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PICTORIAL VOCABULARY MODULE FOR VIRTUAL LEARNING AMONG LOWER SECONDARY ESL STUDENTS

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Abstract

English as a Second Language (ESL) students with limited vocabulary knowledge often face difficulties to learn and use English on a regular basis. To promote virtual learning, this study uses the module of pictorial vocabulary to help students learn vocabulary remotely. The module is tailored based on the 'Substitution Augmentation Modification Redefinition' (SAMR) Model. In this study, 150 ESL students from lower secondary schools across Malaysia use this module to help them learn the target words mentioned in the SBELC. A mixed methods research design is employed. After using the module, students have answered an evaluation form which is evaluated descriptively in terms of its mean scores and standard deviation. The qualitative data from the interview with the students are transcribed, categorized, and coded using content analysis. Based on the research findings, the students' vocabulary knowledge has substantially increased after using the module. This study's implications indicate that the use of pictorial vocabulary learning module is both interactive and effective in learning the target words. In the area of vocabulary acquisition, this research adds value as it can be used to carry out additional research to enhance the ability of students to learn new words.

Keywords:

Vocabulary, Module, Virtual Learning, ESL Students

1. Introduction

Learning vocabulary is a component that has only been indirectly integrated into the four core skills of reading, writing, listening, and speaking that make up the Standards-Based English Language Curriculum (SBELC). As such, students with a limited range and knowledge of vocabulary will find it challenging to learn and utilize English regularly. This study aims to resolve this issue by proposing a pictorial-based vocabulary learning module that aids students in their vocabulary learning remotely. This module is also designed to create a sustainable method for students to participate in the virtual learning of vocabulary. The developmental focus of this proposed module is threefold: to create a pictorial-based learning module, to optimize the said module specifically for vocabulary learning, and to ensure that it allows for sustainable open-distance learning of vocabulary, especially considering the disruptions inflicted by the COVID-19 pandemic to regular face-to-face, teacher-centric classroom instructions. As such, this module is developed and designed around the shift in education and learning methods that would be ~~the~~

most suitable for students in the current situation, which revolve around fostering independent learning and student-centeredness.

2. Literature Review

2.1. How the COVID-19 Pandemic Changed Education

It is not an understatement to say that education is one of the sectors most negatively affected by the COVID-19 pandemic. How education is sourced, offered, transferred, and utilized has seen significant changes overnight as schools and various other educational institutions were forced to close. For example, on May 5th, 2020, UNESCO reported that a country-wide closure of these institutions had been imposed by a total of 161 territories, causing the learning of almost 1.2 billion learners to be disrupted worldwide (UNESCO, 2021). In Malaysia alone, the closing of schools starting on March 18th, 2020, caused mass disruption to the nation's education as 5 million students were affected. These learners have been attending school remotely via various online arrangements to replace the in-class instruction that cannot be afforded in these times, thus causing a shift to a learning style reminiscent of home schooling or online education (Garcia & Weiss, 2020).

However, virtual learning is not without its drawbacks, with one of them being that students tend to spend less time learning from home due to having more factors distracting them from studying compared to when they are in school (Di Pietro et al., 2020). This situation could easily translate to a loss in their ability to concentrate on their studies and schoolwork as they cannot receive a more detailed explanation from their teachers due to the reduced level of communication between the students and teachers (Nassr et al., 2020). Moreover, research strongly suggests that the closure of physical schools and the lack of in-person contact have dampened the motivation of students to engage in learning activities (Garcia & Weiss, 2020).

2.2. How a Digital Based Vocabulary Learning Module Could Resolve Related Issues in Virtual Learning

Previous studies suggest that the inclusion and integration of technology for vocabulary learning could bring much-needed improvement to the learning process. It could infuse novelty, innovation, creativity, interest, and fun into vocabulary learning activities. Therefore, the researchers believe that the digital-based vocabulary learning module that this study has provided an exciting and attractive learning experience for students (Tahir et al., 2020).

