

Original Paper

Effect of Web-Based Activities on the Malaysian Students' Vocabulary Acquisition Performance

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Abstract

Vocabulary acquisition is an important aspect of second language learning. It aids communication and comprehension. Teachers are thus expected to invent very effective means of teaching this vital component to the learners. The purpose of this study was therefore to investigate the possible effect of using web-based activities to teach vocabulary on the vocabulary acquisition performance of the students. Forty pupils were selected for the study and were exposed to web-activities. The study made use of pre and posttests to examine whether there were any changes in the performance of the students. It was found out the used of web-based activities really influenced their performance as all the respondents had scores higher than in the pretest situation. It could then be held that it is imperative that teachers of English harness all creative ways of ensuring that students are assisted to learn effectively and one of such ways is employing technology.

Keywords

Vocabulary, Web-based Activities, Performance

1. Introduction

Pupils should learn and acquire the English vocabulary as it is an important key to English language. Cameron (2001) as cited in Alqahtani (2015) stated that vocabulary is one of the knowledge areas which plays a major role for learners to acquire English language. It is supported by Harmon, Wood and Keser (2009) and Linse and Nunan (2005) who stated that learners' vocabulary development is an important aspect of their language development. This shows that lexical knowledge is vital to communicative skill and to the attainment of a second language. Thus, vocabulary is a critical tool for language learners because the lack of mastery in English vocabulary impedes a successful communication.

But records and observation have shown that mastery of vocabulary is still lacking even in the government school in Malaysia, and as opined by Alqahtani (2015), research has shown that second language learners rely heavily on vocabulary knowledge and the lack of that knowledge is the main and largest obstacle for ESL learners to overcome. This insufficient use of vocabulary is often portrayed by the pupils in their writing, thus making the allegation of having not enough vocabulary to be true among the pupils. According to Yu-han and Wen-Ying (2015), pupils' vocabulary knowledge is positively correlated with their achievement.

Studies on vocabulary and vocabulary acquisition through computer showed that learners are not clearly being taught the majority of words that we know in a language (Carter, 2001) cited in (MohdKhairul, 2018). In order for the learners to be exposed to the vocabulary, new innovations in learning technologies have given the teachers opportunities to help efficiently help the learners. The web-based activities provide exercises and tasks so that learners can move toward learning English language vocabulary learning from a wide variety of perspectives.

Computer and Internet can be used as teaching aids in learning processes especially in learning English language vocabulary. Web-based activities are web applications used to ensure vocabulary mastery among pupils with regards to increase their performance in second language learning (Hasselbring & Glaser, 2000) in Mohd Khairul (2018). They provide different learning activities such as filling in the gap, matching pictures, rearranging words, completing sentences, answering multiple choice questions, and quizzes.

In addition, they provide the learners with multimedia that can help students to see and listen to the words learnt. The existence of colourful pictures and background, audio, video, and interactive media could attract students' attention and interest (Hall & Higgins, 2005) in Mohd Khairul (2018). Therefore, these criteria of web-based activities are believed to be able to enhance students' attitudes, motivations and performance in English language vocabulary learning. The web-based activity can promote self-learning by producing the independent learning environment (Oblinger & Oblinger, 2005).

As an online learning, web-based activity can be used anywhere and at anytime as long as there is device such as computer, smart phone or iPad that can connect to the Internet. The availability of the learning environment makes learning more convenient in acquiring second language vocabulary. It is thus the desire of this paper to examine the effect of using web-based activities on the vocabulary acquisition performance of the pupils in primary schools

2. Methodology

This study was carried out on the pupils of a primary school in Johor Bahru, Johor. The respondents consisted of 40 5th year pupils who were purposively selected based on their English language proficiency level. The pupils chosen were those who obtained Grade C in the English language subject in their 4th final year examination. This study investigated the effect of using web-based activities on the vocabulary acquisition performance of the pupils in primary schools. The quantitative research

design was engaged in this study. This in line with Creswell (2012) who stated that quantitative research is the best inquiry approach to use if the researcher intends to describe the occurring trend and to explain any relationship that exists among the variables. In addition, the study collected information through questionnaire and test (pre- and post- tests) on vocabulary items. The vocabulary test was set according to the vocabularies in the English year 5 text book based on the syllabus by Ministry of Education (2017). The tests were used by the researcher to gather information on the respondents' knowledge on English language vocabulary before and after exposure to the web-activities. The data from the questionnaire were analyzed manually according to the percentages and frequencies.

English language vocabulary was taught through the three web-based applications, in ways of face-to-face learning and independent learning. Frog VLE, Kahoot!, and Quizzizz are the web-based applications currently used in SK Sri Pulai Perdana, hence, the pupils and the teachers had basic knowledge on handling the application. All three websites were chosen because of their interactive capability, and ability to provide immediate feedback to learners as they complete the exercises, etc.

