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The Application of Visual Vocabulary for ESL Students' Vocabulary Learning

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Abstract
Vocabulary is often neglected despite being one of the most crucial aspects of language acquisition. Due to the lack of emphasis on vocabulary learning, ESL students have issues in learning the English language effectively, which resulted in low-level language proficiency. Hence, this paper attempts to address this problem by introducing Visual Vocabulary to learn the target words. The main research question: How effective is the use of the Visual Vocabulary to learn vocabulary for Form Two learners? To investigate the effectiveness of the use of the Visual Vocabulary, 60 students of Form Two from sub-urban schools in Ipoh and Teluk Intan, Perak, were selected. These students were instructed to learn a total of 45 target words and Visual Vocabulary was applied to assist them to learn and simultaneously understand the meaning of the target words. The independent sample t-test, paired sample t-test, and descriptive statistics were used to analyze the scores of the pre and post-tests. The score comparison and total improvement score in percentage were also presented. The paired sample t-test results are ($t=-17.85$, $df=29$, $p<.05$) for the experimental group and ($t=-4.85$, $df=29$, $p<.05$) for the control group. Based on the stated results, both experimental and control groups improved significantly ($p=.000$*) in the post-test with a mean difference of 15.62. The results of this study confirm the effectiveness of Visual Vocabulary in learning and understanding the target words. This approach is proven to increase the success rate of vocabulary learning among ESL learners.

*Keywords***:** Visual Vocabulary, vocabulary learning, ESL students
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Introduction

A recent study highlighted that vocabulary knowledge is also one of the solid foundations to master the English language apart from grammar and pronunciation (Viera, 2017). This is supported by Yovanoff, Duesbery, Alonzo, and Tindal (2005) and Sovakandan, Jaganathan, and Hussin (2017), as they mentioned that without sufficient vocabulary knowledge, effective communication could not be conducted. However, vocabulary is often neglected despite being one of the critical language components. This is because, many teachers only focus on the four skills which are listening, speaking, reading, and writing while teaching in class (Mohamad Nor, Mazlan & Rajab, 2015). Nevertheless, vocabulary teaching is an integral part of an ESL lesson. This is essential for them as they are required to have an extensive English vocabulary at their disposal.

In the Standard Based Curriculum for Secondary Schools (KSSM) English syllabus in Malaysia, vocabulary is one of the crucial parts that support students in mastering the English language. Reading, writing, listening, and speaking are the four skills of language learning that allow students to practice their vocabulary knowledge. Teachers at schools teach the target language tacitly coincide with grammar and sound system. As a consequence of this, several issues associated with vocabulary learning have arisen among learners. The first relates to failure in producing in-depth word knowledge because one does not understand every word in a text. In-depth word knowledge can be defined as the quality of understanding of a word which helps learners to have a thorough knowledge of a word's meaning (Teng, 2016). As an example, the learners face difficulty in determining alternative definition for unfamiliar words in a text, mainly because they could not identify the meaning of the word and its spelling. This situation has become an issue since the learners are unable to recognize the difference.

Other than that, errors in word choice are also common among learners. Making relatively few errors might be related to the method used in the classroom, whereby learners are expected to identify the unfamiliar words found in a text on their own as implicit learning of vocabulary takes place. This generally happens because the target words could not be defined adequately by the learners. In acquiring a language, one should require the opportunity for output or oral practice and the use of new knowledge. It is also parallel with Swain (2000), where he mentioned, the probability of learning will increase when learners reflect upon the form and meaningful communication. Hence, it shows that vocabulary is one of the essential elements of language that will make writing useful. Teng (2016) revealed that new words could be learned accidentally while reading texts. However, the newly acquired vocabulary knowledge would have decayed significantly after two weeks. He suggested form recognition, meaning recognition, memorization of meaning and memorization of form as the easiest knowledge to acquire vocabulary.