The students have full access to the use of images and various other interactive features provided within the module, such as videos and soundbites, to aid, improve, and enhance their vocabulary learning. This situation is a far cry from the monotony of having to memorize words from pieces of paper. As such, it is purported that the engagement level of the students with the digital learning activities could significantly improve their motivation in learning vocabulary, especially when compared to the traditional methods of relying on tried-but-not-so-true methods like on-paper memorization or continuous drilling.

3. Problem Statement

Many studies have attempted to gauge the impacts of the use of technological- or digital-based tools in learning vocabulary with favorable results especially in enhancing vocabulary acquisition (Shokrpour, Mirshekari, & Moslehi, 2019), improving vocabulary retention. Increasing long-term vocabulary memory and enhancing and motivating the learning of vocabulary by young learners (Leong, Abidin, & Saibon, 2019). Apart from that, these studies used digital-based tools and applications such as PowerPoint slides, computer games (Jhon, 2016), online games (Kayaalti, 2018), and Youtube Videos (Arndt & Woore, 2018) to help students in acquiring new English vocabularies. In addition, there are also studies which have employed the use of English language learning software, such as 'Tell Me More' (Enayati & Gilakjani, 2020) and 'Duolingo' (Ajisoko, 2020) for vocabulary learning.

4. Research Objectives

Based on the aim of the study, these research objectives are presented:

- To develop a pictorial vocabulary learning module to be used by Malaysian lower secondary ESL students based on the word list provided in the Standards-Based English Language Curriculum (SBELC) for virtual learning.
- To investigate the effects of using pictorial vocabulary learning module for virtual learning among lower secondary ESL students.

5. Research Questions

According to the research objectives, these research questions are presented:

- How to develop a pictorial vocabulary learning module to be used by Malaysian lower secondary ESL students based on the word list provided in the Standards-Based English Language Curriculum (SBELC) for virtual learning?

- What are the effects of using pictorial vocabulary learning module for virtual learning among lower secondary ESL students?

6. Research Methodology

6.1. Research Design

This research is to develop the pictorial vocabulary learning module and explore the effects of using the module to assist learners in improving their vocabulary. It also includes the research design that is mixed methods using sequential explanatory strategy. Creswell (2014) stated that quantitative research is a type of educational research in which the research decides what to study; asks specific, narrow questions, collects quantifiable data from participants (many participants); analyzes these numbers using statistics; and conducts the inquiry in an unbiased, objective manner. Thus, a mixed methods research design is a procedure for collecting, analyzing, and mixing both quantitative and qualitative research and methods in a single study to understand a research problem (Creswell, 2014).

6.2. Participants

The sample in this study consists of 150 from lower secondary ESL students from various schools in Malaysia. Students are chosen from numerous schools around the nation. The technique of non-probability sampling is used to choose the participants. The non-probability sampling is often referred to as the sampling of convenience or availability includes the use of subjects available to the researcher (McMillan & Schumacher, 1993).

6.3. Materials and Instrument

The following instruments will be used for this study:

- Pictorial Vocabulary Learning Module.
- Student's Evaluation Form.
- Interview.

6.3.1. Pictorial Vocabulary Learning Module

A pictorial vocabulary learning module proposed in this study is presented in the form of virtual module to help lower secondary ESL students to learn the target words as stipulated by the SBELC through the platform called Wixsite. The virtual module consists of the target words, pictures, and annotations (verbal and written version) of the target words. As far as possible, the pictures and annotations used should be related to Malaysian students' context. This tool is also

underpinned by Nassaji's (2003) idea of the fallibility of inferring the meanings of unknown words from pictures and by Plass et al.'s (1998, cited by Mohd Tahir & Tunku Mohani, 2016) suggestion of using both pictorial and written annotations in acquiring target vocabulary items. This is believed will enable them to learn and remember the target words better.

6.3.2. Student's Evaluation Form

An evaluation form is distributed at the end of the study to analyse the general expectations of learners regarding their learning experience using the pictorial vocabulary learning module and variables that influence their perception, engagement, and performance. This is achieved using a questionnaire comprising of statements to be replied by the participants. For each statement in the Student's Evaluation Form, learners are expected to circle the numbers ranging from one to five representing their answers (1 for totally disagree; 2 for disagree; 3 for neither agree nor disagree; 4 for agree; 5 for totally agree.