2.1 Principles of Teaching Vocabulary

Vocabulary is a list and collection of words that an individual knows, to form a language (Linse, 2005). Alqahtani (2015) stated that vocabulary knowledge is a critical tool for second language learners for only knowing a limited number of words will prevent a successful message. It was added that the lack of vocabulary could contribute to the inability of individual to use the organization of comprehensible message (Alqahtani, 2015). There are therefore, several principles of teaching vocabulary; motivating pupils to become independent learners, implementing drilling practices, and focusing on the word, etc. It is important for teachers to provide learners with selection of ways to learn vocabulary. According to Tomlison (1998) as cited in McCarten (2007), the materials used to teach vocabulary should include extraordinary and attractive tools with eye-catching presentations. One of the ways that can be used to teach vocabulary in an exciting way is through educational websites. By using the websites, vocabulary can be accessible through pictures, sounds and different text types. Furthermore, the exercises in language learning for language learners should also diverge and can take on pupils at different proficiency level. The activities should also be made different through controlled practice to use the vocabulary in meaningful ways. The lesson should comprise different learning styles in learning and teaching vocabulary (Wong, 2015).

In addition, McCarten (2007) stated that it is more effective for vocabulary learner to be independent learner. They can devote their time to self-learning, use variety of language learning tools and keep a good note of vocabulary they learnt. The teachers can help pupils to be better in learning second language and acquire good learning habits by introducing the use of computer and Internet as a learning tool. The Internet can provide countless resources to learn English language vocabulary. By exposing the learners to the Internet, learners can make use of these resources efficiently and lead to the independent learning in learning vocabulary.

In the behaviourist perspective, the drilling process in learning is considered a product of stimulation

and reinforcement of learning tools. In this perspective, it is projected that learning is affected by the change of behaviour. By this when teaching vocabulary, as argued by Mergel (1998), learners should be allowed to focus on clear goal and respond autonomously to the learning goal. Pupils could acquire the lesson automatically and effortlessly by using drilling practice. In mastering second language, it is important to focus on lexeme of the language.

Learning new words will be more effective and remembered by the pupils when they learn it many times. Mercado (2017) held that repetition is important in learning. Here, technology can create opportunity to pupils to learn through repetition. Thus, in order to acquire the words, pupils need to actively recall and learn the words they learnt. This view was held by Adolf and Patten (2017) by highlighting that repetition will progress the quality of semantics of words learnt in language learning.

Lastly, Alqahtani (2015) stated that it is important for language teachers to focus on vocabulary in a second language classroom as they are the key source of language. Teachers should help pupils to be aware that they should learn the language not just for the sake of mastering the grammar aspect of the language. This is because, as stated by McCarten (2007), without grammar, very little can be conveyed but without vocabulary nothing can be conveyed. Thus, focusing on vocabulary is an important aspect in mastering a second language.

2.2 Performance

In language learning class, performance is the extent to which language learners have achieved their set language goals. According to Banquil et al. (2009) in Adam and Nor Zairah (2014), academic performance is defined as how students deal with their studies and how they cope with or accomplish different language tasks given to them by their teachers.

According to Hanson (2000), student performance is affected by different factors such as learning abilities, gender and race. In the same vein, Simmons, et al. (2005) added that family income level, attending full time, receiving grant aid and completing advanced level classes in high school having statistically significant effects on college persistence among first generation college students.

Hijazi and Naqvi (2006) cited in Mohd Khairul (2018) conducted a study to find out the factors which affecting college students' performance. In this study researcher mainly explored the factors that associated with performance of students in intermediate examination. This study concluded that attitude towards attendance in classes; time allocation for studies, parents' level of income; mother's age and mother's education were main factors that affect performance of students of private colleges.

2.3 Computer and Internet in Language Classroom

Pupils learn better and faster from what they can see or touch (Oblinger & Oblinger, 2005). Computers are tools of education in teaching and learning providing aid to teacher's lesson to be more fun and understandable to the pupils. It ensures that learners work according to their own time and limit. By this, the learners can spend more time on those topics that can cause difficulty in learning. Information can be reviewed and tasks can be repeated until learners are content before moving on to a new topic. The learners are able to freely control the learning session, which usually increases their satisfaction

with the learning process. For instance, Chong (2005) who did a survey on the Korean pupils found that 83 percent of the subjects considered computers to provide supportive atmosphere. This was also supported by study conducted in Asia by Yunus and Suliman (2014) as cited in Hjalmarsson (2015). It was found out that 89.6 percent of the 58 pupils involved in the study agreed that using ICT had improved their overall language skills.