To cope with this issue, a suitable program for vocabulary intervention or vocabulary instruction should be developed at school. The teachers should choose the appropriate technique to be used in the classroom to decrease the students' lack of vocabulary because if the teacher did not use a useful method, the students could not follow the lesson. One of the ways to increase vocabulary knowledge among students is by conducting the teaching and learning activity in a meaningful way. Teachers are encouraged to use engaging and fun ways to teach vocabulary (Sheridan & Markslag, 2017). It can increase students' interest and help with both memorization and retention. As stated by Nezhad and Shokrpour (2012), vocabulary instruction is crucial to learn

a language. To sum up, deliberate vocabulary learning is essential to enhance English language learning, and to add fun ways to teach vocabulary words can help keep the process of teaching to be fresh and entertaining. This idea might also help students to enhance their level of proficiency because vocabulary knowledge is crucial to improve one's language input and output. Koizumi and In'nami (2013) discovered that vocabulary knowledge leads to an increase in speaking proficiency. The result stated that novice and intermediate levels of students with excellent vocabulary knowledge could produce a variety of alternative meanings and enabling them to have advanced language proficiency.

Previous studies by Viera (2017), Mohamad Nor et al. (2015), Teng (2016), Sheridan and Markslag (2017), Nezhad and Shokrpour (2012), and Koizumi and In'nami (2013) show that there is a lack of studies on the area of active vocabulary learning using visual images for the students to learn new words. Thus, this study intends to examine the application of the Visual Vocabulary for vocabulary learning among English as a Second Language (ESL) learners in the Malaysian classroom as the focus is on observing the achievement in terms of vocabulary knowledge that occurs among learners. In line with the objective, this research question was posed: How effective is the use of the Visual Vocabulary to learn vocabulary for Form Two learners?

Literature Review

Importance of vocabulary learning

In the context of learning English as a second language (ESL), it has been stressed that adequate knowledge of vocabulary is required for English language learners to be able to function effectively using the language. Vocabulary refers to either a single word item, word phrases, or word chunks that are necessary to make meaningful use of the language (Alfaki, 2015). Despite its unusual importance as the most basic form of utterance, vocabulary is not evaluated as other English-language components such as speaking, reading, writing, and listening. Besides, vocabulary is merely and implicitly taught to learners, and vocabulary development is assumed to occur as learners practice other language skills. Hence, it is not a surprise that vocabulary acquisition continues to be one of the areas of concern among English language practitioners, due to the great impacts that it might have on the ESL learners. Nayan and Krishnasamy (2015), for example, claimed that learners with vocabulary problems could find it challenging to make progress in their studies, mainly when subjects they learn are taught using the English medium. Also, when these learners advance to the tertiary education later, they will need to conduct many presentations in English, not only for the language subjects but for all the topics under their area of specialization. If they have acquired a limited and minuscule collection of vocabulary, these students will have difficulties performing well and advance significantly in their educational pursuit.

Vocabulary learning problem among Malaysian students

As previously mentioned, one aspect that should be given urgent consideration to ESL students is their limited vocabulary in English. This is because, English teachers, in general, have concluded that their students have vocabulary-related problems with each of the four primary language skills, namely speaking skills, writing skills, reading skills, and listening skills. This will then profusely impact their performance in these skills. Yovanoff et al. (2005), for example, insisted that "vocabulary knowledge is a significant and constant predictor of overall reading

comprehension irrespective of grade level" (p.4). Sovakandan et al. (2017) concurred with this while acknowledging that limited vocabulary in the English language and grammatical inaccuracy pose significant challenges in writing for the low skilled ESL students.

In a study with students from a tertiary institution about their vocabulary problems, Mutalib, Kadir, Robani, and Majid (2014) found that the problems were caused by a multitude of factors. These students, for example, have indicated that they had a lack of time to learn vocabulary, and the process of learning it can only be done during their leisure time as they read novels and playing games. They also put a heavy reliance on rote-memorizing techniques, which proved to be extremely difficult for students with poor memory-retention skills. Then there was the teacher factor, in which some teachers were rigorous where the students were forced to redo and memorize vocabulary exercises. The students even described these sessions as 'torturous' (Mutalib et al., 2014). Apart from that, the students' attitude was not helping the cause either. When they were asked why they had not reverted to dictionaries or other means of finding definitions of words, they replied that they were "too lazy and checking for words was considered as time-consuming" (Mutalib et al., 2014, p.367).

