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استخدام نموذج قائم علي الصور والاستقراء اللغوي في تدريس اللغة
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The Effect of Using Picture Word Inductive Model on Developing EFL primary Stage Students' Developing Writing Skills

(A research for master thesis requirements)

by

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المستخلص

تهدف الدراسة الحالية الي التحقق من تأثير استخدام نموذج قائم على الاستدلال العقلي للكلمات عبر الصور لتنمية مهاره الكتابة لدي تلاميذ المرحلة الابتدائية. وقد تمثلت عينه الدراسة من ٦٠ طالب من طلاب الصف السادس بمدرسه زويل بدمياط الجديدة واستخدم البحث الطريقة الشبه تجريبية وتم تقسيم عينه البحث الى مجموعتين الضابطة (٣٠) والتجريبية (٣٠) وأعدت الباحثة قائمه بمهارات الكتابة المطلوبة للتعرف على مهارات الكتابة المناسبة لطلاب الصف السادس الابتدائي. وتم تطبيق النموذج على المجموعة التجريبية وتدریس المجموعة الضابطة عبر الطرق التقليدية. حيث أشارت نتائج الدراسة لوجود فروق ذات دلالة إحصائية بين متوسطات المجموعة الضابطة والتجريبية لصالح المجموعة التجريبية. كما يوصي البحث باستخدام النموذج الحالي لتعليم الطلاب في المراحل الابتدائية.

الكلمات المفتاحية: نموذج قائم على الاستدلال العقلي للكلمات عبر الصور، مهاره الكتابة المرحلة الابتدائية.

Abstract:

The aim of this research was to investigate the effect of using a proposed Picture Word Inductive Model (PWIM) to improve grade six pupils' EFL writing skills. The participants of the current research consisted of 60 pupils of grade six at Zeweil primary school in New Damietta. The research applied the quasi-experimental research. The experimental and the control group were divided equally into 30 Pupils each. The instruments of the current research were the EFL writing skills test and the EFL scoring rubric. The experimental group was taught using the proposed (PWIM), while the control group was taught using the regular way. Results showed that the (PWIM) helped pupils to develop their EFL writing skills, as the mean score of the experimental group was higher than that of the control group. The research suggests utilizing the (PWIM) in teaching writing for primary stage pupils.

Key Words: Picture Word Inductive Model, Writing Skill Test, Primary Stage.

Introduction

Language is used for the purpose of communication. To improve language, one needs to improve four skills of listening, speaking, reading and writing. Writing is important to express one's thoughts, as it is a visual representation of speech. Chapell (2011) proceeds to conclude that writing helps to express one's thoughts, sustains communication, promotes thinking skills, stimulates logical arguments, provides feedback, Moreover, it prepares learners to jobs.

Writing in the foreign language is one of the challenging tasks for EFL learners. Chapell (2011) proceeds to conclude that writing helps to express one's thoughts, sustains communication, promotes thinking skills, stimulates logical arguments, provides feedback, Moreover, it prepares learners to jobs. Writing is a center of the language as it helps the learners to put their thoughts in a meaningful and a suitable form. Bauman (2010) states that writing can elevate one's way of thinking, as humans have to connect the details that are derived from the main idea. Likewise, writing needs to be written in a logical order. This is through joining other's points of view and showing respect towards their conventions. Finegan (2008) mentions that writing is one of the most significant devices that humans cannot live without. In addition, Myers (2008) indicates that writing is the means of contacting others' feelings and theories.

Developing EFL learners' writing performance has become a learning objective of its own. As it develops accuracy because it helps them to think before writing, moreover writing help pupils to learn to choose carefully the suitable vocabulary and grammar before writing. Further, it fosters other skills under the umbrella of integration between skills. As pupils can practice organization of their ideas on a paper during writing.

