



Regular Article

The Effectiveness of Using Electronic Educational Games in Developing Al- Azhar Primary Stage Pupils' English Vocabulary Skills

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Abstract

The study aimed at The Effectiveness of using electronic educational games in developing Al-Azhar primary stage pupils" English vocabulary skills. The participants of the study were (60) sixth year primary institute pupils from Efwā primary institute, Beni-suef. The study adopted the quasi-experimental research design. So, there were two groups: an experimental group (n= 30) and a control one (n= 30). To collect data, the researcher used multiple instruments: a diagnostic test, a pre/post test, a list of games, Skills of vocabulary and teachers' guide. The researcher taught both groups: the experimental group was taught through using electronic educational games while the control group was taught through the regular method of teaching. Analysis of the results revealed that the experimental group participants achieved a significantly higher level in their English vocabulary skills than those of the control group. Thus, there was a statistically significant

difference between the mean scores of experimental group in pre-t and post- test of vocabulary in the favor of the post-test. The effect size of using electronic educational games strategy was found to be high. The study recommends using electronic educational games in developing English vocabulary skills.

Key Words: Electronic educational games - English vocabulary.

فاعلية استخدام الألعاب التعليمية الإلكترونية في تنمية مهارات المفردات الإنجليزية لدى تلاميذ المرحلة الابتدائية الأزهرية

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ملخص الدراسة

هدفت الدراسة إلى فاعلية استخدام الألعاب التعليمية الإلكترونية في تنمية مهارات المفردات في اللغة الإنجليزية لدى تلاميذ المرحلة الابتدائية الأزهرية. وبلغ عدد المشاركين في الدراسة (٦٠) تلميذاً في الصف السادس الابتدائي من معهد إفاو الابتدائي ببني سويف. وتم اختيار عينة الدراسة بشكل عشوائي ، وقسمت العينة الي مجموعتين (تجريبية وعددها ثلاثون طالباً واخري ضابطة وعددها ثلاثون طالباً ايضاً). واتبعت الدراسة المنهج شبه التجريبي (القبلي/البعدي) ، وقد تم تدريس المجموعة التجريبية باستخدام الألعاب التعليمية الإلكترونية ، بينما تم التدريس لطلاب المجموعة الضابطة باستخدام الطريقة التقليدية . وقد أعد الباحث أدوات الدراسة والتي اشتملت علي أدوات متعددة تضمنت: الاختبار التشخيصي ، اختبار قبلي / بعدي ، قائمة الألعاب التعليمية الإلكترونية ، مهارات المفردات، ودليل المعلم. وأظهرت تحليل النتائج أن المشاركين في المجموعة التجريبية قد حققوا مستوى أعلى في مهارات المفردات في اللغة الإنجليزية عن المجموعة الضابطة. وبالتالي ، كان هناك فرق ذو دلالة إحصائية بين متوسطات درجات المجموعة التجريبية في الاختبار القبلي والبعدي للمفردات لصالح الاختبار البعدي. وجد أن حجم الاثر باستخدام الألعاب التعليمية الإلكترونية كان مرتفعاً، واوصت الدراسة باستخدام الألعاب التعليمية الإلكترونية في تنمية مهارات المفردات في اللغة الإنجليزية.

الكلمات المفتاحية: الألعاب التعليمية الإلكترونية - مفردات اللغة الإنجليزية

Introduction

Language is one of the most important means of communication between individuals and communities. In order to convey feelings or messages, whether orally or in a written form, people should use language. It is known that the English language is one of the most important languages all over the world as it is an international one. Therefore, teaching and learning English as a foreign language (EFL) has become essential in all countries that don't use English as a mother tongue. One must acquire language vocabulary, grammar, pronunciation and the four skills: listening, speaking, reading, and writing, so that learning English can be achieved.