Mohamad Nor et al. (2015), on the other hand, investigated the English Language teachers' perceived difficulty of English skills faced by their ESL learners. Through a set of questionnaires administered to these teachers, they pointed out that for Speaking Skills, for example, the statement with the highest mean is the statement '*Students have difficulty in using varied vocabulary and expressions*' (M= 3.37). Besides, for the Writing skills, the account '*Students have limited vocabulary knowledge*' has the highest mean (M=3.29). Furthermore, limited vocabulary is again a challenge for their learners in terms of the Reading Skills, with the statement '*Students could not understand the meaning of the words written*' produced the highest mean (M=2.89). As for the Listening Skills, the issue did not get any better, as the statement '*Students have problems because they do not understand the meaning of words*' has the highest mean (M=3.07).

The problem does get particularly vexing as these learners progress to tertiary education. Ideally, in terms of vocabulary knowledge, Read (2000) recommended that the ESL learners who are enrolled in university-level programs should have a vocabulary knowledge between 5,000 to 10,000-word families. Nation (2006) seemed to agree with this while suggesting that university students need vocabulary knowledge of about 8,000 to 9,000-word families to understand a written text without assistance and vocabulary from about 6,000 to 7,000-word families to understand a spoken text.

However, the situation on the ground is notably dire, as it has been established that insufficient vocabulary knowledge is one of the challenges facing Malaysian undergraduates in tertiary education. AbManan, Azizan, and Nasir (2017), for example, conducted a Vocabulary Level Test based on Nation's (1990) Vocabulary Test to a group of Diploma students in a Public University in Malaysia. They discovered that for a passing rate of 83 percent, for the 2,000-word level, 86 percent of the students had passed the test for receptive vocabulary. For the 3,000-word level, only 53 percent had passed. At the 5,000-word level, less than half (47.8%) of the students had passed. Finally, only half of the students had passed the academic word-level. The number of students who have successfully achieved the threshold of 83% for productively known words for

the 2,000-word is 53.7 percent, while at the 3000-word level, only a meager 3 percent had passed the test.

More recently, another study which examined the knowledge of English vocabulary among the first-year undergraduate at a public university in Malaysia at the five-word frequency level, specifically at the 2000-word level, the 3000-word level, the 5000-word level, the academic word-level and, the 10000-word level also produced an alarming result. By using Schmitt, Schmitt, and Clapham's (2001) Vocabulary Level Test, Lateh, Shamsudin, and Raof (2018) found that there is a substantial deficiency in students ' knowledge of academic vocabulary, as 93 percent of students found that they did not master the academic word-level which they are required to know as university students. Not only that, but most of them also have not mastered the rest of the word-levels; 57 percent fails to learn the 2000-word level; a worrying 83 percent fails to learn the 3000-word level; a dismaying 93 percent fails to learn the 5000-word level; a shocking 100 percent of students do not learn the 10000-word level.

These startling findings need to be urgently addressed, as the failure to do so will impede students' ability to cope with the use of English at the university, which will hinder them from achieving their full academic potential (Kaur, 2013). It might be argued that the findings presented here only involved tertiary level students. However, it must not be conveniently forgotten that these students were once primary and secondary school students. Perhaps, a more significant case to be established here is the ineffective and inadequate vocabulary teaching and learning instructions in schools, which has a damaging impact on the students' vocabulary knowledge as they advance to a higher educational level.

Learning English vocabulary using visual aids

Ab Rahman and Shah (2016) argued that the employment of appropriate vocabulary learning strategies could lead to a bigger size of vocabulary bank, better performance in reading, writing, listening, and speaking skills and English proficiency on the whole. Various vocabulary learning strategies have been employed by ESL students, such as guessing the meaning of a single vocabulary object, guessing the meaning of contexts, guessing the meaning by examining the form of words, using the English-English dictionary, using the English-Malay dictionary, asking classmates or colleagues, asking English subject teachers, asking others, such as family members or friends. However, this paper intends to focus on how visuals, particularly images and pictures, can facilitate students' vocabulary acquisition.

Wright (1990) generally believed that the learning experience of a target language would become more significant and meaningful with the inclusion of visuals, as the students can make some sense out of the visuals. He further asserted that visuals also provided interest and motivation while offering an understanding of the context of the language and a specific reference point or stimulus. Al-Rahmi, Alias, Othman, Marin, and Tur (2018) echoed this, as they insisted that visuals and pictures are mainly found to draw the attention of students when they are involved. They further claimed that this strategy is found to be more frequently employed by the lower level students.

