regard to the value that a particular game has to offer [10]. In the current study, being not given the chance to play all levels of games in VocBlast continually was the factor that contributed to the non-significant result of male and female students' behavioural intention to use VocBlast in the future. However, the aforesaid decision was due to it was afraid that it would be difficult to gather all participants for the slot to play the app in the next time around. An implication of this is the possibility that there is a necessity to plan for sufficient slots for the students to play VocBlast considering that majority of them studying in the university are not Apple users.

#### 4. Conclusion

This paper has argued that there was no significant result in gender difference pertaining to their behavioural intention using VocBlast in the future. An implication of this is the possibility that in the future there is a need to require students to play VocBlast on their own and according to their free time. Such was necessary since they would be able to complete all the levels of games in VocBlast on their own. Moreover, VocBlast does not offer social relationship as it does not involve multiplayer. Therefore, students as players are required to figure out the answers in each level of the games they are playing by themselves before they move on to the other level. Nevertheless, this research extends our knowledge of online games in that players need to enjoy playing VocBlast, and requiring them to play in groups seemed to hinder their excitement. As a result of not being able to play VocBlast repetitively due to they played the game in class only, they felt that it was not worth to play it in the future. Yet, this discrepancy could be attributed to many of the students used Android as its operating system. As VocBlast operates on iOS, many students who were not familiar with the system could not enjoy the game. The evidence from this study suggests that teachers may use online games to assist students in learning vocabulary. The use of technology is convenient due to students, in particular, as it is 'part and parcel' of their lives [12]. However, for teachers, the conventional method of teaching vocabulary as requiring students to check the meaning of a particular vocabulary in dictionary; whether online or paper dictionary, is still relevant. Greater efforts for further research are needed to understand the potential use of VocBlast in the future in terms of its players' behavioural intention of playing the game to assist them in learning vocabulary.

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