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VocBlast: A preview of a mobile vocabulary application to learn specialized engineering vocabulary

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ABSTRACT

There is a growing body of literature that recognizes the integration of mobile devices in language learning. Mobile devices is of interest in language learning is because of its portability and efficiency. VocBlast, a newly-developed engineering vocabulary mobile application (app), is developed to assist engineering students at tertiary level to improve their mastery of English language. The objective of the paper is to review the concept and content of the app. VocBlast consisted of 10 different vocabulary games that are designed to accommodate the language learning experience of the engineering students. As for the content of the app, the vocabulary is derived from engineering textbooks. Although VocBlast is still in the progress of development, it can be stated that the app may facilitate learners to enrich their specialized vocabulary. As a new alternative for learners to diversify their vocabulary learning experience, VocBlast allows the learner to not only learn specialized vocabulary but also its definition and application. Thus, this will enrich their specialized vocabulary knowledge and at the same time, provide the learner an opportunity to learn in an interactive and fun environment.

OVERVIEW

VocBlast is a new mobile vocabulary app that is developed by a team from Universiti Malaysia Pahang. Focusing on technical vocabulary only, the app is intended to help the Engineering learners around the nation to widen their vocabulary knowledge.

DESCRIPTION

The vocabulary mobile consists of ten (10) different vocabulary games that are arranged according to the level of difficulty: Game 1, Game 2, Game 3, Game 4, Game 5, Game 6, Game 7, Game 8, Game 9 and Game 10. The vocabulary used in the vocabulary mobile app is taken from the Engineering textbooks. In term of the selection of the vocabulary, the selected one is those from high frequency vocabulary as well as its usefulness (Chitravelu, Sithamparam, & Choon, 2005).

2.1 Game 1

This game tests the learners' spelling knowledge which they have to answer the questions correctly within the time limit of thirty (30) seconds. There are two levels in this game. Each of the level consists of fifteen (15) words. In order for the learner to proceed to Level 2, s/he must score a perfect 15/15. As for the question, it adapts the concept of multiple choice questions (MCQ) which the learner will be given three options- "TAB", "TRIMME", and "FOCRE". When the learner has identified the correct answer; which is "TAB", they just click the box on the right side of the word and a tick will appear. The box will turn blue for the correct answer but will turn red for the incorrect answer. When the learner has answered all of the questions available in Level 1, the result will be revealed. On that page, learner will know the number of question that s/he gets correct and incorrect. Not only that, learner may review the question s/he has answered, return to Main Menu by clicking the "HOME" button and if the learner does not satisfy with the result, s/he can replay the level by clicking the "REPLAY" button.

2.2 Game 2

After completing Game 1, the second game acquires the learner to match the definition with the correct word. The game has three (3) levels which each of the level contains six (6) words that the learner will have to match. The game play for this game is simple but the learner really has to pay close attention when matching the definition to its word. For each of the definition, e.g. "The absence of heat; a temperature considerably below normal"; four (4) options of answer are provided- "COLD", "COMPOUND", "COMMON", and "COURSE". As for this question, the answer is "COLD", thus the learner will click on the "COLD" button. Once answered, next question will appear automatically. For each of the level, the learner must at least answer five (5) correct questions. If they fail to do so, the level will be repeated but the order of the questions and its answers will be shuffled randomly. At the end of Game 2, the learner will be able to review their answers, return to Main Menu by clicking the "HOME" button and s/he can also replay the game by clicking the "REPLAY" button.

2.3 Game 3

Acquiring both of the vocabulary knowledge and spelling knowledge, Game 3 is where the learner will have to arrange the unscrambled letters into its correct spelling based on the definition. Like the previous game, this game has three (3) levels too and for each of it, the learner will be prompted with six (6) questions only. The layout for this game is arranged nicely for the learner. The unscrambled letters is at the top of the page followed by a space for the answer and lastly, the definition. In Game 3, hint is provided to help the learner. Only one hint is given for each of the question. Learner must at least get five (5) correct answers in order for s/he to proceed to Level 2 and Level 3. If s/he fails to achieve the score, another six (6) words will be randomly chosen for the learner to replay the level. There is a time limit for the learner to answer which is sixty (60) seconds. It will automatically restart for each of the new question. Every wrong answer is still accepted however it will be counted as zero. After answering all questions for Level 1, 2 or 3, the result will be viewed. Learner will be able to check their result. If they score above five (5), they may click the "NEXT" button which will direct them to Level 2 or 3 and if they score below five (5), they will have to click the "REPLAY" button. Or else, they would not be able to proceed to next level.