6.3.3. Interview

An interview is carried out to collect information from the informants (Wallace, 1997). The expected interview in this study is effectively standardised questionnaires produced in the oral form. Related questions are about personal perceptions, perspectives, views, interests, and thoughts on the issues included in this interview. The arrangement is made early to guarantee that the flow of the interview is seamless, where interviewees are given advance details about what is involved.

6.4. Research Procedure

After all participants are exposed with the pictorial vocabulary learning module to learn the English vocabulary in a virtual context, they are administered with a follow-up evaluation form. This evaluation form is carried out to test their overall impressions of the pictorial vocabulary learning module used to develop their knowledge of vocabulary. Then, selected participants will be interviewed to further investigate their responses to receive rich data to support the findings from the student's evaluation form.

7. Data Analysis Method

7.1. Quantitative Data Analysis

The quantitative data will be managed using SPSS version 29 statistical software. At the completion of the study, the findings will show whether there is a substantial improvement

after using the pictorial vocabulary learning module (Tahir et al., 2020). The results derived from the questionnaires (student's evaluation form) is descriptively evaluated in terms of mean and standard deviation of responses for each item. The degree of agreement of the participants is not translated to scores for fear that the scores may be less accurate. The participants will provide their responses through the form for the researcher to obtain quantitative data.

7.2. Qualitative Data Analysis

With respect to qualitative findings, one of the sources is to obtain additional information regarding the perspectives and expectations of students about their learning of the target vocabulary through the interview that will be administered at the end of the study. The responses of the students from the interview are classified or coded according to the researcher's associated categories or themes. As the interview is both documented and transcribed by the interviewer, this interview is performed on selected students where they orally delivered their responses. This will help the researcher to qualitatively obtain rich data and explain the observations from the quantitative data. To interpret the data from an interview, according to Brown and Rodgers (2002), the researcher needs to transcribe and classify the responses, allocate the responses into categories, and analyze the coding so that trends can be identified. The answers of all the interviewees would be grouped into a few themes generated from research questions in the analysis phase. First, by rechecking and reanalyzing the transcribed interview, classified points are validated. The interview data provides the study with the requisite details, as it also provides opportunities for respondents to share their personal views and to explain the issue in greater detail (Chua, 2012).

8. Findings

Table 8.1. *Analysis of Student's Feedback Form*

No	Items	SD	D	N	A	SA	Mean	SD
S1	The vocabulary modules (workload) are fair.	0 (0.0)	0 (0.0)	4 (4.0)	31 (31.0)	115 (115.0)	4.74	.497
S2	The vocabulary modules are easy to read and understand.	0 (0.0)	0 (0.0)	3 (3.0)	26 (26.0)	121 (121.0)	4.78	.457
S3	The vocabulary modules are challenging.	4 (4.0)	10 (10.0)	24 (24.0)	49 (49.0)	63 (63.0)	4.04	1.044
S4	The vocabulary modules are very interesting.	0 (0.0)	1 (1.0)	6 (6.0)	22 (22.0)	121 (121.0)	4.75	.493
S5	The vocabulary tests are	0	0	3	42	105	4.68	.509