Current traditional approaches in the EFL learning as (Lillis, 2001) mentions are: The Text- Approach, the Process- Approach

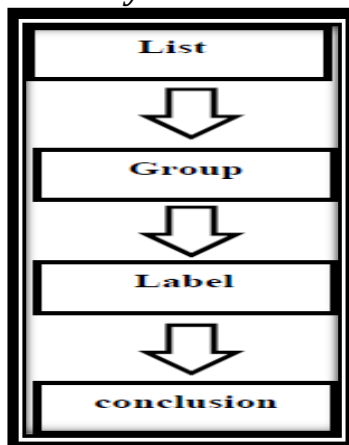
and the Genre-Based Approach. In text-based approach the pupils imitate the model presented by their teacher in which the teachers focus only on a spelling, vocabulary, style and grammar. The purpose for this approach is not in process, but in product. While, in the process-based approach the pupils follow some steps of writing starts by planning, drafting, reflection, peer review, revision then proofreading before presenting the final product. Furthermore, in the reader genre-based approach the pupils follow some steps like the five stages of a genre-approach to writing are (Hyland, 2007): setting the context, Modelling, Joint construction, independent construction and comparing. This approach to writing is considered as a social skill practice. Therefore, pupils learn to communicate by balancing between purpose and readers' expectations.

The (PWIM), introduced by Emily Calhoun (1999), is "an inquiry-oriented language arts strategy that uses images containing familiar objects and actions to elicit words from children's words". It was designed for teaching literacy to small groups from kindergarten up to grade six. However, Calhoun (1999) suggested that teachers can arrange big group activities using PWIM as well. She also recommended that the PWIM can be adapted and used with older beginners (Calhoun, 1999, p. 21). Joyce and Showers (2002) and Joyce et al. (2009) gave a more detailed description of the process of the PWIM, compared with Calhoun's (1999) initial research. The role of the teachers are facilitators, questioners, and organizers (Wang et al., 2008).

According to Huda (2016) humans should always distinguish between objects, cases and emotions. The steps to think in an inductive thinking are:

Figure 1

Steps to Think Inductively



Source: Huda (2017, P.246).

PWIM has several purposes. It is used to lead pupils into “questioning about words, then add words to their sight-reading and writing vocabularies, looking for phonetic and structural principles, and using observation through studying, Additionally, permitting young readers to think inductively, analyze words and sentences, then move to writing a paragraph independently. The final goal of this strategy is to enable language beginners to become powerful language learners” (Calhoun, 1999, p. 21).

Previous Studies

Due to the importance of the writing skill, as it is considered the corner stone to the success in the academic areas. Many studies have been implemented to improve this vital skill.

Studies related to writing skill

A great body of research has been conducted in EFL writing for primary stage in general and on the use of the PWIM in particular. Elshahat (2014), Qalaja (2015), Murad (2017), Harisma, Ghina, Yana (2019), El_Shafi(2015), Kener(2017), Alzahadany (2018) has shown that pupils confront problems in writing a consistent text, poor mechanics and unrelated ideas. Therefore, it is essential to implement this study to overcome the current writing skills problems.

Studies related to the Picture Word Inductive Model

A number of studies, Wongchai (2019), Kholiq (2018), Ningish (2018), Purti(2018), Rahmadani (2018), Rosyada (2018), Huda (2017), Suheniati(2017), Yuliana (2011), Wahyuni (2016), Amanah (2016), Kusni(2013), and Choo(2013) concluded using the PWIM improved descriptive, recount, and narrative writing ,and increasing vocabulary repertoire for many learners.

An extensive review of the literature has revealed a dearth of local and international empirical research on the utility of PWIM model in primary stage for developing writing. In spite of a fair number of studies on the effectiveness of PWIM model in language learning process, there is a lack of studies that investigate its effectiveness in developing EFL writing skills for primary stage pupils.

The Pilot Study

The researcher administered a writing test to 30 sixth grade pupils to determine their level of competency in EFL writing skills.

Table 1: EFL Writing Skills pilot Test Results

Writing Skills	Lowest Score	Max. Score	Mean	SD	Percent
Vocabulary	0	16	4.07	2.60	31.67%
Content	0	16	3.70	1.99	23.13%
Organization	0	16	3.57	2.21	22.29%
Mechanics	0	16	4.03	1.96	25.21%
Grammar	0	16	3.57	2.27	22.29%
Total	0	80	19.93	7.96	24.91%

Results in table (1) show sixth grade EFL primary stage pupils' deficiencies in EFL writing skills as the total mean score was 19.93. These results demonstrate the pupils' low level in the EFL writing skills as the mean score of each of the targeted skills was <0.5.

Statement of the Problem

In light of the researcher's teaching experience, results of the pilot study and previous related studies, the problem of the current research can be stated as follows: "Egyptian EFL primary stage pupils have deficiencies in EFL writing skills ". Their writing lacks organization, full of grammatical and vocabulary mistakes, and short of content development. Consequently, the researcher suggested the use of PWIM to enhance EFL writing skills for primary stage pupils.