2.4 Game 4

Almost similar to Game 3, this game acquires the learner to drag the letters into the boxes to form a word based on the definition given. Applying sixty (60) seconds as a time limit for each of the words, there is no specific score that the learner has to achieve. Instead, when s/he arranges the letters wrongly, a sound will produce and the boxes will blink in red. A pop-up will appear and inform the learner that the answer is wrong and they have to try to answer it again until they get a correct answer. If s/he fails to complete it within the period of the time limit, next word will automatically appear. Similar to the previous game, at the end of the game, learner may review her/his answer, return to Main Menu and replay Game 4.

2.5 Game 5

For this game, the learner will have to guess the word based on the given definition. S/he has two (2) options of completing the task; either by dragging the letter to its correct box or by clicking the letter and the box that s/he wants to place it. When the answer is correct, the letters will turn to green and turn to red for the incorrect answer. Hint is also provided but in a limited amount. Throughout the level, learner can only use the hint for ten (10) times only. Each click on the “HINT” button, one (1) letter will be revealed. A “shuffle” option is introduced in this game. There is no limit in using the “shuffle” option. In addition to that, learner is allowed to skip the question and go to the next one. Learner can click the two arrows that is located on the bottom left of the page. By way of illustration, s/he has the freedom to choose which question to answer first. Another button that can be found is the “HOME” button. By clicking the button, the learner will be directed to Main Menu; indicating that the game has ended. As for that, the game will not be saved and the hint will be reset.

2.6 Game 6

At Game 6, the learner will have to guess the correct letters to be filled in the blanks. This game is about making connection between an image and the learner’s vocabulary knowledge. Similar to the previous games, it has three (3) different levels where each of the level will have ten (10) questions. Time limit of sixty (60) seconds is given. Once the time ends, next picture will appear; indicating that the player has failed. While playing, the image will appear one by one, reducing the distraction. At the end of the game, the score will be revealed as well as the time that the learner has spent to answer all questions.

2.7 Game 7

Introducing crossword puzzle for Game 7, it applies the similar concept as to what everyone knows about crossword puzzle. The task for this game is to complete the puzzle by referring to the clues that are provided. Unlike any typical crossword puzzle, the clue will not be listed on any side of the puzzle. In order for the learner to get a clue, all s/he has to do is to click the number of question that s/he wants to answer. Immediately a small pop-up will appear and the clue is revealed. Different to the other six (6) games before, this one would not have any score. Instead, the learner must complete all of the puzzles to make her/him eligible to move to the next game. To heat up the game, learner must complete this task in twenty (20) minutes.

2.8 Game 8

If in the previous games such as Game 4 and 5 the definition is given as a clue, Game 8 is taking that one notch higher. This game acquires the learner to define the word; specifically, Engineering words. Still employing the same concept where there are three (3) levels that the learner has to pass, only six (6) words will be randomly chosen from the database. Out of six (6), the learner must answer five (5) correct questions in order for them to move to the next level. Not only that, s/he needs to finish answering each of the questions within the period of sixty (60) seconds. As a result of exceeding the time limit, the learner will be considered as fail to answer the question. When s/he fails, another six (6) words will be randomly chosen from the database. On the page, the word will be located on the left side while three (3) choices of the definition will be on the right side. Completing all levels and s/he will be directed to Game 9.

2.9 Game 9

Employing the concept of Word Search, the learner has to identify the word based on the given definition. Similar to Game 5 or 6, however, the choices of answer would not be given for Game 9. It is solely depending on their understanding of the definition and later search for the word. Instead of time limit, a little of twist is given to Game 9. Learner will be able to see the time that s/he has spent on completing the Word Search. At the end of the game, a pop-up will appear, congratulating the learner for the completion of the task and informing the time s/he has spent. In term of retrieving the definition, exactly like Game 8, the learner has to click the number of the question that s/he intends to answer and the definition will appear under the Word Search

box. It is also important to note that a “HOME” button is accessible at the bottom right of the page for the learner to end the game.

2.10 Game 10

The last game available in the vocabulary mobile app is Game 10 that adopts the multiple choice questions (MCQ) as its framework. There are fifteen (15) questions that the learner has to answer and to complete the task, they must at least score ten (10) and above. Since it adopts MCQ, five possible answers are available. For an example, taken from the app itself, the question would be “An infra-red __ pick up signals from a hand-held remote control unit” and the choices of answer are as follow: “SENSORS”, “SPHERE”, “MAGNET”, “TOOL”, and “BOX”. When the learner click on the correct answer, which in this case is “SENSORS”, it will turn to blue, indicating that the learner has answered it correctly. Immediately, next question will appear automatically. There is no time limit for Game 10.