	relevant to the target words learned during class.	(0.0)	(0.0)	(3.0)	(42.0)	(105.0)		
S6	The target words are taught at a suitable level and pace.	1 (1.0)	0 (0.0)	1 (1.0)	36 (36.0)	112 (112.0)	4.72	.544
S7	During the vocabulary activity, how eager/willing are you to participate?	2 (2.0)	1 (1.0)	6 (6.0)	39 (39.0)	102 (102.0)	4.58	.725
S8	How much do you look forward to this vocabulary activity?	1 (1.0)	0 (0.0)	5 (5.0)	44 (44.0)	100 (100.0)	4.61	.621
S9	How bored do you feel throughout the vocabulary activity?	80 (80.0)	31 (31.0)	21 (21.0)	18 (18.0)	0 (0.0)	1.84	1.06 6
S10	How motivated to learn more vocabulary do you feel during the activity?	0 (0.0)	0 (0.0)	8 (8.0)	46 (46.0)	96 (96.0)	4.58	.592
S11	Would you like to continue learning vocabulary via this activity?	0 (0.0)	0 (0.0)	10 (10.0)	41 (41.0)	99 (99.0)	4.59	.614
S12	How excited do you feel to learn vocabulary via this activity?	0 (0.0)	0 (0.0)	8 (8.0)	36 (36.0)	106 (106.0)	4.65	.579
S13	I know more English vocabulary after each vocabulary module.	1 (1.0)	1 (1.0)	4 (4.0)	33 (33.0)	111 (111.0)	4.68	.627
S14	I can memorize the new words faster and better after learning the target words from the vocabulary modules.	0 (0.0)	1 (1.0)	5 (5.0)	43 (43.0)	101 (101.0)	4.62	.585
S15	I can better understand the meaning of the target words being taught in the vocabulary modules.	0 (0.0)	0 (0.0)	5 (5.0)	41 (41.0)	104 (104.0)	4.66	.541
S16	I can use the target words that I have learned from the vocabulary modules accurately when writing sentences.	0 (0.0)	1 (1.0)	4 (4.0)	33 (33.0)	112 (112.0)	4.7	.550
S17	I can remember the target words that I have learned	1 (1.0)	1 (1.0	4 (4.0)	46 (46.0)	98 (98.0)	4.59	.646
S18	I can use more vocabulary in speaking and writing after having learned them from the vocabulary modules.	1 (1.0)	1 (1.0)	2 (2.0)	32 (32.0)	114 (114)	4.71	.594
	Overall						**4.47**	**.626**

(Source: Self/Authors' Own Illustration)

Referring to Table 8.1, the average score for this section is 4.47 (SD= .626), indicating a significantly high mean score. The findings suggest that students have expressed positive feedback regarding the pictorial vocabulary learning module. The highest mean score implies that most students strongly agree that the vocabulary modules are easy to read and comprehend (M= 4.78, SD= .457). Additionally, students find the vocabulary modules highly interesting (M = 4.75, SD= .493) and consider the workload associated with them to be fair. Moreover, with a considerably high mean score of (M = 4.72, SD = .544), students agree that the target words are taught at an appropriate level and pace. Table 8.1 also indicates that students can utilize a greater range of vocabulary in their speaking and writing after learning from the vocabulary modules (M=4.71, SD= .594). Furthermore, students claim that they can accurately employ the target words learned from the vocabulary modules when constructing sentences (M = 4.7, SD =.550).

Nevertheless, with an average score of 4.62 (SD=.585), five students expressed uncertainty regarding their ability to memorize new words more quickly and effectively after using the vocabulary modules. Some students also displayed hesitation on how much they do look forward to the vocabulary activity (M = 4.61, SD=.621). Additionally, ten students were unsure whether they would continue utilizing the vocabulary modules as part of their learning activities (M = 4.59, SD = .614), and only 96 out of 150 students expressed motivation to learn more vocabulary during the activities (M = 4.58, SD = .592). Furthermore, almost half of the students perceived the vocabulary modules as challenging (M = 4.04, SD = 1.044). Lastly, with a mean score of 1.84 (SD = 1.066), the results indicate that 21 students were uncertain whether they felt bored during the vocabulary activity. Overall, students have a highly positive perception of using the pictorial module for vocabulary learning.

8.1. Findings from the Interview

Table 8.2. *Students' Accumulative Interview Responses of the Basic Research Themes*

Basic Research Themes	**Learners**	**Accumulative Responses**
Personal Experiences	3,7,14,18,30, 37, 40, 44, 49, 65	Positive: interesting texts and graphics. Negative: texts are too lengthy, requires strong internet connection.
	5, 8, 9, 10, 12, 28, 31, 35, 38, 42, 45, 47, 63	Positive: user-friendly and the website is knowledgeable. Negative: the website makes phone lagging, and it drains phone battery fast.

