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THE USE OF MALAYSIAN MODEL OF PICTORIAL VOCABULARY FOR VIRTUAL LEARNING AMONG LOWER SECONDARY ESL STUDENTS IN MALAYSIA

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ABSTRACT

Vocabulary learning is only indirectly integrated into the four core skills of the Standards-Based English Language Curriculum (SBELC): reading, writing, listening, and speaking. English as a Second Language (ESL) students with limited vocabulary knowledge often face difficulties to learn and use English on a regular basis. In a sustainable Open Distance Learning (ODL), this study uses Malaysian model of pictorial vocabulary to help students learn vocabulary remotely. In this study, 300 ESL students from lower secondary schools across Malaysia use this model to help them learn the target words mentioned in the SBELC. A mixed methods research design is employed. After using the model, 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, categorised, and coded using content analysis. Based on the research findings, the students' vocabulary knowledge has substantially increased after using the model. This study's implications indicate that the use of the Malaysian model of pictorial vocabulary learning 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

Pictorial Vocabulary, Virtual Learning, Vocabulary, Malaysia 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.

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 Malaysian model of pictorial- based vocabulary learning that aid students in their vocabulary learning remotely. This model is also designed to create a sustainable method for students to participate in the virtual learning of vocabulary. The developmental focus of this proposed model is threefold: to create a pictorial-based learning model, to optimize the said model 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 model 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). In addition, the physical and emotional restlessness that many students were going through due to being confined at home for long periods throughout the ongoing COVID-19 pandemic caused them to feel both stressed and anxious. 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). Their homes' relaxing and comfortable environment further exacerbated this lack of motivation to participate in online learning activities actively.

2.2. How a Digital Based Vocabulary Learning Model 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 model 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 model, 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.

The shift to digitalization regarding vocabulary learning methods is crucial, especially in the era of remote learning, where students learn primarily by themselves. Naturally, doing things alone is not easy because one would need a very high and constant level of motivation, interest, and commitment to see it through. This is where the benefits of digitalization in vocabulary learning will manifest. The heightened level of student engagement and interest in learning vocabulary using the digital-based vocabulary learning model is one of the most apparent positive changes that have been made to the learning process. In addition, the model also offers immediate feedback to its users (Tahir et al., 2020). They do not have to wait for their teachers to provide feedback on the vocabulary learning activities they have done.

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.

The situations expose the gaps that this study intends to address. First, even though there are digital-based tools, applications, or models that can be used to learn English vocabulary such as online games and YouTube Videos, these mediums are not meant for English language learning purposes, and the vocabulary learning process usually will take place indirectly. Second, while there are applications, software or digital-based models that are intended for English language learning, there is not any digital-based tool, application, or model that is explicitly designed for English vocabulary learning. Third, to the best of the researchers' knowledge, studies on these two matters in the Malaysian context which use the word list suggested by the SBELC are almost second to none; there is a clear need for such studies, as indicated by Mahzan, Alias, and Ismail (2020). Fourth, all the studies were not done in the context of education during the post-pandemic era. Such studies are important as it could

provide an insight on how the post-pandemic could impact English vocabulary learning in especially in Malaysia.

4. Research Objectives

While investigating the effects of utilising the model, it is also posited to receive the students' feedback after using the model as it is essential to understand the students' perceptions of learning the target words by using the model has influenced them in improving their vocabulary knowledge. Based on the aims, these research objectives are presented:

1. To develop a Malaysian model of pictorial vocabulary learning 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.
2. To investigate the effectiveness of using Malaysian model of pictorial vocabulary learning for virtual learning among lower secondary ESL students.

5. Research Questions

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

1. How to develop a Malaysian model of pictorial vocabulary learning 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.
2. To investigate the effectiveness of using Malaysian model of pictorial vocabulary learning for virtual learning among lower secondary ESL students.

6. Research Methodology

6.1 Research Design

This research is to develop the Malaysian model of pictorial vocabulary learning and explore the effectiveness of using the model 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 (a large number of participants); analyzes these numbers using statistics; and conducts the inquiry in an unbiased, objective manner. On the other hand, he mentioned that qualitative research is a type of educational research in which the researcher relies on the views of participants; asks broad, general questions; collects data consisting largely of words (or text)

from participants; describes and analyzes these words for themes; and conducts the inquiry in a subjective, biased 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 300 from lower secondary ESL students from various schools in Malaysia. Students are chosen from numerous schools around the nation where they should not have a connection or meet each other so that they cannot interact with each other when learning the target vocabulary using the Malaysian model of pictorial vocabulary learning. It is important to monitor the factors that jeopardise validity (Leedy, 1997). The technique of non-probability sampling was 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).

