Picture-vocab: Self-made picture dictionary to improve pupils’ vocabulary retention in Malaysia

Mohd Syaubari Othman¹, Hasrul Hosshan²,³, Mohd Ridhuan Mohd Jamil¹, Yuvabarte Arun¹, Mohd Afifi Bahuruddin Setambah¹, Mazarul Hasan Mohamad Hanapi¹, Tajul Rosli Shuib¹, Abdul Talib Mohamad Hashim¹, Mohd Muslim Md Zalli¹

¹Department of Educational Studies, Faculty Human Development, Sultan Idris University Education, Tanjung Malim, Malaysia
²Department of Special Education, Faculty Human Development, Sultan Idris University Education, Tanjung Malim, Malaysia
³National Child Development Research Centre, Sultan Idris University Education, Tanjung Malim, Malaysia

ABSTRACT

This project was conducted to investigate whether the use of pictures able to improve pupils’ vocabulary retention. There were 36 pupils from an urban school located in Malaysia who are in year 4 involved as participants. The pupils were of average proficiency level of the English Language. A pre-test and post-test were conducted in order to identify the effectiveness of the intervention. An interview was carried out with 10 pupils in the post-intervention for triangulation purpose. The scores from the pre-test and post-test were compared to measure the effectiveness of the intervention. Whereas, the analysis of the interview was procured on pupils’ perception towards the intervention. The findings indicate that pupils are able to remember the vocabularies taught for a longer period of time when the words are associated with pictures. Findings also indicate the use of the pictures in improving their vocabulary retention.

Keywords: Long-term memory, Pictures, Retention, Vocabulary

This is an open access article under the CC BY-SA license.

1. INTRODUCTION

Vocabulary, as one of the knowledge areas in language, plays a great role for learners in acquiring a language [1]. Vocabulary is one of the key components in mastering a language. Through the statement, we can say that every word that we use in our daily life conversation is a vocabulary. Without the correct vocabulary, a person will not be able to have an effective conversation with their social circle. According to Azhar [2], “without grammar very little can be conveyed, without vocabulary, nothing can be conveyed”. Hence, learners need vast choices of vocabulary in order to convey their thoughts and ideas in the targeted language.

Research has shown that second language readers rely heavily on vocabulary knowledge and the lack of that knowledge is the main and the largest obstacle for L2 learners to overcome [3]. Many researchers and teachers have come up with various ways in overcoming the issue that concerns the lack of mastery in vocabulary among learners. According to Tamuri and Ajuhary [4], there are various techniques for teaching new vocabulary. Teaching vocabularies through pictures are one of the ways suggested by [4].

Pictures are one of the valuable aids which bring “images of reality into the unnatural world of the language classroom” [5]. Pictures can be used as a way to attract the learners’ attention and interest toward teaching and learning. Associating the words with a picture that can be related to the word will help the
students to remember the words taught for a longer period of time. Thus, it is decided to interplay visual arts, which is using pictures and vocabulary learning in order for students to enhance their vocabulary retention.

“Picture-vocab: Self-made dictionary” is an intervention that is used in order to overcome the issue of pupils’ lack of vocabulary content. According to Zakariya [6], young learners have a short span of remembering the information that has been taught to them. As pupils tend to forget often, the picture-vocab helps the students to refer to the words that is being taught for the particular topic whenever they want to in order for them to remember the words and use it frequently. Hence, pupils’ vocabulary content as well as their fluency in English Language can be enhanced.

According to Hennessey and Amabile [7], without using a language or a word frequently, the specific language or word will not be saved in their long-term memory. This will eventually result the learners to forget the word or the language as time goes on. We do not remember things because of insufficient focus, time or attention spent on them, and because of insufficient practice, usage, revisiting or application [8]. Based on the Hermann Ebbinghaus’s theory as cited by [9], the human brain would forget the information obtained if the particular information is no longer practiced or applied. The longer is the wait to apply the acquired knowledge, the less we remember it [10].

According Murre and Dros [11], forgetting curve if information that is not used in 31 days, it will not be stored in the long-term memory. The lack of use of language made them to forget the language as they do not use it often. As a way to overcome the situation, before introducing the intervention, four specific techniques in the classroom have been used in the classroom, which are, introducing new vocabularies in context, use pictures and body gestures, providing visual aids and spelling bee “pop quiz”. Although the methods were working for the students to grasp new vocabularies, they still had difficulties in remembering words a week after the lesson. Students neither remember the words nor the picture that is associated with words. Poor retention among young learners is caused by several factors.

