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B.B: Interactive Busy Vocab Box

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ABSTRACT

The four language skills (reading, writing, listening, speaking) are often considered to be the main determinant of second language proficiency. In addition to those skills, there is one other feature of second language learning that can be considered important, that is vocabulary. However, unlike the other major skills, vocabulary acquisition for ESL learners are mostly self-taught. Learners are often expected to acquire vocabulary through reading, rather than being explicitly taught [1]. A survey conducted among undergraduates of a foundation program found that they are primarily concerned with not having a sizable vocabulary, suggesting that ESL learners are aware of the importance of vocabulary to help them be more proficient in English. It is also clear that ESL learners require targeted strategies for them to successfully build a sizable vocabulary. One such strategy is by building up on root words using affixes. This is the fundamental idea behind the design of the B.B-Interactive Busy Vocab Box (BB Vocab Box). The combination of root word expansion and tactile learning strategy could help students retain the new words better. This portable box has the potential to help ESL learners engage in active learning activities by providing a tactile experience. Though at first glance the product may be deemed more suitable for young learners, adult ESL learners can also benefit from its novel design and approach. The contents chosen for the BB Vocab Box adhere to the CEFR guidelines and can be tweaked to fulfil the varying needs and learning objectives of its users, be it the parents, teachers or learners themselves. Thus, the BB Vocab Box is able to provide a structured guide to vocabulary expansion, while also empowering learners to personalise their learning experience.

Keywords: ESL learners; vocabulary size; tactile learning; CEFR

1. INTRODUCTION

In the tertiary learning environment, it is crucial for learners to possess a certain level of proficiency as they often need to interact with materials that are considerably more difficult than what was used in schools. The more difficult the materials, the better their proficiency needs to be, especially in terms of reading and writing. One way for ESL learners to improve their proficiency is by expanding their vocabulary size. However, most ESL educational systems are structured to put more emphasis on grammar rather than vocabulary, deeming grammar requires more effort to teach while vocabulary can be self-taught. Unfortunately, most adult ESL learners consider vocabulary acquisition as one of the

greatest challenges that they have to face when learning English [2]. Most are have also not been explicitly taught how to acquire vocabulary when they were in school, leading to an increased difficulty in expanding their vocabulary to cope with the demands of tertiary learning institutions. For example, the vocabulary size of most Malaysian undergraduates is inadequate, hindering them in their academic progress, especially in terms of understanding academic texts [3,9]. Therefore, vocabulary learning should also be emphasised and no longer be considered secondary to the other language skills.

In addition to vocabulary building not being focused on explicitly in the education system, there is also a significant lack of materials to support vocabulary building. Educational modules, classes and games, centre more on the development of the four major skills. Even when the educational materials and tools are made specifically for teaching vocabulary, the intended users are usually young children, not adult learners.

The BB Vocab Box is created as a response to the issues stated above. The main objectives of this product are to introduce a strategy for vocabulary learning, provide an enjoyable and active learning experience as well as offering a learning tool that can be personalised to meet specific learners' needs.

Vocabulary Learning Strategies

A commonly used strategy for learning new words is by having a list and memorising them. The list usually comprises of high frequency words or words that are commonly used in speaking and writing. However, as this list can be extremely long, ranging from hundreds to thousands, it is unrealistic to expect learners to simply memorise it. A much more effective strategy is by applying the affixation system to vocabulary learning [8].

Most English words are actually related to one another through a common root word. The use of affixes (prefix and suffix) helps learners to create new words and improve their vocabulary size [7]. Learning the affixation system also helps learners with grammar. For example, the word *eat* is a verb (action word). By adding the suffix *-er* to it, learners get a new word (*eater*), that falls under a different word class (noun). Other than that, the affixation strategy also allows learners to change the definition or meaning of a word. For example, the meaning for *happy* can be changed simply by adding the prefix *-un*, to get the word *unhappy*.

Tactile Learning Style

The BB Vocab Box is designed to incorporate the tactile learning strategy (e.g. activities are hands-on and requires physical movements). Although some early feedbacks deem the product to be more suitable for younger learners, adult ESL learners can still reap the same benefits. A research conducted among a group of undergraduates at a Malaysian private university found that the preferred learning strategies are tactile and kinaesthetic [4]. Although the current trend in education focuses more on online learning and the use of mobile apps, the simplistic design of the BB Vocab Box can still attract learners' attention.

Furthermore, the use of mobile apps and online tools caters more to visual and auditory learners. Although it seems to be more appealing, adult ESL learners actually show a preference for physical and hands-on activities [4]. Thus, the use of BB Vocab Box can provide them with the learning experience suitable for their preferred learning style.

