The Effectiveness of Using Picture Word Inductive Model Strategy in Developing EFL Iraqi students’ Vocabulary Retention

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Abstract: Vocabularies represent the basic elements of any language, thus, if there wasn’t sufficient control in using them then the result would be a difficulty in vocabulary retention when needed. The Picture Word Inductive Model Strategy (PWIM) than traditional methods. The current study aims at investigating the effectiveness of using (PWIM) Strategy in developing EFL Iraqi students’ vocabulary retention. The study is conducted by using an achievement test to check the study sample. The researcher has selected a sample of (65) students in third stage in English Department in the Colleges of Education at Missan University in the Academic Year (2021-2022). The students are divided into two groups, the first group is the experimental group and the second group is the control group. In order to find out whether there are any statistically significant differences among the two groups’ achievement, the researcher applied the T-test formula for the two samples in an independent way. Based on the outcome of the study, there are statistically remarkable differences appeared in the results from the two groups. Accordingly, the study proves that using (PWIM) can increase the vocabulary retention of the students.

Keywords: EFL, PWIM, vocabulary, retention.

Introduction

In order to communicate with others we need a language and to do that we need to have a sufficient amount of vocabularies. Furthermore, just have a large number of vocabularies is not sufficient, we need to be able to remember them whenever we need them. The students need to learn how to retain vocabularies in order to communicate and talk with other students. Using language for the purpose of communication with others makes an opportunity for making some kind of controlling over the learning context of the students. Bader (2017) states that teaching English around the world is done for various and different goals like to have a job, passing an exam, for developing their educational skills, etc. On the other hand, in Iraq and such countries, English is taught in schools and universities as part of educational curriculum. The educational progress of the students is assessed by measuring their ability in participating and expressing in various situations, also it can be clearly noticed that the more students participate the more they learn. According to Weaver and Qi (2005) when students participate in the class, then they need a set of vocabularies to use and employ. In addition, they need to remember this vocabulary whenever needed and use them in the right context and situations.

The Problem of the Study

The following problems are formulated in the study:

1. How can the use of (PWIM) strategy be effective in developing the vocabulary retention of students?
2. Whether or not using (PWIM) strategy can help the students improving their vocabulary retention?

Hypothesis of the Study

Based on study problems, the following questions are presented:

1. Whether there exists differences in the statistics between the experimental group and control group mean score

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before using the (PWIM) strategy in the pre-test achievement or not?

2. Whether or not there are any remarkable statistically differences between experimental group and control group pre-test and post-test mean score results of using (PWIM) strategy?

3. Whether or not there exists any notably statistically differences in the mean scores of post-test achievement between experimental group and control group after the using of (PWIM) strategy?

The Aim of the Study

This study aims at:

1. Assessing the effectiveness of using (PWIM) model in developing the ability of students for vocabulary retention.

2. Investigating the statistical differences between the use of (PEIM) strategy and the traditional methods in improving students' vocabulary retention ability.

Literature Review

According to Linse (2005) states that vocabulary is “the collection and types of words the students have”. These words are required to be used in communication. On the other hand, Bader (2017) defines vocabulary as "words which are presented by the students in language context". According to her, if students have a sufficient number of vocabulary than they will be able to express their thoughts and ideas more effectively.

Richards and Willy (2002) claim that the vocabulary importance appear through using language, because in order to use language effectively you will need to be familiar with its vocabulary since it represents the main element in any language. Furthermore, it is necessary for improving the students' ability for learning skills listening, speaking, writing and reading. For Arista (as cited in Ismail & Salih, 2019) the vocabulary represents a central part of communication, and it's necessary for students to learn and know as much vocabulary as possible to create and present a meaningful sentence. If students get control over their vocabulary than they will be able to learn English much more easily. If students lack the ability to retain the vocabulary, then their ability to communicate will decrease too. According to Bader (2017) retention is “a process for recalling the information in a given time, to be able to retain things in memory or to have the ability to recall experience and knowledge after a period of time of learning processes”. Recalling and remembering information is determined by the kind of memory the information is kept. For Chen et al. (2008) there are three effective and significant types of memory that are considered to be important to the process of earning. The three types are as follows:

1. Sensory memory: In this type the information is saved for only brief time. That is to say, the information would be available only for a limited time.