Many studies have attempted to shed some light on how the use of visuals could help in vocabulary acquisition. Vedyanto (2016), for example, experimented with the use of pictures in a test format to evaluate vocabulary achievement among 41 secondary schools in Indonesia. He provided two forms of tests, with and without the picture. The one with the pictures required the students to complete the missing letters and then match the photos with the English words by drawing the lines. In contrast, the one without pictures was simply dealt with by translating the Indonesian vocabulary into the English vocabulary by completing the missing letters. He reported a positive and excellent correlation (r=.84) between the use of pictures in a test format and vocabulary achievement of the students. He also observed that the students seemed to be more relaxed as they dealt with the test format with pictures. On the contrary, when they were completing the task by referring to the incomplete words without any images, "they seemed very slow in answering the questions and looked anxious and perplexed" (p.56).

A study conducted in Malaysia by Mukundan, Mahvelati, Mohd Amin Din, and Nimehchisalem (2013) revealed that Form Four students' writing skill performance related to vocabulary, content, organization and mechanic scores had shown 'fair to poor' levels. It shows that lack of adequate vocabulary knowledge mainly caused by their low language proficiency can bring to poor writing skills among these secondary school students. This means that most of the students failed to explain their ideas smoothly following a logical and cohesive consequence (Ashrafzadeh & Nimehchisalem, 2015). The learners lacked in terms of paraphrasing skill, creating their arguments due to effects on first language (L1) transfer. This L1 habits made them fail to notice the prominence of having well-organized and cohesive writing. Chang, Lin, and Abdul Rashid (2014) mentioned that understanding written text is one of the most critical skills in learning the English language.

In the context of the teaching of English as Foreign Language (EFL), the use of visuals has also been indicated as one of the very effective vocabulary learning strategies. Saad, Yaacob, and Shapii (2017) examined the vocabulary learning strategies of a group of Saudi secondary stage learners in a Saudi International School in Malaysia. With regards to the use of pictures in guessing the meaning of a particular English word, the participants have revealed that visual images have helped them to understand the meaning of a word through either cartoons or picture images. One of the participants acknowledged that only 20% of the attention paid was paid to the sentence, while 80% to the photo. The participants further admitted that pictures "helped their imagination and assisted in learning new vocabulary items, particularly by the use of dictionaries" (p.1253).

In the Malaysian context, Ab Rashid (2011) used children's stories to assist vocabulary learning among a group of less proficient young adults in Malaysia. He chose these stories as he believed that these stories offer visual support that could help the participants of the study to understand better. The pictures helped the young readers to grasp and remember the words which appeared during the reading. Changes in vocabulary proficiency were analyzed through the comparison of the results of the Pre and Post-test, as well as their writing in the learning diaries. He found out that after using these stories, all participants scored better marks in the Post-test compared to the Pre-test, with about 20% of them showing a very significant improvement in the Post-test. Also, all the participants gave positive feedback on the use of children's stories to learn new vocabulary. Apart from that, the English teacher involved in this study had positive

perceptions regarding the use of children's stories to increase vocabulary learning among less proficient students. However, they also reminded that "the selection of the texts must be done carefully so that only good quality children's stories would be given to students" (p.9).

Visuals were also found to be one of the motivating factors in enhancing the students' interest in reading literary texts, which are laden with new vocabularies. According to a study by Yunus, Salehi, and John (2014) on the Malaysian Secondary School teachers' perception on the use of visual aids in motivating students to read literary texts, 92.6 percent of the teachers surveyed believed that the students were better engaged with literary texts when the visuals accompany the texts. This is because videos and pictures allow the students to comprehend better since they will be able to see what is exactly happening in the literary texts. They don't rely on listening where they might lose their concentration (Yunus et al., 2014). Besides, the use of visual aids promoted the students' interpretation of abstract ideas in the text. Furthermore, 94.2 percent of them also felt that the use of visual aids could improve their students' performance even though they are of different English proficiency levels. Colorful graphics and exciting pictures make the word more memorable for them. These pictures will increase the incentive of pupils to learn as they are drawn to the visual aids. Visual representation of the words can help the students to make sense and process the information (Yunus et al., 2014).

Apart from that, Jazuli, Din, and Yunus (2019) utilized pictures in the form of digital flashcards to help a group of low proficiency primary school students in acquiring new vocabulary. The data was collected based on the marks obtained during the Pre and Post-intervention worksheets that contained seven new verbs and 21 new nouns that were answered by the pupils. A survey of eight items was conducted where the pupils responded to the scale of "Yes or No" that reflected their feeling in learning vocabulary through this method. It was found that there was a significant difference between the Pre and Post-test marks when pupils learned using these digital flashcards. It was also suggested that the participants had a higher motivation to learn and apply new words by learning about it visually.