English vocabulary learning and teaching is considered one of the major challenges that EFL learners and teachers face. Most EFL learners have problems in using and practicing English language because their vocabulary is limited. Thus, learners should use effective strategies to exceed these difficulties and make vocabulary learning better and more attractive. Additionally, the mastery of vocabulary doesn't only happen in the classroom or school (Graves, 2007, p.17)

A lot of educators have realized that remembering vocabulary is the most important part in English learning and they begin to pay much more attention to use games for teaching English, especially for teaching vocabulary. Thus, many studies have been written to tell teachers how important of using games in teaching vocabulary and recommend them how to carry out games in teaching vocabulary. However, most of them focus on teaching vocabulary in primary, middle, and high school and ignore the importance of applying games for teaching vocabulary in preschool. Further, almost no one attaches importance to it and applies it into the English teaching of pupils. The aim of this study is through the application of games in primary schools to improve the learning of vocabulary, develop pupil's team spirit and cooperative consciousness, and develop pupil's comprehensive abilities (Yu & Ruan, 2012, p.51).

Thornbury(2002, p .31) states that they can be confronted by words that are totally unfamiliar or being used in ways that for them are novel and possibly obscurity. To find the right word to fit the meaning can be very frustrating, especially if the store of words is limited. To summarize this, the learner while learning the vocabulary of a second language can come across several challenges:

1. Making the correct connections, when understanding the second language, between the form and meaning of words
2. When producing language, using the correct form of a word for the meaning intended (i.e. nose not noise)

To meet these challenges, the learner needs to:

1. Acquire a critical mass of words for use in both understanding and producing the language.
2. Remember words over time; be able to recall them readily.
3. Develop strategies for coping with gaps in word knowledge, including coping with unknown words, or unfamiliar uses of known words.
4. Have to take responsibility themselves for vocabulary expansion.

Ribawi(2009) confirmed that educational and pedagogical games used in most educational programs through electronic dictionaries, such as word games, letters, paragraphs, and exercises to them after learning facts, concepts, and principles. Educational games used to make sure from learning and make it more attractive and training at higher levels of learning and thinking. Educational games designed to make learner feels that he can only play, but the measurement of learning found that learners can learn creativity, innovation, and higher levels of educational objectives. Therefore, learning that requires stimulation uses a lot of educational programming patterns, and various electronic games or simulation games, which make learning more interesting, prompting many younger learners and adults to continue their learning, regardless of time, place, and age of the learner.

Review of Literature

Educators believe that words and vocabulary critically affect learners' lives. In fact, educated individuals are often recognized by their written and spoken vocabulary (Blachowicz & Fisher, 2004). Besides, (Read ,2000) claims that words are the basic building unit of language, words are considered the units of meaning from which larger structures, for example, sentences, paragraphs and whole text are made up.

Hyland & Tse,(2007), Sprenger(2013), Nagy & Townsend (2012, p.96) view academic vocabulary as a component of academic language and state that argue that the capacity to read and understand texts from various content areas or disciplines is closely related to pupils' vocabulary knowledge. They also assert that familiarity with academic vocabulary is important for teachers to "support learners' understanding and use of the language of the disciplines

Al-Hileha (2013) mentions importance of electronic educational games as follows:

1- Educational games provide a fertile environment that helps in pupil development, motivates his learning, and argue active interaction with subject matter, and these include: facts, concepts, principles, skills, laws and theories in a real climate closer from his sensory perceptions, that make him attracted to games and seeks to deal with them in an entertaining and enjoying style to achieve certain objectives.

2-Play, in all its different patterns and methods, helps pupils in discovering the world around them, and acquire a lot of information and facts about things and people in their environment. They can find out figures, colors and sizes, know their shared characteristics, and the relationships among them. Through play, they also know their functions and importance. All of these, enrich the intellectual life of pupils, through the extensive knowledge about the world around them, and provide them with cognitive skills that help in understanding the world and adjust with it.

The researcher agrees with previous researchers that games create an atmosphere of healthy competition where pupils can play, enjoy themselves and learn in the same time. This was obvious between the pupils in the class during the researcher's experiment in teaching the skills of vocabulary for the experimental female and male groups, they were very enthusiastic to play the game and win.

Neville (2009) conducted a study aimed to investigate using digital game-based learning to teach L2 vocabulary. The sample of the study consisted of fifty pupils; they were chosen randomly and divided into two groups. The first is an experimental group and the second is a control group. The study measured the knowledge retention, and attitudes of pupils towards learning vocabulary through the game. The results showed that effectiveness of using digital game-based learning in teaching vocabulary of pupils.