2. Working memory: In this type of memory the information is saved and related to previous knowledge to create solutions for the problems. This type can hold a piece of information to a full concept.

3. Long-term memory: The last type memory holds the well-learned information. Unlike the other two types, in this type the information is saved and available for a long period of time.

In this memory, there is the vocabulary's conscious retention. Learning and retaining vocabulary can start from the teacher where he can drag the attention of his students and help them to concentrate on the new vocabulary by means of relating them with their knowledge (Chen et al., 2008).

What is the Picture Word Inductive Model (PWIM)?

The Picture Word Model is developed by Calhoun (1999), this strategy employs pictures that contain a well-known actions, objects and scenes then point out the name of these objects and actions. This strategy or model can in fact helps the students to gain more words. Furthermore, it can help them to improve their writing vocabulary, discovering structural principles and phonetic that are presented in those words. The reason behind using this model is to improve students' vocabulary, concepts about words, and sentence and paragraph structures through our content subjects of reading, math, science, or social studies. As to how to use to apply this model, it can be easily applied by listening the words using a poster by the students. The students read and categorize the words on the poster as a class over a series of days. Then, a sentence is written and produced using these words by each class. Based on the level of the grade the sentences are categorized and formed into paragraphs. Consequently, the paragraphs are written by the students. The benefit of using this model from K to grade 6 is that it will help students building their abilities in vocabulary and writing.

Advantages of PWIM:

This strategy or model has a several and various advantages listed by Calhoun (1999):
1. The grammar, mechanics, phonics, and the use of standard English are emphasized in this strategy.

2. This strategy uses pictures which can support the students with a concrete referent for the learning of new words, phrases, and sentences.

3. Using pictures that are relevant to the subjects being studied can help students feeling part of the community of the classroom and can actively participate in the activities of the class.

4. Since this model uses picture word chart then this chart can work.

5. As an immediate reference to give an ability for the students to put these words to their sight vocabulary. The relationship between symbol and sounds can be chosen and emphasized by teacher (introduced or taken to mastery).

6. This model can help students identifying the patterns and relationships of the English language, to make them able to use this learning to newly encountered words.

7. This model enables students to see and hear how the words spelled in correct way.

8. Modelling the main concepts and words by the teacher can be beneficial for students. As they continue practicing, they might become able to make paragraphs and sentences that are relevant to the subject of the study.

The (PWIM) can be applied with a whole class, small groups, pairs, or individually to lead students into inquiring about words and adding them to their vocabularies, discovering phonetic and structural principles, and engaging in other reading and writing activities.

![Figure 1. Shows a picture with ink marks presents the picture word inductive model](image)

**Methodology**

**Research Design**

The researcher employed the experimental design since it is compatible with study nature. The experimental study is conducted using two groups of students: The first group is the experimental group, this group is taught using (PWIM) strategy. The second group is the control group, this group is taught using the traditional methods. Table (1) clearly shows the study design.

| The Group | The method |
|-----------|------------|
| Experimental | PWIM |
| Control | Traditional |

**The Participants Composition**

The population included students in the third stage at English Department in The Colleges of Education at Missan University in the academic year (2021-2022). The number of population selected is 65 students.
The Sample of the Study

The researcher selected a sample of (65) students from the third stage in College of Education, from English Department at Missan University. For both of the groups, the experimental and the control group, the sample was selected in a random way. The sample of the study is divided into experimental group including (33) of the students and (32) of students in control group. The sample of the study can be further illustrated in Table (2).

| Group of students | Number of students | Total |
|-------------------|--------------------|-------|
| Experimental      | 33                 | 65    |
| Control           | 32                 |       |

The Instruments of the Study

In order to achieve the goals and answers the questions of the study an achievement pre- post test is conducted. The researcher designed a test of (6) questions, each one of these questions has (4) items, for each item the researcher gives (2) marks. Thus, the test marks are about (50). Before conducting the test using (PWIM) strategy, a test is applied using the traditional methods. Afterward post test applied after the using of (PWIM) strategy.