Teacher must make use of several techniques while teaching of vocabulary [12]. One of the well-known techniques that has been identified through the previous researches is the direct translation method. The direct translation method is used as one of the strategies to overcome the issue of pupils’ in using the English language efficiently. Although direct translation can be used as an instructional strategy in teaching and learning of English language, as cited in [13] states that translation misleads and prevents students from thinking in the foreign language. According to Holmes [14], the teacher should try to get the meaning to the class without using translation. This is not preferable as translation may or may not provide the meaning of the word accurately and precisely. It is advocated as the method used enables the pupils without grasping the meaning of a word that they have learned to pronounce rather than to depend upon the translation.

Although some methods were proven working for the students to grasp new vocabularies, they still had difficulties in remembering words a week after the lesson. Students neither remember the words nor the picture that is associated with words. Poor retention among young learners is caused by several factors. Working memory (WM) is believed to be responsible for the active tasks of extracting contextually appropriate vocabulary, stating one’s own opinions, while temporarily storing the other person’s words during conversation [15]. As pupils having difficulties in remembering words for a long term, their working memory is most probably being affected. In order to enhance and build their vocabulary retention,

Learners remember better the material that has been presented by means of visual aids [16]. Some words work well with pictures, particularly nouns. When pictures are shown together with words, students have a better understanding and also able to remember the words for a longer period of time. Hence why, it is decided to introduce the Picture-Vocab, the self-made picture dictionary to improve pupils’ vocabulary retention. Furthermore, the main objectives of the project are: i) To investigate the effectiveness of the self-made picture dictionary in helping the students to improve on their vocabulary retention; ii) To find out the effectiveness of using picture dictionary in refining students’ vocabulary retention.

2. RESEARCH METHOD

Kemmis’s model was used as a guideline for the project. Kemmis developed a simple model of the cyclical nature of the typical action research process Figure 1. The figure shows the Kemmis’s model which has four phases which is to plan, act, observe and reflect [17].

The first phase of the model is to plan. Planning is an essential stage in any research that is being conducted. As the first step, a plan was done to carry out a pre-test in order to identify the existence of the issue of the lack of vocabulary retention among the pupils. Once the issue has been identified, an intervention for the issue was planned. Next, the materials that are needed to conduct the intervention for the issue that was identified. As for the intervention, the materials that templates of backgrounds of each topic were needed to be provided to the students and also pictures to help the students to associate with the words that they have learned.

Picture-vocab: Self-made picture dictionary to improve pupils’ vocabulary ... (Mohd Syaubari Othman)
So, it is planned to find on the size of the template that will be distributed to the students, pictures that is going to be selected and so on. After the input, a plan to carry out a post-test in order to identify the effectiveness of the intervention on the pupils. As the final stage of planning, a plan to interview pupils at random for the triangulation of the data collected. For interview, a planned interview protocol was arranged in order to gather the information correctly. Figure 2 shows the flow of the planning that has been carried out during the research [18].

Next, once the planning stage is done, the next phase of the model has been proceeded. Firstly, the pre-test has been carried out as planned. Based on the results, it was realized that the issue of not mastering the vocabulary exist among the pupils. As the next act, the application of the intervention into action during the teaching and learning session with the students was done in order to overcome the issue faced. An input was given which is needed for the pupils to fill in their picture-vocab template according to the units. Finally, a post test was conducted as planned during the planning stage [19]. Figure 3 shows the flow of the act that has been carried out in the research.
After taking the required action, it is needed to do some observation on the effect of the intervention to the pupils for the issue faced. Through the results of the observation, the effectiveness of the action taken can be identified. The behaviors of the pupils during the input session were observed, which is very important. Through their reaction, it was able to identify if the intervention is pupil centered as planned or not. Next, their templates that were given for the pupils to fill-in during their free time was observed. It will be done before the beginning of every lesson and make sure the students are taking the necessary steps as planned. Finally, once the post-test has been conducted as planned, the scores of pre-test and post-test of each pupil and observe the differences of their scores will be observed [20]. Figure 4 shows the flow of the observation that has been done in the research.

![Flowchart showing the stages of observation](image)

**Figure 4. The flow of the observation that has been done in the research**

As the final step, the differences between the scores of pre and post-test of each pupil and identified the effectiveness of the intervention as a whole has been reflected. Next, the on the strengths, weaknesses, and the steps that can be taken to improve the intervention has been reflected. Through the reflection, it was able to identify how effective the intervention was to the pupils [21]. Thus, when the second cycle is being carried out in the future, the strength, weakness and the ways to overcome identified will be taken into consideration [22]. Figure 5 shows the flow reflection that has been done in the research.