EVALUATION

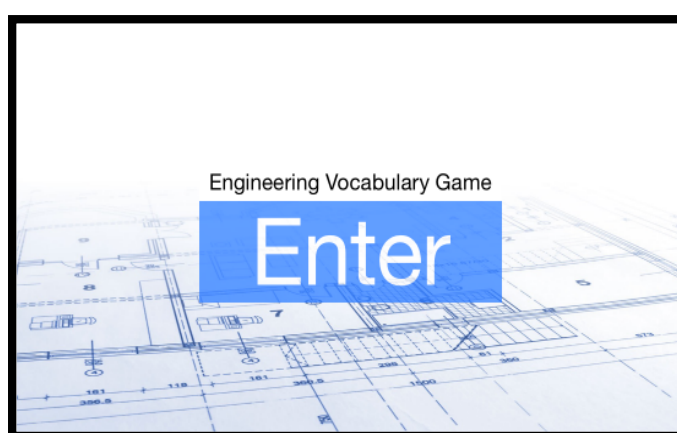


Diagram 1

As mentioned, VocBlast is developed to assist the Engineering learners at the tertiary level to improve their vocabulary knowledge particularly in technical vocabulary. Diagram 1 shows the first page that learner will see when they are about to start playing the game.

It has been pointed out by several linguists and English for Specific Purposes (ESP) teachers that teaching technical texts is a real difficulty especially in the environment where English is being taught as second language (Baker, 1988). The learning of technical vocabulary should be a continued process. It bridges all four language skills which are reading, writing, listening and speaking (Nam, 2010). It should be happening whether inside the classroom setting or outside the classroom. With the advancement of technology, computer-assisted language learning (CALL) and mobile-assisted language learning (MALL) are no longer alien to many.

Previously, fellow educators may not be prepared to embrace to use of mobile devices as an educational tool. It all change when more and more appeared with the result of their study proving that mobile devices are the new “in” thing in the field of education (Balghezadeh & Olalrostam, 2010; Godwin-Jones, 2011; and Kim & Kwon, 2012). Not only it fits into the lifestyle (Steel, 2012), it also provides a personal and learner-centered learning opportunity (Kim & Kwon, 2012). Similar to VocBlast, learner can continue learning ESL in their own “bubble” without any interruption at anytime and anywhere.

On a different note, the integration of sound, image and graphic in VocBlast is a rich network of cognition of two different mental codes which are verbal and non-verbal (Paivio & Clark, 1991). The dual coding theory (DCT) is associated in the concept of multimodal input (e.g. touch, sound and manual gestures) in VocBlast. According to DCT, the representations in one system will activate those by in the other system.

Like any other vocabulary mobile apps, the instructions available for each game are given in bite-size chunks of input. Two obvious reasons for such implementation are to fit the size of the mobile device and to

ease the learner to understand. The latter reason is closely related to field independent (FI) learning (Brown, 2007, pp. 121-124). Through FI, the learner will be able to distinguish the unnecessary part and only concentrate on one particular item, in this case, the demand of the task.

Another feature of VocBlast that needs to be highlighted is the flexibility and accessibility while playing the game. Unlike any other vocabulary mobile apps, VocBlast allows the learner to skip questions that they find difficult and later, they can simply revisit them to finish the game. Besides that, as shown in two diagrams below, learner can opt to hide the keyboard and use the hint to assist him/her in answering the question.