The introduction of the Common European Framework of Reference (CEFR) in the English Syllabus of Malaysian schools meanwhile presents an additional challenge to an already uphill battle on vocabulary acquisition among Malaysian students. However, Krishnan and Yunus (2019) reported that the use of visuals in learning vocabulary could provide some much-needed relief to this situation. Questionnaires, face-to-face interviews, Pre-and Post-test, and observations were used to collect data from 20 students aged 14 in a semi-urban secondary school in exploring the use of blended learning to expand the acquisition of vocabulary among low-proficient students and enable them to move gradually into the CEFR band. They disclosed that for one of the items in the questionnaire '*I learn better with pictures from online resources*', the mean score is sky-rocket high (M=4.60). They later indicated that this has shown that low proficient students learn much better in acquiring CEFR vocabulary by using pictures, specifically from the internet.

In summary, based on the previous studies in the literature review, it is evident that the studies in vocabulary learning are still lacking, and future research should investigate the effectiveness of vocabulary instructions for the students to learn the target words. The present study that the researcher conducted is intended to fill in the gap mentioned above. This is mainly

in the context of the Malaysian classroom, where the use of Visual Vocabulary is applied to help students learn new words. The application of Visual Vocabulary also reflects the use of new material in using visual aids to help students learn the intended vocabulary to replace the materials such as conventional pictures or images.

Methodology

This study employs a quasi-experimental research design. As mentioned by Creswell (1994), the experiment is an extraordinarily measured method. This design is the most suitable method due to the limited time and number of participants in the study. The experiment stretches valuable data for the researcher in mediating and associating the variations in the scores between the experimental group and the control group in the Pre and Post-tests.

Subjects

The sample in this study comprises of two groups of Form Two students (60 students) from two different schools situated in the suburban area of Ipoh and Teluk Intan, Perak. They are a low level of English language proficiency learners. Non-probability or convenient sampling technique was chosen to select these students.

Research Instruments

Pre-test

This test is proposed to decide the earlier score of each learner who participates in the study. The word list in the test must be chosen based on the unknown words recognized earlier. This test also functions as an instrument to guarantee the word list identified from the New Words Test is unfamiliar to the learners. Hence, the list of words in the Pre-test is the new words that the learners do not have any prior knowledge about.

In the Pre-test, learners are allocated with fifteen short reading texts where the synonyms or same meaning phrases of target words are used in the sentences. The synonyms or same meaning phrases are also emphasized, highlighted, and numbered so that the learners can select the target words, which are the words to be learned in the form of multiple-choice answers for each synonym or the same meaning phrase in the reading text. There is 45 multiple choice type of questions created for the Pre-test; Text One until 15 include three multiple-choice questions each. Participants are supposed to answer the 45 multiple choice questions in half an hour. The maximum score for the test is 45. Answers nor responses are not prepared for the learners after the test.

Visual Vocabulary

To train the target words to the learners in the experimental group, they are prearranged with a Visual Vocabulary worksheet. The worksheet contains the target words, space to draw pictures, and explanations of the target words. This is strengthened by Nassaji's (2003) idea of the weakness of deducing the meanings of unknown words from pictures and by Plass, Chun, Mayer, and Leutner's (1998) proposition of using both visual and written explanations. Target vocabulary items can be provided with their similar pictures and written explanations, as cited in Jihyun (2010). Phillips (2016) stated that using pictures together with words in language classes has proven to be useful, especially in adult learners. Learners are requested to draw the images that they can relate with the target words in the Visual Vocabulary worksheet to encourage active

involvement among them. This should be able to help them to learn and remember the target words better.