	1, 6, 11, 15, 16, 17, 20, 22, 29, 43, 50, 52, 53, 57, 59	Positive: many elements and the website are colorful. Negative: it has too many modules and the website cannot be accessed offline.
	4, 13, 19, 24, 26, 27, 33, 39, 51, 55, 56, 62, 66	Positive: informative content and easy to understand Negative: too many ads pop up while using the website
	2, 21, 23, 25, 29, 32, 34, 36, 41, 46, 48, 54, 58, 60, 60, 61	Positive: attractive pictures and interactive audios Negative: the website does not have practice section
Vocabulary Lessons	All learners	Most Like: Module 4 It has pictures, audios, texts, and graphics. Most Dislikes: Module 1 It only has texts.
Instructor's Instructions	All learners	Add some more pictures and videos.

(Source: Self/Authors' Own Illustration)

A total of 66 participants from the participants were interviewed in this study. All 22 male students and 45 female students were 14 years old, exhibiting a low proficiency level in language skills and limited knowledge of the English language. Based on Table 8.2, the participants provided diverse responses to the interview session, encompassing three main themes: personal experiences, vocabulary lessons, and instructors' instructions. Regarding personal experiences, 10 students expressed agreement that the modules featured interesting texts and graphics. However, they also mentioned that certain modules contained lengthy texts, necessitating a strong internet connection for access. Furthermore, 13 students highlighted that the website was user-friendly and provided valuable knowledge. However, they noted that the website's weakness was its rapid battery consumption on devices. On the topic of the website's appearance, 15 students expressed positive feedback regarding the use of visuals in vocabulary learning. They found the website to be colorful and rich in elements, facilitating easy acquisition of new English vocabulary. However, 13 students reported experiencing excessive advertisement pop-ups while accessing the website. Conversely, the remaining 15 students agreed that the website featured

attractive pictures and interactive audio elements. Nonetheless, they noted the absence of a practice section, which prevented them from practicing before engaging in the session.

When it comes to vocabulary lessons, all students unanimously expressed a preference for module 4 while showing less enthusiasm for module 1. The reason behind their preference for module 4 is its appealing visuals, interactive audio components, and engaging graphics. On the other hand, their dissatisfaction with module 1 stems from its sole reliance on text. Based on the guidance provided by the instructor, most students recommended incorporating additional pictures and videos on the website.

9. Discussion

This study aims to investigate the efficacy of the pictorial vocabulary learning module for Malaysian lower secondary English as a Second Language (ESL) students, specifically focusing on the word list outlined in the Standards-Based English Language Curriculum (SBELC) for virtual learning. Generally, students responded positively to the use of pictures as a learning tool compared to relying solely on textual materials. This study indicates that incorporating the pictorial module of vocabulary learning into English teaching methods can lead to more efficient learning for students, facilitating their acquisition of English target words. Furthermore, the utilization of pictorial learning can serve as an alternative or supplementary approach for teaching and learning English vocabulary. Ultimately, this approach contributes significantly to the enhancement of learners' vocabulary skills, enabling them to comprehend and utilize English effectively in reading, listening, speaking, and writing, thereby fostering the development of overall English language proficiency.

Fadli (2022) reported that students' perception scores reached 98.25 percent, indicating excellent performance. The findings were corroborated by student interviews, which revealed that the utilization of pictorial module for vocabulary learning resulted in improved English vocabulary skills. These results align with Ee and May's (2017) assertion that employing pictorial techniques, along with frequent exposure to vocabulary through engaging activities and colour coding, can enhance vocabulary acquisition. Similarly, Tahir et al. (2020) found that the use of pictorial module in language learning significantly benefits students, particularly those with limited vocabulary knowledge. Saad et al. (2017) also discovered that employing visual images, such as cartoons or pictures, aids students in comprehending the meaning of English words. Saptanto et al. (2021) supported these findings by demonstrating the efficacy of pictorial