Pupils can make use of the computer and Internet as self-learning tools. Vigdor et al. (2014) highlighted that using the computers as learning tools can offer self-conscious language learning. Niknejad and Rahbar (2015) in Mohd Khairul (2018) further highlighted that the computer-based activities can lead to the increasing of communication with texts, which can allow autonomy through the pupils' capability to read.

Pupils anxiety of making mistakes in learning activities in class can be an obstruction in language learning. Many pupils are shy, thus do not participate in class activities as expected. Therefore, the emergence of the use of computer and Internet becomes a cure to pupils' anxiety. The computer and Internet provide a means for communication where learners can be anonymous when stating opinions, arguments, and answers. In a study by Lin et al. (2011), more than 70 percent of the pupils felt happy learning the second language through computer.

The use of computers and Internet might lower affective filter which can encourage the pupils to get a better result. A learner who is anxious, nervous, or uninterested may be rejecting input, making inability to acquire language (Lightbown & Spada, 2006). In other words, students will basically refuse to participate in classroom activities when they felt threatened. Providing a warm and supportive classroom environment is one of the ways to lower down students' affective filter. This can be achieved through the computer and internet.

Immediate feedback is one of the advantages of using computer and Internet as learning and teaching tools. The use of immediate feedback using the computer and Internet is agreed to be beneficial to the learners (Nakata, 2015). The computers and Internet can give feedback almost immediately given the situation of the Internet connection. In this aspect, pupils can test their knowledge and thus can learn through mistakes they made. Errors are important to be corrected before incorporating into their knowledge. The study by Brantmeier (2003) showed that 80 percent of the pupils favoured using computers because they could get immediate feedbacks on their comprehension of text. A survey by Chong (2005) indicated that 98.7 percent of the respondents agreed that they liked the immediate feedbacks from the computer to compare their thoughts and ideas thereby evaluating own performance. In addition, web-based applications uphold interactivity in their function. The learners have to work together with the computers themselves, without receiving assist from peers. The interactivity can create a situation which learners can communicate with the learning and teaching tools. A study by Kung and Chuo (2002) stated that the pupils found that learning English through web-based application was interesting, effective and necessary. It showed that the learners were excited to learn using web-based application. This is because the learners can be in a virtual learning environment, where

there exist numerous applications, such as forum for classroom discussion. Vocabulary learning is one of the benefits the learners can gain.

So, web-based activities serve as powerful tools in enhancing learning and teaching experience. Pupils can explore and understand the lesson easily, due to its user-friendly function. Almost all of web-site applications existing nowadays have the same interface, where it provides the learners the ability to control and experience the contents more easily and confidently. The user-friendly features allow the learners to understand almost immediately how to control and use the web application. According to Tobias et al. (2014), for example, web-games in web-based activities can easily be found and used freely in language learning.

In their own perception, Richards and Rodgers (2014) held that many teaching techniques are unlikely to sustain the interest of learners. It is because the method used was teacher-oriented rather than pupils-centered. This is different in using computer language games in the classroom which provides a more supportive and student-centered learning environment.

Furthermore, a study by Chen et al. (2016) showed that the use of computer in language class can help the pupils to acquire knowledge more easily. It is interesting, relaxing and interactive and can enhance learners' motivation. The second language learners' attention can be maintained, hence making computer language games useful in promoting performance. This was supported by Akhter Farhat and Dzakiria (2017) who stated that the use of CALL provides a broad selection of experience to the learners to learn by drilling. The learners can make use of the computer in a significant way exclusive of any uncertainty and without being tattered out.

Finally, Aydin (2016) stated that web-based application said the attainment process since they inspire a natural, creative, and authentic learning environment. Web-based activities have a great latent to increase pupils' motivation and attention. This motivation can lead to more effective and meaningful lesson and can also lower their anxiety level and construct self-confidence. According to Chametzky (2013), if the learners have fine learning surroundings, it will lower their affective filter. Therefore web-based activities are vital to enhance teaching and learning.

2.4 Findings and Discussion

Table 1. Gender of the Respondents

Gender	Number of Respondents	Percentage (%)
Male	19	47.5
Female	21	52.5
Total	40	100

Findings revealed that there were 47.5 percent male and 52.7 percent female (see Table 1). The number of female pupils was larger than male pupils. This was due to the larger population of female pupils in

government primary school nowadays compared to male pupils. The table implies that there was no obvious difference between the numbers of male and female respondents.