CEFR Word Level

The Common European Framework of Reference for Languages (CEFR) considers vocabulary size as one of the most reliable tools to measure proficiency [5,6]. Using this framework, learners can be separated by levels, from beginner to advanced, based on the standardised size of their vocabulary. As such, in order to align the content of the BB Vocab Box to the requirements of CEFR, the list of words is developed using the information obtained from an online database (<https://www.englishprofile.org/wordlists>). The database provides a comprehensive list of words based on the levels of CEFR (A1-C2). The researchers then chose suitable words from the A1-A2 levels (beginner), B1-B2 (intermediate) and C1 (advanced) to be used as the content material for BB Vocab Box.

2. INNOVATION DEVELOPMENT

This one of a kind vocabulary learning tool consists of two activities for word building, the Vocab Tree and the Vocab Tower. The tree and tower design were chosen to represent vocabulary building. Both activities require the participants to choose a particular root word, then adding suitable prefix and suffix to it to build a new word. The early prototype of the BB Vocab Box made use of easily sourced materials like boxes, small circular magnets (to attach the Vocab Tree to its base), sticker paper for the Vocab Tower word list, colour paper for the Vocab Tree word list, toy building blocks for the Vocab Tower and felt cloth to make the Vocab Tree and for other decorative purposes.

In order to make the box portable, all the components were designed to fit within the box. The Vocab tree is detachable from its base, for easy storage. There is also an instruction manual (inclusive of a list of possible answers and scorecard) for the users. Figure 1 shows the prototype of the BB Vocab Box and the instruction manual.



Figure 1: BB Vocab Box and instruction manual

Figure 2 and Figure 3 shows the design of the Vocab Tree and Vocab Tower respectively.



Figure 2: Vocab Tree



Figure 3: Vocab Tower

While the components make use of the root word vocabulary growth method and tactile learning, the difference lies in the target users. The Vocab Tree is meant for beginner to intermediate level learners and is limited to pairing one root word with various suitable prefix and suffix. It features root words from the A1, A2 and B2 level. The Vocab Tower on the other hand, is meant for more advanced level learners as the root words are more challenging (CEFR B2, C1 and C2 level) and there is an option for using multiple root words at once and connecting these words via shared prefix or suffix.

The BB Vocab Box also has a manual to explain the gameplay, a list of possible answers (newly created words) based on the root word and affixes used as well as a scorecard to add an element of competition if the product is used by multiple users at the same time. Parents and teachers can also use the suggested word list and scorecard to monitor their children or students' progress.

3. COMMERCIAL POTENTIAL

One of the main appeals of the BB Vocab Box is its compact size and easily sourced materials. As every component of the Vocab Tree and Vocab Tower can be stored in their respective compartments, users can easily bring the box everywhere. Separate pieces of the BB Vocab Box (e.g. toy building blocks) are also easily replaceable.

In addition, the words chosen for use with the BB Vocab Box may be customised and personalised to suit learners' needs. Young learners or those with lower proficiency can use words within the A1 and A2 level in CEFR and gradually increase the level of difficulty until they reach C2. This is a feature lacking in most interactive and educational products in the market, which typically cater only to specific age groups or a specific level of proficiency.

In comparison to other similar products (e.g. busy books, vocabulary games) which can be sold

anywhere from RM25 to RM50, this product is considerably cheaper. Table 1 shows the estimated cost to manufacture one BB Vocab Box.

Table 1: Estimated manufacturing cost of a BB Vocab Box

No.	Item	Quantity (Set)	Price per unit (RM)	Total price (RM)
1.	Box	2	0.80	1.60
2.	Magnet (small)	6	0.35	2.10
3.	Felt cloth (pack)	1	2.00	2.00
4.	Toy blocks (medium)	1	7.00	7.00
5.	Double sided tape	1	0.70	0.70
6.	Colour paper	5	0.29	1.45
7.	Sticker paper	5	0.18	0.90
			TOTAL	15.75

4. CONCLUSION

The main objective behind the creation of the BB Vocab Box is to provide an engaging tool for learners to increase their vocabulary size. Although acquiring adequate vocabulary size is important for ESL learners, it should not be considered to be the only criterion to determine proficiency. Nevertheless, it should still be given importance equal to the other major language skills. The BB Vocab Box helps learners to learn the of root word expansion method and improve their vocabulary through the use of affixes. The design of the current prototype is quite basic, which is something that can be improve on in the future. The future versions of the BB Vocab Box will retain its design concept but be further developed to provide better learning experience for the users. Another update to the design is to provide several packs of root words and affixes, categorised using the CEFR levels.

The product has not yet been extensively tested. However, the feedback has been favourable so far. Users who have tested the products have reported that the vocabulary learning method introduced by the BB Vocab Box is interesting and helpful in getting them to think about the way the learn vocabulary. As the product requires active participation from its users, it is hoped that they will be able to retain the newly created words which will help them improve their vocabulary size.

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