Research Questions

The current research attempted to answer the following main question:

1. How could we implement PWIM in teaching writing for EFL primary stage pupils?
2. What is the effect of using the PWIM on improving EFL primary pupils'EFL writing skills?

Hypotheses of the Research

Based on the aforementioned review of literature, the subsequent hypotheses were stated for the current research:

1. There is no statistically significant difference at level ≤ 0.05 between the mean score of the control and the experimental group on the EFL writing skills pre-test.
2. There is a statistically significant difference at level ≤ 0.05 between the mean score of the experimental group in the pre and post administration of the writing test, in favor of the post-test.
3. There is statistically significant difference at level ≤ 0.05 .

Design

The present study adopted the two quasi-experimental design. To attain the purpose of the study, two groups were selected randomly from grade six pupils in New Damietta Zeweil School to be sample of the study. The experimental group's pupils used the PWIM, and the control group pupils received regular teaching. Both groups were exposed to the pre-post

writing EFL writing skills test.

Participants

After discarding absent pupils, the participants of the current research were sixty primary school pupils at Zewil governmental school in New Damietta who were divided equally into an experimental and control group. The participants have been studying English for six years. Two intact classes were chosen to represent the control and experimental groups.

Instruments

The current research utilized the following instruments:

- An EFL writing skills checklist.
- An EFL writing skills test (Pre-Post).
- scoring rubric for the EFL writing skills test.

Aims of the PWIM

The aim of the Picture Word Inductive Model as Calhoun, Poirier, Simon and Mueller (2001) confirm that the model exploits the learner's capability to inductive thinking and boosts generalization. The model promotes word concept, sentence, and paragraph concepts. It elevates various skills such as recognizing the phoneme of the word, sorting the words and sentences then form a paragraph or story depending on what pupils notice from the picture, delivering phonics and spelling through explicit instruction and inductive thinking and exploring the language with using questioning that promote pupils learning.

Content of the PWIM

The model consists of fourteen sessions which aimed at developing writing

Skills to grade six pupils

Session One	Orientation session Pre-administration test
Session two	Unit seven “Zoo Animals Escape” Conversation time Word time
Session three	Unit seven “Zoo Animals Escape” Grammar time “Past Simple” Past continuous Connector “When”
Session four	Unit seven “Zoo Animals Escape” Reading time “Welcome to Sunnville Zoo giant Panda home”
Session five	Unit eight:” In the Kindergarten” Conversation time Word time
Session six	Unit eight:” In the Kindergarten” Grammar time
Session Seven	Unit eight:” In the Kindergarten” Reading time
Session eight	Unit nine:” Cities Around the World “ Word time Conversation time
Session Nine	Unit nine:” Cities Around the World “ Grammar time
Session ten	Unit nine:” Cities Around the World “ Focus time’ Reading time time’ Reading time
Session eleven	Unit Ten: “At school”. WordTime Conversation time
Session Twelve	Unit Ten: “At school”. Grammar time
Session thirteen	Unit ten: “At School”. Reading Time
Session Fourteen	Revision on the four units Post –treatment

Statistical Techniques of the Research

The researcher in the current research utilized the statistical package for the social sciences program (SPSS); version (22), to determine the results of the experiment and their statistical

analysis The results of the research are reported in the light of the hypotheses. Results of the First Hypothesis, the First hypothesis stated that: " There is no statistically significant difference between the mean score of the control group and the experimental group on the EFL writing skills pre-test". To test this hypothesis, the researcher used the t-test. Table (2) below shows results of testing the first hypothesis.

Table 2

Equivalence of the Two Groups on the Pre-measurement of the EFL Writing Skills Test

EFL Writing skills	Research groups	Mean	SD	t-test		
				T	DF	P-value
Vocabulary	Experimental Group	5.77	0.90	1.22	58	0.228
	Control group	5.47	1.01			
Content	Experimental Group	3.90	0.99	0.72	58	0.475
	Control group	4.10	1.16			
Organization	Experimental Group	4.27	0.94	0.64	58	0.526
	Control group	4.43	1.07			
Mechanics	Experimental Group	4.60	1.38	0.67	58	0.503
	Control group	4.37	1.30			
Grammar	Experimental Group	5.10	1.18	0.72	58	0.476
	Control group	4.87	1.33			
Total Score	Experimental Group	23.63	2.27	0.63	58	0.532
	Control group	23.23	2.65			

Table (2) demonstrates that there was no statistically significant difference between the mean score of the experimental group and that of the control group on the pre-measurement of the EFL writing skills test. These results indicated that both groups

were homogenous before implementation of the model.