Table 2. Race of the Respondents

Race	Number of Respondents	Percentage (%)
Malay	35	88
Chinese	0	0
Indian	2	4
Other	3	8
Total	40	100

In addition, based on the information obtained, the majority of the respondents were Malay, with 88 percent of the respondents followed by the other race with 8 percent of respondents, and the remaining 4 percent of the respondents are Indians. There were no Chinese respondents in the class (see Table 2). This could be due to the fact that the enrolment of the government primary schools had the least percentage of Chinese and Indians pupils, who would rather choose to learn in national type school.

Table 3. Pupils' Performance after Using Web-based Activities to Learn English Language Vocabulary

Respondent (R)	Pre-test (%)	Post-test (%)	Difference
R1	13	40	+ 27
R2	17	43	+ 27
R3	20	47	+ 27
R4	23	50	+ 27
R5	23	50	+ 27
R6	27	50	+ 23
R7	27	53	+ 27
R8	30	57	+ 27
R9	30	57	+ 27
R10	30	63	+ 33
R11	33	63	+ 30
R12	33	63	+ 30
R13	33	67	+ 33
R14	37	67	+ 30
R15	37	70	+ 33
R16	37	70	+ 33

R17	37	70	+ 33
R18	40	73	+ 33
R19	40	77	+ 37
R20	40	77	+ 37
R21	40	77	+ 37
R22	40	77	+ 37
R23	40	80	+ 40
R24	40	80	+ 40
R25	43	80	+ 37
R26	43	80	+ 37
R27	43	80	+ 37
R28	47	80	+ 33
R29	47	83	+ 37
R30	47	83	+ 37
R31	47	83	+ 37
R32	47	87	+ 40
R33	47	87	+ 40
R34	50	87	+ 37
R35	53	90	+ 37
R36	53	90	+ 37
R37	57	93	+ 37
R38	57	97	+ 40
R39	57	97	+ 40
R40	64	97	+ 33

In relation to the effect of the web-based activities on the pupils' performance, Table 3 showed the different scores obtained during the pre-test and post-test. The pre-test and post-test vocabulary questions were administered to 40 respondents who participated in the study.

According to the table, the range of marks obtained by the respondents in the pre-test is from 13 percent to 64 percent. The table shows that R1 have the least marks whereas R40 have the highest score. After the treatment, the same respondents were required to take the post-test similar to the set of questions from the pre-test. The score of the post-test were calculated and compared with the pre-test, as shown on the table. It can be seen from the table that R38, R39 and R40 have the same highest score in post-test, which is 97 percent. However, the lowest mark for the post-test is still received by R1 with 40 percent score.

After the scores from the pre-test and post-test are obtained from the respondents, the result between the two tests are compared to determine the respondents' performance towards using web-based

activities to learn English language vocabulary. As a result, the analysis show that there was significant difference between the scores in pre-test and post-test, where all the respondents had higher scores in the post-test compared to the pre-test. The respondents performed better after the treatment done.

Table 4. Mean, Mode and Median of Pre-test Score and Post-test Score

	Pre-test (%)	Post-test (%)
Mean	39	73
Mode	40	74
Median	41	74

To further analyse the difference between pre-test and post-test, the mean, mode and median score of the pre-test is calculated and presented in Table 4 above. The mean score for pre-test is 39 percent, the mode score is 40 percent, and the median of the score in pre-test is 41 percent. However, in post-test, the respondents have the mean score of 73 percent and mode score of 74 percent. This shows significant difference of score between the pre-test and post-test, where the respondents score better in the post-test after treatment had been done.

The respondents R23, R24, R32, R33, R38 and R39 showed the best improvement in post-test compared to the pre-test, with an increment of 40 percent each. They were followed by 14 respondents (R19, R20, R21, R22, R25, R26, R27, R29, R30, R31, R34, R35, R36, and R37) who have the increment of 37 percent.

From the analysis of the results and findings, it is proved that the respondents performed better in the post-test administered after being in the six weeks treatment using web-based activities. This becomes apparent that by using web-based activities, pupils can learn and perform better in learning English language vocabulary. This finding can also be an opportunity for the teacher to use new resources and tools in order to teach an effective lesson. The learning using web-based activity can surely help in increasing pupils' motivation, creating positive attitudes, and attract them to learn and be able to acquire language effectively, not only learning English language vocabulary, but also to learn English language as it is, including speaking and writing.

3. Conclusion

The findings obtained from the pre-test and post-test administered during the study revealed pupils improved their performance in the post-test. Based on the results in the post-test, it shows that the treatment helped the respondents to improve their knowledge in vocabulary. Then, with wide exposures to the varieties of vocabulary exercises available through the web-based activities treatment, the respondents were able to choose the topic they were interested in. Therefore, these enabled them to improve their vocabulary knowledge in the post-test. The result is similar to the finding by Rodrigues

and Vethamani (2015) who found that the use of online learning showed greater performance.

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