Vahdat & Rasti- Behbahani (2013) conducted a study to investigate the effect of video games on Iranian EFL pupils' vocabulary learning. The participants of their study were 40 intermediate EFL learners, both male and female; they chose their participants through a TOEFL proficiency test. They divided them into two groups (10 males and 10 females in each): a control group and an experimental group. The control group studied vocabulary in traditional classes, but the experimental group experienced vocabulary learning (the same words) via a video game called "*Runaway: A Road Adventure*". The findings of their study revealed that learning vocabulary via video games was advantageous, and it was shown that males were more disposed toward video-game learning than females. They argued that there is a positive correlation between gender and learning vocabulary through video games.

Context of the Problem

The problem arose when the researcher asked many of the teachers and the educators of English about the efficiency of teaching English vocabulary through a questionnaire prepared by the researcher to make sure of the problem. The

questionnaire showed that the teaching of English vocabulary in the classroom still needs a lot of development to improve pupils' learning. So, the researcher has made a questionnaire for thirty-five teachers of English, including teachers at governmental schools, the results were as follows:

The result of the previous questionnaire confirms

- 1- (69.44 %) of the pupils need modern strategies to help them learn English vocabulary.
- 2- (80.05 %) of the pupils don't know how to use English vocabulary in English.
- 3- (83.3 %) of the teachers think English vocabulary difficult for pupils of sixth grade in primary schools.
- 4- (66.6 %) of teachers face a lot of problems when they teach a lesson of English vocabulary.
- 5-(75%) of the pupils can't answer about English vocabulary exercises in pupils' book and workbook.

The researcher has also conducted a pilot study to know more about the problem, so the researcher has prepared a pre-diagnostic test based on English vocabulary, covering all what the pupils studied in the first semester of the sixth grade at an institute. The results were bad. Where (76%) of the random sample, which included sixty-five pupils, males and females, got lesser than the degree of success. It confirms that pupils need recent strategies in developing English vocabulary. The researcher found out the following results: -

- 1-Many pupils suffer from their inability to understand English vocabulary.
- 2- Many pupils suffer from their inability to answer English vocabulary.
- 3-pupils perform poorly and receive low scores at the questions related to English vocabulary at English language test.

Statement of the Problem

Based on the literature review, the results obtained from the previously mentioned pilot study and the researcher's observation, it is emphasised that the sixth-

year primary stage students need to develop their English vocabulary skills through using educational electronic games.

Questions of the Research

What is the effectiveness of using electronic educational games in developing Al-Azhar primary stage pupils' English vocabulary skills?

Purpose of the Research

The main purpose of the study was as follows:

Investigating effectiveness of using electronic educational games in developing Al-Azhar primary stage pupils' English vocabulary skills

1. Significance of the Research

The significance of the current study is as follows:

1. Introducing various forms of electronic educational games for learning English vocabulary.
2. Using electronic educational games and work to be employed in the educational process.
3. Helping planners of curriculums to prepare English language material by using electronic educational games for Elementary institutes pupils.

Instruments and Materials

The present study employed the following instruments:

1-Measurement Tools

- 1- A diagnostic test of the pilot study
- 2- English vocabulary skills checklist
- 3- A pre/post achievement test of English vocabulary

2- Materials

- 1- Electronic educational games.

2-A teachers' guide.

1-A Diagnostic Test

A- The Objectives of Diagnostic Test

An initial diagnostic test was created by the researcher to

1. Recognize your areas of strength and weakness.
2. Recognize the challenges students have with terminology in English
3. Learn as much as you can about the issue.

Description of the Diagnostic Test

A) Vocabulary

The test consists of (20) questions. All questions are obligatory. The number of pages is "1". The test is timed and graded. The test is of (20) marks. The test duration is (45) minutes. Test results showed that.