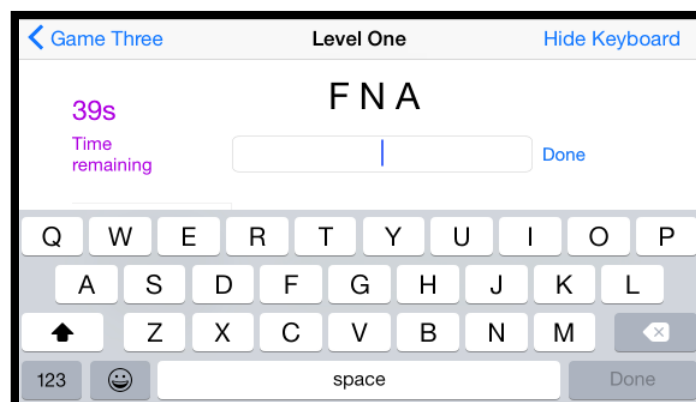


Diagram 2

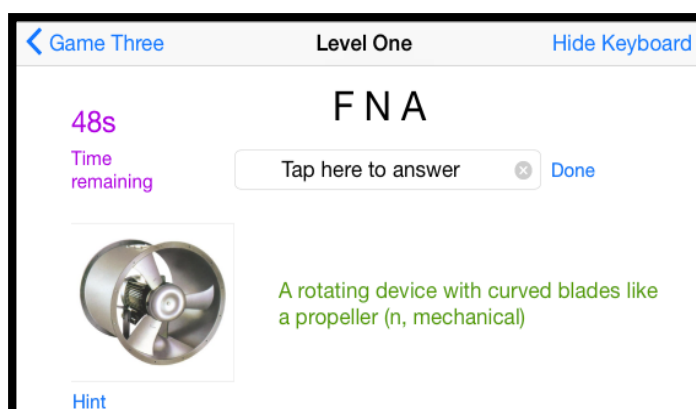


Diagram 3

Referring to Diagram 2, when the learner clicks the “Hide Keyboard” button, the QWERTY keyboard will be hidden from sight immediately. If the learner has figured out the answer, all s/he has to is to tap the box which written “Tap here to answer” and the keyboard will appear again. As described in the description for each of the game above, some games provide hint to the learner e.g. Game Three. For the hint to appear, learner needs to click the “Hint” button that is available on the bottom left of the game (refer to Diagram 3). Once clicked, an image will appear. It is also important to note that there is a time limit for each of the questions. If the learner fails to answer the question within the time limit, a pop-up will appear as shown in Diagram 4 below.

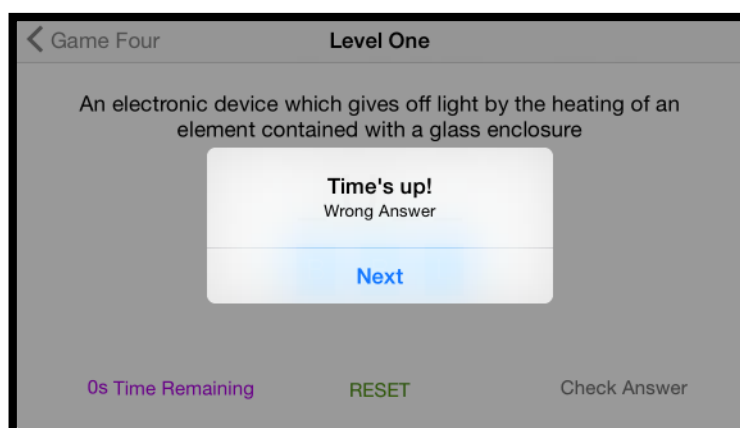


Diagram 4

The question that learner fails to answer will be accepted however will be given zero point. To move to the next question, learner will only have to click the “Next” button (refer to Diagram 4).

As for Game Four, for an example, it requires the learner to scramble the letters until it forms a correct word. By referring to Diagram 5, the “Reset” button allows the learner to clear his/her incorrect answer and continue arranging the letters.

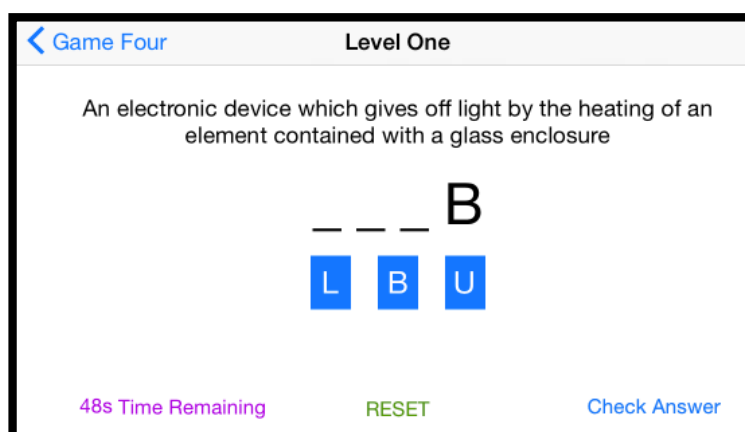


Diagram 5

CONCLUSION

In general, VocBlast is an educational tool that provides the opportunity for learner to develop their sense of individuality and at the same time, it provides a higher degree of user interactivity (Goundar, 2011). It is also a proof that learning process can be done anywhere and anytime. Most importantly, VocBlast can be a new platform for engineering students to improve their vocabulary mastery.

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