Post-test

Once all the processes for both groups are executed, an immediate recall test (Post-test) is steered. To avoid learners giving memorized answers from the Pre-test since the Post-test uses the same items from the Pre-test, variations have been made in terms of the organization of the texts. In the Post-test, the learners are allocated with fifteen short reading texts where the synonyms or same meaning phrases of the target words are used in the sentences. The synonyms or same meaning phrases are also emphasized, highlighted, and numbered so that the learners could select the target words, which are the words to be learned in the multiple-choice type of answers for each synonym or the same meaning phrase in the reading text. Similarly, with the Pre-test, there is 45 multiple choice type of questions created for the Post-test; Text One until 15 comprise of three multiple-choice questions each. Participants are requested to answer all 45 multiple choice questions within 30 minutes. The maximum score for the test is 45. The Post-test purposely uses the same questions in the Pre-test so that the researcher can compare the learners' scores before and after they undergo the process. The difference in terms of counts of Pre and Post-tests regulates whether the learners show improvement or vice versa from the application of Visual Vocabulary for vocabulary learning. To designate the efficiency of Visual Vocabulary, these scores are used as an indication.

The answers nor feedback are not given to the learners after the test. The Pre and Post-tests are tools used to determine the learners' ability to learn the target words as the scores of the Pre and Post-tests are compared among participants in this study. To decide whether the scores are significantly different or otherwise, the scores of the Pre and Post-tests are also measured.

Data Collection

After the researcher acknowledged 45 to-be-learned words, all participants sat for a vocabulary test, which the researcher used as the Pre-test in the formal study. In the formal investigation, the participants in the experimental group were presented with the Visual Vocabulary, where they learn the target words by using the Visual Vocabulary worksheets. The vocabulary directives were divided into nine sessions. Subsequently, nine sessions of regular English lessons were executed for the control group, where the participants in this group indirectly studied the target words.

After the final session, all participants sat for an immediate recall test (Post-test) comprising of 45 prearranged target words registered by the researcher. The Post-test was intended to determine their comprehension of the word meaning from multiple-choice questions and the aptitude to recollect a word in context dinamically. After the Post-test, a follow-up Semi-structured Students' Interview was executed to elucidate the results from the Pre and Post-tests.

Data Analysis

The quantitative data was analyzed using the statistical software SPSS version 25. The effectiveness of using Visual Vocabulary to learn the target words among the participants was revealed by differentiating the mean scores of the Pre and Post-tests. The results specify whether

there is a substantial improvement or vice versa, at the end of the study (Mohd Tahir & Tunku Mohtar, 2016). Besides that, the vocabulary scores of the Pre and Post-tests were also analyzed using the independent sample t-test, paired sample t-test, descriptive statistics, with mean scores and standard deviation offered as well as the total development score in percentage was calculated to measure how the participants accomplish in their achievement tests of vocabulary respectively.

Results

This research is conducted to investigate the effectiveness of learning vocabulary among the participants by using the application of Visual Vocabulary. To see the difference in the Pre-test results of the experimental and control groups, an independent sample t-test was run. The result of the t-test is as shown in Table One.

Table 1 *Independent sample t-test for the pre-test of the experimental and control group*

Pre-test	Mean score (M)	Standard deviation (SD)	t	df	Sig. (2-tailed)
Experimental group (N=30)	16.67	5.27	1.024	29	.314
Control group (N=30)	15.23	6.01			

Based on the table above, the experimental group scored a higher mean of M = 16.67 as compared to the control group, which scored the mean score of M = 15.23. This marks the mean difference (M difference) of 1.44 for both groups. Also, there is an insignificant difference (t=1.024, df=29, p>.05) based on the statistical results of the independent sample t-test which shows the absence of significant difference between Pre and Post-tests for the control and experimental groups; hence the Pre-test results of the participants for both groups are almost similar. The experimental treatment was conducted for participants who were of the same level of knowledge regarding target words.

Next, the scores of the Pre and Post-tests based on Form Two learners' performance were learned in finding out the effectiveness of the treatment in this research. Both scores were then transformed into mean scores to ensure the quality of both the validity and reliability of the scores. In comparing the improvement of learners' scores, the total improvement score is calculated for both groups. The results of learners' mean score, total improvement score in percentage, and standard deviation of the Pre and Post-tests (Descriptive Statistics) are as presented in Table Two and Three for both groups, respectively:

Table 2 *Descriptive statistics for the pre and post-tests of the experimental group*

Experimental group	Mean score (M)	Standard deviation (SD)	M difference	Total improvement score (%)
Pre-test	16.7	5.27	21.9	131.1
Post-test	38.6	6.25		

Table 3 *Descriptive statistics for the pre and post-tests of the control group*

Control group	Mean score (M)	Standard deviation (SD)	M difference	Total improvement score (%)
Pre-test	15.2	6.01	6.4	42.1
Post-test	21.6	10.45		

Table Two indicates the descriptive statistics for the Pre and Post-tests of the experimental group. The mean score obtained for the Pre-test of the experimental group is M = 16.7. The mean score obtained for the Post-test is M = 38.6, and the result is influenced by new knowledge on target words that the group has learned by using Visual Vocabulary. This shows there is an improvement (M difference) of 21.9 between Pre and Post-tests of the experimental group. Besides, in percentage, the total improvement score is up to 131.1%.