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	Control group	4.43	1.07			
Mechanics	Experimental Group	4.60	1.38	0.67	58	0.503
	Control group	4.37	1.30			
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Figure 2

Differences in Mean Score Between the Two on the Pre-measurement on Each Skill in the EFL Writing Skills Test.

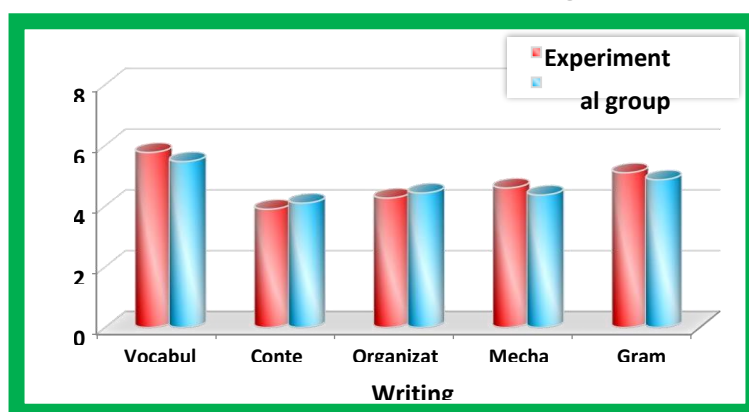
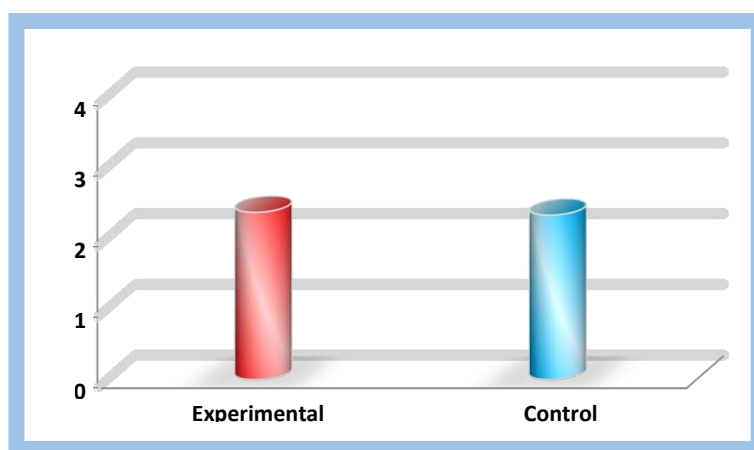


Figure 3

Difference in Mean Score Between the Two Groups on the Pre-measurement of the Overall EFL Writing Skills



Results of the Second Hypothesis:

The second hypothesis stated that:

” There is a statistically significant difference at level ≤ 0.05 between the mean score of the control and experimental groups on the EFL writing skills post-test, favoring the experimental group”. To verify this hypothesis, the researcher used the t-test. Table (3) shows a comparison between the two groups on the post measurement of the EFL writing skills test.

Table 3

A comparison of the Experimental & Control Groups on the Post Measurements of the EFL Writing Skills Test.