Validity and Reliability

Test validity is assured by applying it on a pilot sample to conduct level of difficulty and discrimination power of test items and how easiness or difficulty to distinguish the variation factor and to determine the face and content validity of the test, it is given to a jury of 15 university staff members and English educational specialist in the field of TEFL, linguistics and language testing. After verifying validity, difficult and distinguishing factors of the items, the researcher re-corrected the responses of the pilot study. Then finds the reliability factor using a T-test because this formula is used in objective tests.

The Statistical Means

For achieving the aims of the study and answering its questions, the following statistical procedures were used:

- To find out whether there is an any notable statistical differences in the mean scores of the pre and post test of the experimental group, the researcher conducted a t-test for the paired sample.
- The T-test is conducted for the independent Sample to explore any notable statistical differences between the two groups based on the statistical results of pre-test (before using the strategy) and post-test (after using the strategy) achievement of students' vocabulary retention. A pilot study is conducted to indicate any different aspect may appear for the test

Results

The study results are analyzed based on the questions of the study:

First Question related Results

As stated the before, the first question of the study is as follows:

Whether there exists differences in the statistics between the experimental group and control group mean score before using the (PWIM) strategy in the pre-test achievement or not?

In order to answer this question, T-test for Independent Sample procedure was conducted. The outcomes of the study reveal that the calculated value (0.160) while the tabulated value is (0.214), that is to say it is higher than the calculated value and the level of significance is (0.05). Thus, this shows that there are indeed notable statistical differences in mean scores in the results of pre and post tests of the two groups, that is before and after using (PWIM) strategy. Consider Table (3) which explains these results vividly.

| Group                      | N  | Mean | SD   | t       | p    |
|----------------------------|----|------|------|---------|------|
| Experimental group (pre-test)| 33 | 3.500| 6.363| 0.214   | 0.05 |
| Experimental group (post-test)| 32 | 3.120| 3.420|         |      |

Second Questions Related Results

As mentioned above, the second question of the study provides that:
Whether there are any remarkable statistically differences between experimental group and control group pre-test and post-test mean score results of using (PWIM) strategy?

To answer this question, the researcher conducted a Paired Sample T. test procedure. The outcomes of the study prove that the tabulated (T) value is (0.46) and (0.05) level of significant which shows that there are notable statistical differences between the mean scores of the two groups before and after using (PWIM) model. These results are represented clearly in Table (4).

| Group                        | N  | Mean | SD  | t    | p   |
|------------------------------|----|------|-----|------|-----|
| Experimental group (pre-test)| 33 | 3.500| 6.363|      |     |
| Experimental group (post-test)| 32 | 4.260| 3.361| 0.046| 0.05|

**Third Question Related Results**

The current study third question is as follows:

-Whether or not there exists any notably statistically differences in the mean scores of post-test achievement between experimental group and control group after the using of (PWIM) strategy?

To answer the third question, a T. test for Independent Sample procedure is conducted. The outcomes of the test reveal that the tabulated value is (0.071) and (0.05) level of significant. This result proves that there is a notable statistical difference between mean scores in post-test achievement after the using of (PWIM) strategy by the experimental group. Consequently, this proved that using (PWIM) has an effect on students’ vocabulary retention. This can be illustrated in Table (5).

| Group                        | N  | Mean | SD  | t    | p   |
|------------------------------|----|------|-----|------|-----|
| Experimental (post-test)     | 33 | 4.260| 3.61 |      |     |
| Control group (post-test)    | 32 | 3.820| 4.919| 0.071| 0.05|

**Discussion**

Based on the results of the study it has been found that there is no any notable statistical difference in the experimental and control group mean scores before using (PWIM) strategy. Moreover, it has been found that there is indeed a statistical difference in mean scores of pre-test and post-test between experimental and control groups due to the effect of (PWIM) strategy. In addition, the results show that there is a statistical difference between the mean scores of the two groups which is different from before and after using.