Among the lower secondary ESL students, 30 are chosen for the pilot test as they represented a total of 10 percent to 20 percent of the actual sample size of this study (Baker, 1994). The pilot test is performed to test the accuracy of the model and items established by the investigator. In addition, the Cronbach Alpha internal consistency analysis is performed on 30 students selected

6.3 Materials and Instrument

The following instruments will be used for this study:

1. Malaysian Model of Pictorial Vocabulary Learning.
2. Student's Evaluation Form.
3. Interview.

6.3.1 Malaysian Model of Pictorial Vocabulary Learning

A Malaysian model of English vocabulary learning proposed in this study is presented in the form or 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. Based on Howard Gardner's theory of multiple intelligences, the model capitalizes on the learners' visual intelligence, which refers to their ability to visualize the world

accurately, modify surroundings based upon their perceptions, and recreate the aspects of their visual experiences. 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.

To ensure that this model utilizes technology that could be impactful to the teaching and learning process, this model will be tailored based on the 'Substitution Augmentation Modification Redefinition' (SAMR) Model, developed by Puentedura (2006). It is widely used to assess the integration of technology and its impact on teaching and learning. SAMR divides technological innovation into four stages which are substitution, augmentation, modification, and redefinition.

There are three steps to the model. The teacher begins by selecting the target words from the SBELC. These target words are separated into four groups, presented in one of these four modes:

- Text mode (target words, categories, Malay equivalent, example of sentences).
- Text-picture mode (textual information as above, plus pictures to illustrate the target words).
- Text-sound mode (textual information as above, with the audio recording of how the target words are pronounced).
- Text-picture-sound mode (textual information as above; combined with the pictorial and audio elements).

Words from various parts of speech (nouns, verbs, adjectives) are included in each mode. Students were also administered a pre-vocabulary assessment at this stage. During the second or intervention stage, teachers have used Wixsite containing these target words every day (Monday through Friday) at a different time twice a day. This activity lasts for four weeks, with a different style of vocabulary presentation used with the students each week. The students have subsequently studied the target words.

For the final stage, the students were given a test every Friday for four weeks following the Wixsite presentation on each of the four vocabulary modes. Any gains or losses in the students' vocabulary will be compared across the various vocabulary modes that were recently presented. To better understand the four different vocabulary modes, they have experienced over the last four weeks, the students were interviewed and asked to complete a

questionnaire to share and compare their insights on the effectiveness of these modes on their vocabulary learning.

6.3.2 Student 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 Malaysian model of pictorial vocabulary learning and variables that influence their perception, engagement, and performance. This is achieved by the use of 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). Close-ended questions are included in this questionnaire. Therefore, since the scoring of the responses is much more accurate, it is also simpler and faster to fill in.

The questionnaire is answered in standard practise by reading the questions and then ticking answers (Wallace, 1997). The questionnaire contains statements related to their impression of the Malaysian model of pictorial vocabulary learning; the like or dislike of using the Malaysian model of pictorial vocabulary learning to learn vocabulary; impressions of positive or negative consequences of learning vocabulary and their expectation while using the Wixsite application. When one discusses one's feelings, emotions and provides an account of them, an introspective or mental data will inevitably be generated as this is achieved by 'looking out' (Wallace, 1997). It is possible that what other people think, or feel would be as important as any sort of knowledge.

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 in order to guarantee that the flow of the interview is seamless, where interviewees are given advance details about what is involved. As the interviewees are all between the ages of 13 and 15 years, before undergoing the interview, the interviewer would give them proper instructions. This is in terms of how the interview will proceed, the sort of questions that will be posed, and the form of responses that the interviewees expect. This also includes the duration of the interview where it should be made known to them (Wallace, 1997).

6.4 Research Procedure

After all participants are exposed with the Malaysian model of pictorial vocabulary learning to learn the English vocabulary in a sustainable Open Distance Learning context, they are administered with a follow-up evaluation form. This evaluation form is carried out to test their overall impressions of the Malaysian model of pictorial vocabulary learning used to develop their knowledge of vocabulary. Then, selected participants will be interviewed to further investigate their responses in order to receive rich data to support the findings from the student's evaluation form. The researcher also plans to perform a pilot study before the formal research to investigate issues and failures that could exist linked to the Malaysian model of pictorial vocabulary learning, questionnaires and interview items. In the pilot stage, a few questions would be posed, such as 'Was the pictorial vocabulary learning using social messaging application are simple and easy to use?', 'Are the questions in the student's evaluation form clear?', 'Are you able to answer all the interview questions?', and others. In addition, feedback and recommendations may also be requested from the participants to help make the Malaysian model of pictorial vocabulary learning, questionnaires, or interviews more successful. This pilot research is used to strengthen the model and materials created by the investigator as well as to address problems that could emerge during the formal study. The data obtained from the student's evaluation form and interview will be quantitatively and qualitatively evaluated and compared.