Simultaneously, the descriptive statistics for the Pre and Post-tests of the control group are as demonstrated in Table Three. As shown, the mean score obtained for the Pre-test of the control group is M = 15.2. The group inherently learns the target words before sitting for the Post-test. The mean score obtained for the Post-test is M = 21.6. There is an improvement (M difference) of 6.4 marked for the Pre and Post-tests. However, in percentage, the total improvement score is only 42.1%.

Also, the scores obtained by both the experimental and control group in Pre and Post-test are compared. The outcomes (improve, decline, and same score) are then recorded respectively for both groups in Table Four:

Table 4 *Score comparison between the pre and post-tests of the experimental and control group*

Group	Learners with an improved score (%)	Learners with a declined score (%)	Learners with the same score (%)
Experimental	100	0	0

	(30 learners)	(0 learners)	(0 learners)
Control	80 (24 learners)	17 (5 learners)	3 (1 learner)

Table Four indicates the score comparison (improve, decline, or same score) between the Pre and Post-tests of the experimental and control group. For the experimental group, it is shown that all learners (100%) were able to achieve improvement after Visual Vocabulary was used to learn target words. This shows the effectiveness of using Visual Vocabulary to learn target words for the experimental group as they have all improved in their scores for the Post-test.

However, the number of learners who achieved higher scores in the control group was only 24 (80%), followed by the declining scores by five learners (17%). The remaining of one learner (3%) obtained the same score in both Pre and Post-test. They have all intrinsically learned the target words before sitting for the Post-test. Although the highest percentage of the control group was with those who obtained higher scores, there was still a learner (3%) who had not improved in the post-test, and surprisingly, five learners (17%) achieved lower scores. The results recorded in the control group are inconsistent after they had intrinsically learned the target words by following regular English lessons. This proves that the approach used is not suitable and sufficient for all learners in the group, especially for those who obtained lower or the same scores in the Post-test compared to the Pre-test.

Tables Five and Six demonstrate the results of the paired sample t-test for the Pre and Post-tests of the experimental and control group. The results of the test are presented below:

Table 5 *Paired sample t-test for the pre and post-tests of the experimental group*

Experimental group	Mean score (M)	Standard deviation (SD)	t	df	Sig. (2-tailed)
Pre-test (N=30)	16.67	5.27	-17.854	29	.000
Post-test (N=30)	38.63	6.25			

Table 6 *Paired sample t-test for the pre and post-tests of the control group*

Control group	Mean score (M)	Standard deviation (SD)	t	df	Sig. (2-tailed)
Pre-test (N=30)	15.23	6.01	-4.851	29	.000
Post-test (N=30)	21.57	10.45			

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Table Five presents the results of the paired sample t-test for the Pre and Post-tests of the experimental group. The mean score obtained by the learners for the Pre-test is M = 16.67, while for the Post-test, the mean score is M = 38.63. This records the mean difference (M difference) of 21.96 between Pre and Post-tests. There is a significant difference (t=-17.854, df=29, p<.05) based on the statistical results of the paired sample t-test, which has also led to the substantial increase of the scores obtained by the participants in the experimental group after the experimental treatment.

Meanwhile, the results of the paired sample t-test for the Pre and Post-tests of the control group is as demonstrated in Table Six. A mean score of M = 15.23 is recorded based on the results of the learners' Pre-test, while for the Post-test, a mean score of M = 6.34 is obtained. There is a significant difference (t=-4.851, df=29, p<.05) based on the statistical results demonstrated by the paired sample t-test. Therefore, the scores after the experimental treatment have increased significantly among participants in the control group. However, the score improvement (M difference) for the experimental group exceeded the control group by 15.62. This points out the effectiveness of the treatment used for the experimental group, which is better than the control group due to the number of target words that learners from both groups have learned within the same period.