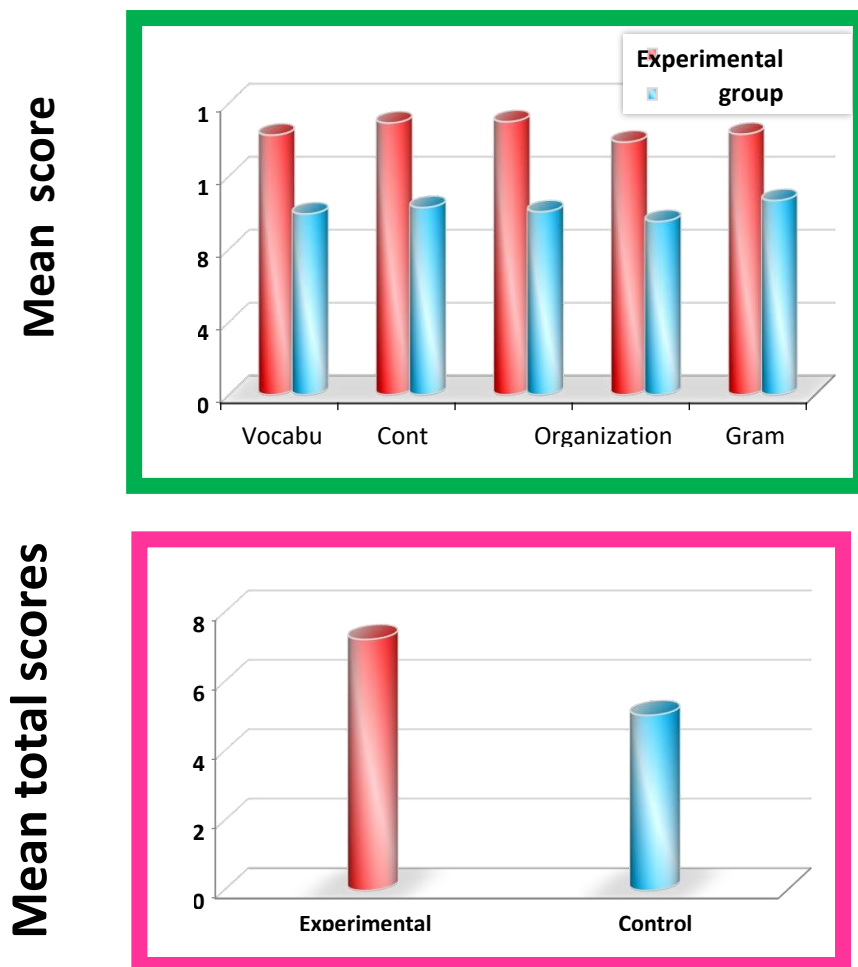
EFL Writing Skills	Research groups	Mean	SD	t-test		
				t	DF	P-value
Vocabulary y	Experimental Group	14.25	0.82	17.29	58	0.001
	Control group	9.93	1.10			
Content	Experimental Group	14.92	0.19	21.92	58	0.001
	Control group	10.28	1.14			
Organization	Experimental Group	14.98	0.09	20.39	58	0.001
	Control group	10.05	1.32			
Mechanics	Experimental Group	13.87	1.61	10.93	58	0.001
	Control group	9.52	1.47			
Grammar	Experimental Group	14.30	0.74	14.26	58	0.001
	Control group	10.67	1.18			
Total Score	Experimental Group	72.32	2.14	35.84	58	0.001
	Control group	50.45	2.57			

According to table (3), there was a statistically significant difference between the mean score of the experimental group and control group at 0.001 level, on the total EFL writing skills posttest, favoring of the experimental group. Statistics shows that the mean score (m= 72.32) higher than that of the control group (M= 50.45). In addition, the experimental group outperformed the

control group in all sub skills.

Figure 4

Difference in Mean Score Between the Two Groups on the PostMeasurement of the EFL Writing Skills Test.



Results of the third Hypothesis:

The third hypothesis stated that "There is a statistically significant difference at level ≤ 0.05 between the mean score of the experimental group on the pre and post administration of the EFL writing skills test, favoring the post-test". In order to calculate the difference, between the experimental groups mean

score on the pre and post on the pre and post application of the EFL writing skills test. Results were presented in the table (4).

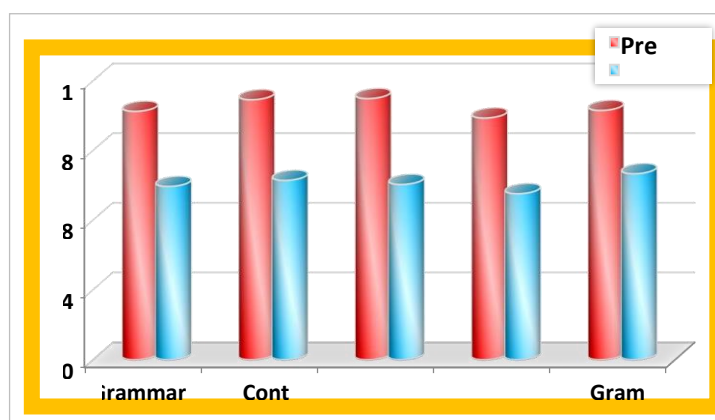
Table 4 A comparison of the Experimental Group Performance in the Pre and Post Administration of the EFL Writing Test=