7. Data Analysis Method

7.1 Quantitative Data Analysis

The quantitative data will be managed using SPSS version 26 statistical software. At the completion of the study, the findings will show whether or not there is a substantial improvement after using Malaysian model of pictorial vocabulary learning (Tahir, Albakri, Adnan, Shaq, & Shah, 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 in order for the researcher to obtain quantitative data.

7.2 Qualitative Data Analysis Process

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. In order 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 reanalysing 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 1. Independent samples 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=150)	44.71	11.24	10.04	29	.314
Control group (N=150)	55.3	6.33			

Based on the data presented in Table 1, it can be observed that the experimental group achieved an average score of 44.71, while the control group scored 55.3. The average difference between the two groups was 10.59. However, when conducting an independent samples t-test, it was determined that this disparity was not statistically significant ($t=10.04$, $df=29$, $p>.05$). This indicates that there was no noticeable distinction in the pre-test outcomes between the control and experimental groups. As a result, the pre-test scores in both groups were relatively similar, suggesting a comparable level of knowledge regarding the target terms prior to the experimental treatment. Additionally, descriptive data for the experimental group's pre and post-tests can be found in Tables 2 and 3 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	44.7	6.33	120	72.8%
Post-test	164.7	6.81		

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	55.3	11.24	100	64.3%
Post-test	155.3	9.91		

Table 2 provides a summary of the Pre- and Post-test results for the experimental group. The average score in the Pre-test was recorded as M=44.7, while the Post-test score was significantly higher at 164.7. This indicates that the group experienced a substantial increase in scores after receiving targeted vocabulary instruction. The mean difference between the Pre- and Post-test scores was 120, highlighting the significant improvement. This increase in scores represents a remarkable 72.8 percent rise.

Table 3 presents the descriptive data for the Pre- and Post-tests of the control group. The average score in the Pre-test was 55.3, while the average Post-test score achieved through regular English classes without targeted instruction was 155.3. The mean difference between the Pre-test and Post-test scores was 100 which is indicated as a significant improvement. The control group experienced an overall percentage improvement of 64.3 percent. However, Table 4 compares the Pre- and Post-test results of both the experimental and control groups. It provides a performance comparison, indicating whether each student's scores in each group improved, decreased, or remained the same.

Table 4. Score comparison between the Pre and Post-tests of the experimental and control group

Group	Learners with improved score (%)	Learners with declined score (%)	Learners with same score (%)
Experimental	100 (150 learners)	0 (0 learner)	0 (0 learner)
Control	98 (148 learners)	0 (0 learner)	2 (2 learners)

Table 4 presents a comparative analysis of the performance outcomes (enhanced, declined, or unchanged scores) observed in the Pre- and Post-tests of the experimental group. Following instruction with the pictorial model, all 150 participants (100 percent) within this

group demonstrated improvement. These findings indicate that all participants in the experimental group exhibited enhanced scores in the Post-test, indicating the efficacy of the pictorial model in facilitating the acquisition of target words among the experimental group. Contrarily, among the control group participants who acquired the target words implicitly through conventional English lessons prior to taking the Post-test, 148 participants (98 percent) achieved higher scores in the Post-test. Additionally, 2 learners (2 percent) obtained identical scores in both the Pre- and Post-tests. Therefore, it can be deduced that the control group participants yielded inconsistent outcomes, as they naturally acquired the target words through standard English classes. This observation suggests that the method employed may not universally yield desired results for every participant, particularly those who obtained equivalent scores in the Post-test compared to the Pre-test.

Table 5 and 6 provide the outcomes of the paired sample t-test conducted for the Pre- and Post-tests administered to the experimental and control groups.