![Flowchart showing the stages of reflection](image)

**Figure 5. The flow reflection that has been done in the research**

3. RESULTS

There were nine questions set for both pre and post-test. Both tests contain the same questions but the arrangements of the questions differ in each set. Both tests were carried out in the similar environment and time to ensure the validity of the test. The result of the tests helped in understanding the pupils’ improvement in the performance in the classroom. Figure 6 illustrates the difference between the number of scores scored by the pupils for each item in the pre-test and post-test.

![Bar chart showing the number of scores scored by the pupils](image)

**Figure 6. The difference between the number of scores scored by the pupils in the pre-test and post-test**
Figure 6 shows the comparison between the scores scored by the pupils in the pre-test and the post-test that was conducted. From the bar graph, it is obvious that there is a massive increase in achievement before and after the introduction of the intervention. All the participants have shown a positive increment in their post-test for each item, except for item number 9, which is storm. In the pre-test, item number 5 (merchant) obtained the least number of scores. Pupils do not know the word merchant before the intervention was introduced. But, in the post-test, 16 pupils were able to give the correct answer for the picture. There is an increase in the number of pupils that were able to associate the word with the picture and understand the word at the end of the intervention. This clearly shows that the intervention has helped the pupils to understand the vocabulary better and also able to remember the words for a longer period of time. Table 1 shows the percentage difference for pretest and posttest in this study.

Table 1. Percentage difference for pre-test and post-test

<table>
<thead>
<tr>
<th>Criteria</th>
<th>Pre-test</th>
<th>Post-test</th>
<th>Difference</th>
</tr>
</thead>
<tbody>
<tr>
<td>Percentage (%)</td>
<td>34.44</td>
<td>78.51</td>
<td>44.07</td>
</tr>
</tbody>
</table>

Further analysis of the scores was obtained from the calculation of the percentage. Table 1 mentions the difference in the percentage of the items that was correctly answered by the pupils. In the pre-test, the percentage of items that was correctly answered was 34.44%. As for the post-test, the percentage of items that was correctly answered hiked up to 78.51%. There is a huge difference between the percentages of scores, which is 44.07%. Hence, the difference indicates that the pupils have improved in their vocabulary retention skill using the intervention.

An interview has been conducted with 10 pupils to know their perceptions of improving their vocabulary retention by using pictures. The pupils were chosen based on their proficiency level and the changes in their post-test. With the summary of the transcription, the results have been coded based on their statements as shown in Table 2.

Table 2. Some of the feedback and keywords from the interview given by the participants

<table>
<thead>
<tr>
<th>Code</th>
<th>Keywords</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Positive feedback</td>
<td>Can remember.</td>
<td>89%</td>
</tr>
<tr>
<td></td>
<td>I like pictures</td>
<td></td>
</tr>
<tr>
<td></td>
<td>I can answer the question asked with the pictures.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>I had fun.</td>
<td></td>
</tr>
<tr>
<td>Negative feedbacks</td>
<td>Too many words. So, I cannot remember the words.</td>
<td>11%</td>
</tr>
<tr>
<td></td>
<td>I do not like sticking the picture.</td>
<td></td>
</tr>
</tbody>
</table>

As from the summary of the interview that was conducted with 10 pupils, the results as shown in the table were obtained. There were 89% of the total numbers of respondents have given a positive response to the questions that were asked during the interview. Whereas, 11% of the total numbers of respondents have given a negative response to the questions that were asked to them. One of the negative answers that was given by the pupil was that the number of words which is a lot and the participant could not remember. This response will be taken into consideration for the further project purpose.

4. DISCUSSION

From the finding, it can be seen that that using pictures in the classroom in order to improve pupils’ vocabulary retention is certainly an effective way to enable to learn vocabularies. This method has given the low proficiency pupils a new hope of how to remember words in the easiest way. According to Murre and Dros [11], a picture is a description that gives you an idea in your mind of what something is like. Thus, using pictures in classroom given an idea of what the words means. This allows pupils to remember and understand the new vocabularies and able to remember then for a longer period of time easier. The discussion done based on the research question.

4.1. How can the use of self-made picture dictionary help to improve the pupils’ vocabulary retention?

To answer this question, the findings from the pre and post-test and interview has been examined. All of the participants have shown improvement in their post-test results compared to their pre-test results. The number of correct answers given for each item also shows a huge difference between the pre-test and the
post-test [23]. The percentage of correct answer given for each item increased from 34.44% to 78.51% in the post-test. There was a 44.07% difference in the percentage of the number of correct answers given in the pre-test and post-test. This clearly proves the effectiveness of using pictures in helping the pupils to improve their vocabulary retention [24].