Discussion

Concerning the research question on the effectiveness of the use of the Visual Vocabulary to learn vocabulary for Form Two learners, both groups demonstrated an increment of the mean scores in the Post-test. Although both groups have shown improvement, the total improvement score in percentage for the experimental group exceeded the control group by a staggering 89%. The score improvement (M difference) for the experimental group also exceeded the control group by 15.62. Besides that, the participants in the control group showed inconsistent results as not all of them improved in their scores of the Post-test compared to the Pre-test. This indicates the effectiveness of the use of Visual Vocabulary to learn the target words among the participants in this study.

The same result was attained by Saad et al. (2017) with regards to the use of pictures in guessing the meaning of English words where visual images have helped the students to understand the meaning of a word through either cartoons or picture images. In the current study, the experimental group surpassed the control group in terms of their improvement score in percentage. This shows that the application of Visual Vocabulary is more useful for the participants to learn the target words compared to the implicit approach. Thus, the learners learn more effectively using Visual Vocabulary, where the teachers can apply Visual Vocabulary in their English language lessons so that it can enhance the learners' ability to determine the target words. Eventually, it will contribute to the development of the learners' vocabulary knowledge when the numbers of English words learned to increase significantly, which will enable them to use and comprehend the English language in reading, writing, listening, and speaking. As a result, this will contribute to the development of English language proficiency.

The current study included the use of Visual Vocabulary worksheet for the learners in the experimental group to assist them in learning the target words. This is aimed to scaffold the

learners' needs to learn the target words better. Visual Vocabulary worksheets are included with annotation and connotation of the target words. This will help them to remember and comprehend the target words better for them to store the learned target words in their long-term memory. As a result, the effectiveness of learning the target words can be optimized among the learners. However, the learners need to use the target words learned from time to time so that the use of the words is automated, and it will not be easily forgotten.

Since the use of Visual Vocabulary addresses the existence of learners with different abilities (language proficiency), learners with a low level of vocabulary knowledge benefited significantly. Based on the findings, it is evident that the teachers should consider using Visual Vocabulary for the learners with low language proficiency to learn the target words as it is effective based on the results of the current study.

Interpretation

Based on the research question on the effectiveness of the use of the Visual Vocabulary to learn vocabulary among learners, the results of this study have proven that the use of Visual Vocabulary is effective among the participants. The mean difference of 21.9 is recorded between Pre and Post-tests of the experimental group, where the total improvement score in percentage is up to 131.1%. On the other hand, the mean difference of 6.4 is marked for the Pre and Post-tests for the control group, and the total improvement score in percentage is only 42.1%.

A previous study by Vedyanto (2016), for example, experimented with the use of pictures in a test format to evaluate vocabulary achievement among 41 secondary schools in Indonesia in which he provided two forms of tests, with and without the picture. The earlier study is different from the present study in terms of how the researcher conducted the vocabulary instructions. The current research focusses on using a new material (Visual Vocabulary) to help students learn the target words. In contrast, the previous study implemented tests with or without the picture to help learners acquire new vocabulary.

The present study can be an added value to the knowledge of the field in vocabulary learning as future research should use the results of this study to conduct further investigation to improve the learners' ability to learn new words. Future research can compare the use of Visual Vocabulary with the new material or approach in vocabulary instructions, which aimed to help learners increase their vocabulary knowledge. Thus, the result of the present study is crucial for future research in the field of vocabulary learning and vocabulary instructions.

Conclusion

The findings from this study suggest that the use of Visual Vocabulary is useful in learning the target words among Form Two learners to a great extent where participants' overall improvement score of the experimental group recorded 89% higher than the control group in terms of the total improvement score in percentage. The mean difference between both groups also indicates that the performance of the experimental group exceeded the control group by 15.5. Thus, the experimental group's performance improved vastly compared with the control group. Learners' attention to vocabulary items can be drawn by using productive vocabulary tasks (Folse, 2006). Teachers are advised to use Visual Vocabulary for the students to learn the target words,

which results in better retention. In the future, researchers may also consider inventing new materials or methods of instruction to increase learners' ability to learn new vocabulary. The period of research can also be changed so that the results of a long-term study that involved vocabulary learning can be investigated, and the effectiveness can be compared to the short-term study.

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