Table 5. Paired samples 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=150)	44.7	6.33	-213.631	149	.000
Post-test (N=150)	164.7	6.81			

Table 6. Paired samples t-test for the Pre and Post-tests of control group

Control group	Mean score (M)	Standard deviation (SD)	t	df	Sig (2-tailed)
Pre-test (N=150)	55.3	11.24	-187.776	149	.000
Post-test (N=150)	155.3	9.91			

Table 5 presents the results of the paired sample t-test conducted on the Pre and Post-tests of the experimental group. The average score of the participants in the Pre-test was recorded as M=44.7, while for the Post-test was M=164.7. The mean difference between the Pre and Post-tests which is denoted as M difference was calculated as 120. The statistical analysis using the paired sample t-test revealed a significant difference ($t=-213.631$, $df=149$, $p<.001$). This indicates that the scores of the participants in the experimental group showed a substantial increase following the experimental treatment. Consequently, the null hypothesis is rejected whilst the alternative hypothesis is accepted.

Conversely, table 6 provides the results of the paired samples t-test conducted on the Pre and Post-tests of the control group. The average score of the participants in the Pre-test was recorded as M=55.3 and it was M=155.3 for the Post-test. The mean difference between the Pre and Post-tests was calculated as 100 referred to as M difference. The statistical analysis using the paired samples t-test revealed a significant difference (t=-187.776, df=149, p<.001). This indicates that the scores of the participants in the control group exhibited a significant increase following the experimental treatment. However, when comparing the performance change (the M difference) between the experimental and control groups, the experimental group outperformed the control group by 20. This suggests that the intervention applied to the experimental group was more effective compared to the control group, as the participants in the experimental group learned a greater number of target words within the same time period as the control group.

Table 7. An 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 relevant to the target words learned during class.	0 (0.0)	0 (0.0)	3 (3.0)	42 (42.0)	105 (105.0)	4.68	.509
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 these 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	1.066
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 am able to 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**

Referring to Table 7, 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 model. 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 7 also indicates that students are able to 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 model for vocabulary learning.

8.1 Findings from the Semi-Structured Students Interview

Table 8: Students' Accumulative Responses of the Basic Themes on Qualitative Data of the Research

Basic 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.

A total of 66 participants from the experimental group 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. 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 colourful 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 experimental 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, the majority of students recommended incorporating additional pictures and videos on the website.

9. Discussion

This study aims to investigate the efficacy of the Malaysian model of pictorial vocabulary learning 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 sustainable open distance learning. The research involved two groups, an experimental group and a control group, both of which exhibited significant enhancements in mean scores during the Post-test phase. The experimental group demonstrated a noteworthy overall percentage improvement score of 72.8%, while the control group exhibited a total percentage improvement score of 64.3%. Moreover, the experimental group outperformed the control group by a margin of 20 in terms of score improvement (indicated by the M difference). In contrast, the control group's participants displayed inconsistent results, with not all of their scores showing changes from the Pre-test to the Post-test. This further underscores the success of the study participants who employed the pictorial model of vocabulary learning in augmenting their vocabulary knowledge.

Bates and Son (2020) reported a similar finding, suggesting that the utilization of a pictorial model can enhance students' performance in the Post-test assessment. However, in the present study, the experimental group outperformed the control group in terms of the percentage change in scores. These results demonstrate the effectiveness of the pictorial model approach in improving students' vocabulary knowledge. 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 model 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 models 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 models 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 metaplan 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 Metaplan, 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 models 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 experimental group, revealing that the utilization of a pictorial framework 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 experimental group respondents demonstrated favourable attitudes towards all the techniques encompassed within the pictorial model 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 model of vocabulary learning modules 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 model 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 model 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

Based on the findings of this study, it can be deduced that the implementation of the pictorial model of vocabulary learning yields significant success in facilitating the acquisition of target words among lower form ESL students of secondary school. The participants effectively learn the target vocabulary through the utilization of the pictorial model instructional approach, which proves more efficacious. This can be attributed to the storage of target words in their long-term memory, leading to successful performance in the Post-test as a result of word retention. The hypothesis was supported by higher scores obtained in the Post-test compared to the participants' performance in the Pre-test. The present study further suggests that the adoption of the pictorial model 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 studies 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. Furthermore, future research may consider selecting participants from different age groups or educational forms. To enhance the generalizability of the findings, future studies may also take into account variations in gender, family background, and race among the selected sample. Specifically, this study will contribute to create a customized vocabulary learning approach that aligns with the English language curriculum and syllabus of the nation. It seeks to enhance the methods of acquiring English vocabulary, suitable for both remote and in-person learning, and accommodating the diverse learning preferences of Malaysian students, particularly those who benefit from visual and auditory stimuli. Additionally, the study will leverage technology and its associated devices, recognizing their significance in education in the aftermath of the pandemic.

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