Pictures facilitate pupils’ vocabulary earning and also enable them to remember the words for a longer period of time as they could understand the meaning of the word with the help of visual aids. In most cases, new words could not be understood by the pupils as there is no mental image formed while learning the word [25]. Through guided visualization, pupils will learn how to associate the word with the pictures. According to Dichev and Dicheva [26], a mental image can be restored in a human’s brain for longer period of time compared to being heard or writing it down. Thus, pictures that are being associated with the words will help them to remember the words for longer period of time [27].

Besides, the analysis of the interview has also suggested that the participants have improved in learning vocabulary after the introduction of the intervention [28]. The interviewees were able to list down the words that they have learned during the intervention without fail. Majority of response that were given by the pupils were positive [29]. The interviewee’s response during the interview has been taken into consideration for the purpose in knowing the underlying reasons for the pupil’s achievements. Hence, through the analysis of the findings, the research question on how can the use of self-made picture dictionary help to improve the pupils’ vocabulary retention can be answered with a positive response. The vocabulary retention of pupils was able to be improved with the help of pictures [30].

5. CONCLUSION

As a whole, the project is a platform build especially for the pupils to improve their vocabulary through the help of visual aid. This is supported saying that the usage of visual aid in the teaching and learning process can motivate and help the students to associate the words with the pictures. These eventually enhanced the pupils’ vocabulary skill and increase the number of words in their word bank, as well as help them in saving the learned words in their long-term memory. Hence, the project that is specially designed for the benefits of the students and helped them to learn English language in a more fun and less pressuring. This study only focuses on the use of language and the next study can look at the relationship between language use and student attitudes.

ACKNOWLEDGEMENTS

The authors would like to thank Research Management Innovation Centre (RMIC), Universiti Pendidikan Sultan Idris (UPSII) for their support GGPU and Department of Educational Studies, Faculty Human Development, Universiti Pendidikan Sultan Idris (UPSII) for their support in this research.

REFERENCES

Yuvarbarte Arun is currently a master student at Department of Educational Studies, Faculty Human Development, Sultan Idris University of Education. His main research directions are curriculum studies. Relating to his research area, he has written and published proceeding of international conference and articles published in international journals. He can be contacted at email: yuvarbarte@gmail.com.

Mohd Afifi Burhanuddin Setambah is currently a lecturer at Department of Educational Studies, Faculty Human Development, Sultan Idris University of Education. His main research directions are Sciences and Mathematics primary and secondary School, teaching methods of research development. Relating to his research area, he has written and published many books, over 50 articles in prestigious journals and proceeding of international conference and articles published in international journals. He can be contacted at email: mohd.afifi@fpm.upsi.edu.my

Mazarul Hasan Mohd Hanapi is currently a lecturer at Department of Educational Studies, Faculty Human Development, Sultan Idris University of Education. His main research directions are Malay Language and Primary School, Curriculum Education. Relating to his research area, he has written and published more books, articles in prestigious journals and proceeding of international conference and articles published in international journals. He can be contacted at email: mazarul@fpm.upsi.edu.my.

Tajul Rosli Shuib is currently a lecturer at Department of Educational Studies, Faculty Human Development, Sultan Idris University of Education. His main research directions are psychology Education and Islamic Education. Relating to his research area, he has written and published many books, articles in prestigious journals and proceeding of international conference and articles published in international journals. He can be contacted at email: tajulrosli@fpm.upsi.edu.my.

Abdul Talib Hashim is currently a lecturer and Dean at Faculty Human Development, Sultan Idris University of Education. His main research directions are Sosiologi, Curriculum and general Education. Relating to his research area, he has written and published many books, articles in prestigious journals and proceeding of international conference and articles published in international journals. He can be contacted at: abdul.talib@fpm.upsi.edu.my.

Mohd Muslim Md Zalli is currently a lecturer at Department of Educational Studies, Faculty Human Development, Sultan Idris University of Education. His main research directions are education psychology, teaching methods of research development. Relating to his research area, he has written and published many books, over 14 articles in prestigious journals and proceeding of international conference and articles published in international journals. He can be contacted at email: muslim@fpm.upsi.edu.my.

Picture-vocab: Self-made picture dictionary to improve pupils’ vocabulary ... (Mohd Syaibari Othman)