EFL Writing skills	Test	Mean	SD	t-test		
				t	DF	P-value
Vocabulary	Pre-test	5.77	0.90	41.56	29	0.001
	Post-test	14.25	0.82			
Content	Pre-test	3.90	0.99	59.09	29	0.001
	Post-test	14.92	0.19			
Organization	Pre-test	4.27	0.94	62.18	29	0.001
	Post-test	14.98	0.09			
Mechanics	Pre-test	4.60	1.38	22.52	29	0.001
	Post-test	13.87	1.61			
Grammar	Pre-test	5.10	1.18	32.84	29	0.001
	Post-test	14.30	0.74			
Total Score	Pre-test	23.63	2.27	74.03	29	0.001
	Post-test	72.32	2.14			

The results in table (4) illustrate that the mean score of the experimental group was higher in the post administration of the writing test. The value of the t-test was 74.03 which pointed to a statistically significant difference at (0.001) between the mean score of the experimental group pupils on the pre and post administrations of the EFL writing skills total test, favoring the post administration. The difference in the mean score of the experimental group on the pre and post administrations of the EFL writing skills test is shown in the following figure (5)

Figure

A comparison of the Experimental Group Performance on the Pre and Post Administrations of the EFL



The previous table and figure reveals that the mean score of the experimental group was higher on the post administration of the EFL writing skills total test.

Discussion of Results

Results obtained from analyzing data of independent – samples t-test revealed that there was a statistically significant difference between the mean score of the experimental group and that of the control group on the EFL writing skills posttest, favoring the experimental group.

Finally, results revealed that both groups made an improvement at all the EFL writing skills. However, the experimental group had a higher progress than the control one. This, in turn, asserts the effectiveness of the PWIM on the experimental group's EFL writing skills. The experimental groups have a higher progress in all skills than the control group.

This asserts the effectiveness of the PWIM on grade six pupils EFL writing skills.

It is noticed that, the learners' skills to form sentences has increased due to their ability to recall vocabulary. Also, vocabulary was enhanced through knowing the antonyms and synonym and classifying new vocabulary in various ways. This increased learners' vocabulary repertoire. Peer correction motivated the learners to reduce their mistakes as they became more autonomous; this moved the class from a teacher- centered to a learner- centered one. Teacher's feedback assisted learners to reduce their mistakes and feel satisfied with their performance. The effect size was 0.995 which asserted the effectiveness of the PWIM on developing grade six pupils' EFL writing skills. It was noticed that due to the multiple and varied activities and exercises that the PWIM provided learners has improved. Therefore, the PWIM provided the chance towards independent learning.

Conclusions

Several conclusions were drawn from the current research:

1. The PWIM proved its versatility to different types of learners as it is helpful to keep the words in their long-term memory by practicing them in different activities.
2. The PWIM maximized the learners' ability to reach generalization, or putting a suitable title by their own for the lesson, through utilizing the learner's capacity to reason inductively. It encourages pupils to think about word concepts, sentences, and paragraphs.
3. The PWIM developed a variety of skills such as word and phoneme recognition, word and sentence alignment, creating paragraphs or stories based what is observed in picture and inductive thinking.
4. The experimental group outperformed the control group on all the five sub- skills examined by the EFL writing skills test which included: content development, vocabulary, grammar,

mechanics and organization

5. In fact, the PWIM was highly effective in improving grade six pupils' EFL writing skills.

Recommendations

The findings of this research have a number of important implications and insights for future investigations:

1. Curriculum designers of primary stage are recommended to utilize the PWIM in the activity books.
2. It is advisable to use more activities of cooperative learning at the primary school level.
3. The deductive teaching is suggested to be carried out on other areas of learning.
4. The PWIM should be implemented by teachers in the EFL classes as it proved a high effectiveness.
5. The process approach is a good area for future research

Suggestions for Further Research

Some suggestions for further research can be derived from the current research:

1. Conducting the research to investigate the PWIM effect to promote
2. critical writing.
3. Investigating the PWIM effect on developing EFL writing skills at the preparatory and the secondary school Pupils.
4. Researching the effect of the PWIM on teaching speaking.
5. Studying the effect of using the PWIM on the learners' attitude and self- regulations towards learning English.

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