materials as a teaching aid for improving students' English vocabulary in speaking skills. Their study revealed a significant increase in both experimental and control groups' scores after implementing the pictorial materials, suggesting that learning with this approach is more effective than conventional methods. Furthermore, Andrä et al. (2020) found that incorporating gestures and pictures enhances ESL students' vocabulary memory. Therefore, Tahir et al. (2020) recommended that teachers adopt pictorial materials to expand students' target word repertoire, thereby optimising vocabulary retention. Nonetheless, students are encouraged to independently engage in pictorial vocabulary learning to facilitate long-term memory and retention of the target words. In contrast, Wafi and Keshta (2013) expressed that the findings of their study did not support the assumption that the subtitle group would outperform the no-subtitle group since there were no significant differences between the two control and experimental groups. Although Wafi and Keshta (2013) contradicted the results of the studies, many previous findings (Tahir et al,. 2020; Bates and Son, 2020; Fadli, 2020, Ee and May's, 2017; Saptanto et al., 2021; Andrä et al., 2020; Khansir and Mosaddegh, 2014; Tavakoli and Gerami, 2013; Zou and Xie, 2021; Hashemzadeh, 2012; Yip and Kwan, 2006; Tahir, 2017) showed that the the incorporation of pictorial vocabulary is effective in learning the target words among lower secondary ESL learners.

This assertion is reinforced by the researchers' examination of 67 participants selected from the participants, revealing that the utilization of a pictorial module for vocabulary instruction has facilitated enhanced acquisition of target words among students. Multiple investigations have demonstrated that employing a pictorial approach in language learning facilitates better comprehension of target words compared to traditional methods of vocabulary instruction. These findings suggest that the incorporation of pictorial representations effectively aids in teaching unfamiliar words to lower secondary learners, as it directs their attention towards specific vocabulary items through the implementation of effective vocabulary tasks. Consequently, educators are advised to prioritize the instruction of target words by incorporating visual aids, such as pictures or images, to optimize retention (Tahir, 2017).

With regard to the second research inquiry, the respondents demonstrated favourable attitudes towards all the techniques encompassed within the pictorial module of vocabulary learning, as elucidated in the vocabulary lessons of this study. This can be discerned from the findings obtained through the analysis of the Students' Feedback Form, which revealed

predominantly that most students strongly agree that the vocabulary modules are easy to read and comprehend (M= 4.78, SD= .457) followed by mean score M = 4.75 and SD= .493 for students find the vocabulary modules highly interesting and the students consider the workload associated with them to be fair. Moreover, with a considerably high mean score of (M = 4.72, SD = .544).

During the interview session, the participants claimed that most students argued that the pictorial modules of vocabulary learning were interesting as they contain attractive pictures, interactive audios, and interesting graphics (personal experience theme). Besides that, the students also expressed that they preferred module 4 as it contains more pictures and audios than module 1 which only has too lengthy texts (vocabulary lesson theme). For the instructor's instruction theme, the students agreed that the teacher is supposed to provide some more effective way of teaching by adding some more pictures and to avoid teaching materials with plain texts.

Based on the research findings, it has been observed that the utilization of the pictorial module of vocabulary learning significantly enhances learners' comprehension and recognition of target words. The incorporation of this teaching technique proves highly advantageous for learners in their acquisition of new English vocabulary. Consequently, it is recommended that educators and curriculum designers consider integrating the pictorial module method to facilitate the development of vocabulary skills, particularly for individuals with limited proficiency in English. This instructional approach ultimately supports students in expanding their lexical repertoire, aligning with Tahir et al.'s (2020) assertion that it contributes to the overall enhancement of students' language abilities and proficiency, thereby fostering successful language acquisition and usage.

10. Conclusion and Future Recommendations

Based on the findings of this study, it can be deduced that the implementation of the pictorial module of vocabulary learning yields significant success in facilitating the acquisition of target words among lower form ESL students of secondary school. The present study further suggests that the adoption of the pictorial module of vocabulary learning enhances students' vocabulary retention and is particularly beneficial for students with limited language skills, warranting the provision of diverse learning strategies and instructional support tailored to their needs by curriculum designers and English teachers. Moreover, the study highlights the

importance of visual aids in fostering meaningful learning and increasing students' vocabulary acquisition.

Essentially, this study contributes to the advancement of vocabulary teaching and learning methods through visual stimuli in terms of enhancing students' vocabulary acquisition. Future research is recommended to expand upon these findings through a survey study involving a larger sample size, exploring the effectiveness of pictorial vocabulary instruction not only for EFL/ESL learners in Malaysia but also for learners from different countries.

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