The aim of the current study is to investigate the effectiveness of using (PWIM) strategy in improving students' vocabulary retention. Furthermore, it aims at investigating the influence of (PWIM) strategy on the vocabulary retention ability of (PWIM) strategy. Which shows the effect of using (PWIM) strategy on students' vocabulary retention of the students.

The study presented three questions and aimed at answering them using a pre-post achievement test to investigate how the use of (PWIM) strategy affects the students' vocabulary retention. The outcomes of the study revealed that using (PWIM) strategy has an effect on students' vocabulary retention which appears clearly in experimental group achievement which used the (PWIM) strategy in comparison to the control group where the traditional methods are applied. Based on the results of the study it has been found that (PWIM) strategy influences the vocabulary retention of students, it raises their ability to remember the vocabulary meaning whenever it needs. Accordingly, the outcomes of the study prove the vocabulary retention of the experimental group is highly increased according to the results of post-test. Consequently, the results of the study prove that using (PWIM) improve the students’ ability to remember the vocabulary and use them in the appropriate context and situations. Student performance in English class is also improved since the students would have the ability to remember and use the vocabulary whenever they need.

Students’ ability of learning can be enhanced by such kind of cooperative strategies.

This goes up with a study conducted in Swedish by Li (2011) which indicates a result demonstrates the PWIM's advantages for immediate vocabulary the result demonstrates the PWIM's advantages for immediate vocabulary testing that when the experimental group being taught with PWIM has performed relatively better that control group that taught with another technique Li (2011). Another recent study presented by Hamdani (2021) has concluded the impact of PWIM in enhancing young learners’ vocabulary in English language, where the students are required to identity pictures which motivate them to be active and enhance language use mastery.
Conclusions
After analyzing the results, the researcher has come to conclusion that using (PWIM) strategy can indeed be effective in developing and improving students’ vocabulary retention. That is to say, (PWIM) strategy is considered better than the traditional methods in developing the students’ vocabulary retention. Furthermore, this strategy gives students an opportunity to predict the meaning of a given vocabulary. Another criteria of this strategy is that it is a student-centered instead of being a teacher-centered strategy. It also can enhance teachers’ ability to solve problems related to students’ ability to remember the new vocabulary. (PWIM) strategy helps draw the concentration of students’ knowledge toward predicting the meaning and construct sentences by themselves. Using this strategy can also improve students’ language skills such as grammatical skills, writing skills that when they write a sentence using the new vocabularies.

Recommendations
After conducting the study, the researcher can expose some recommendations for the upcoming studies concerning PIWM technique, and these recommendations may vary form the focus and regular use for the PIWM technique inside the classroom, to the formal implementation of this technique in the governmental instructions. The teachers may need to use PIWM when teaching English vocabulary in any study level or material as it improved great flexibility and entertainment. PIWM do not need time to prepare or waist, teachers can implement it directly in the classroom. It is a student centered technique, where all attention is given to student. There is a great need for clear imbedding to this technique in the official Iraqi instructions. Future researchers can tackle PIWM impact in spelling, writing or reading. A new instructional teaching program may be developed for elementary or kindergarten. This Technique may be adopted for learners with higher levels by asking them to design or create pictures according to their needs or course demands with the use of dictionary.

Limitations
The study is limited to study the effectiveness of (PWIM) strategy in improving students’ vocabulary retention. The sample of the study are the third stage students from the English department at Missan College of Education. The tools that are employed to measure the effectiveness of (PWIM) strategy is pre-test achievement.

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