- 1- Pupils suffer from their inability to keep of English vocabulary.
- 2- Pupils suffer from their inability to answer English vocabulary questions.
- 3- Pupils perform poorly and receive low scores at the questions related to vocabulary at English language test. The results of the pupils in diagnostic test of vocabulary can be shown in the following table.

Table (1) the results of the pupils in diagnostic test of English vocabulary

Pupils' number	65 pupils			
Categories (Marks)	0 - 5	6 – 9	10 - 15	16 - 20
Redundancy(Pupils)	26	24	12	3
Percentage	40%	36.9%	18.46%	4.61%

2-English Vocabulary Skills Checklist

A- The Objectives of the Checklist

First, the objective of the checklist that was prepared by the researcher is to identify and determine the most important English vocabulary skills that should be taught. The checklist was submitted to several juries (professors, supervisors and

teachers). After that the researcher determined the most important and the weakest English vocabulary skills that pupils should be taught in English language.

Second, English vocabulary skills checklist aimed at determining the most appropriate skills for sixth year primary institute pupils. The checklist was prepared in the light of directives of the ministry of education (2022, 2023), the review of the literature and related studies on vocabulary skills. Also, the viewpoints of senior teachers, supervisors and EFL experts were considered.

B-Validity of the Checklist

The checklist was refereed by professors from different universities, supervisors and teachers to decide if the skills were suitable or unsuitable through adding, removing or correcting. They were asked to assign the most important sub skills for in-service EFL teachers. The jury members were kindly asked to judge English vocabulary skills checklist in terms of the following criteria:

- 1- Stating of the items.
- 2- How far the items measure pupils' vocabulary.

The Jury members were also asked to give their comments and suggestions. The Jury members agreed that the checklist was valid for use since the above-mentioned criteria were met in the checklist. The Jury members also mentioned that the checklist was good and comprehensive covering the identified standards and indicators. The jury members validated the checklist and provided some comments.

The researcher modified and refined the checklist accordingly. Some of the comments and remarks raised by the Jury members were as follows in (Table 2)

Table (2) English vocabulary skills checklist

N	Skills	Jury's No	percentage
1	Distinguish between the sounds of the word	6	72%
2	Identify the purpose of speaker	6	72%
3	Analyze parts of speech (e.g., noun, verb)	6	83%
4	Describe familiar things, people, places and food	6	83%
5	Generate new words and sentences	6	83%

6	Define the concept of the word	6	83%
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3-A Vocabulary Pre /Post- test

A) Aims of the Test

In pre- administration, it aimed at ensuring the equivalence of both the experimental and control groups on English vocabulary skills in their entry level. Post testing aimed at measuring sixth year primary pupils' progress on English vocabulary skills.

B) Constructing the Pre/ Post Vocabulary Test

To construct the test, the researcher referred to the directives of the Ministry of Education particularly the vocabulary skills of the primary stage and reviewed literature and related studies regarding the vocabulary skills. The test consists of thirty questions covering six missing sub skills through five questions for each.

C) Validity of Vocabulary Pre/ Post- Test

To determine English vocabulary test validity, it was submitted to a group of jurors (N=6), four faculty members in TEFL and a senior supervisor of ELT. The jury members gave their opinions and remarks concerning the suitability of items to the stated objectives of the test, the adequacy of test items and their appropriateness for the determined skills and the clarity of the test instructions. To calculate the construct validity of English vocabulary pre posttest, the researcher used Pearson statistical Formula as follows:

- Using Pearson Formula, the researcher estimated the correlation of the grade of each item with the total mark of English vocabulary sub-skills. The results are as shown in table (3):

Table (3): Construct validity of vocabulary test

N	Vocabulary skills	Questions	Correlation coefficient (r)	P-value
1	Distinguish between sounds of the word	Question1	.59	0.01
2	Identify the purpose of speaker	Question2	.82	0.01

3	Analyze parts of speech (e.g., noun, verb)	Question3	.80	0.01
4	Describe familiar things, people, places, food and routine.			
5	Define the concept of the word	Question4	.79	0.01
6	Generate new words and sentences	Question5	.49	0.01

D) Reliability of Vocabulary Pre/Post-Test

To confirm that English vocabulary test measures what it is mainly designed to measure; it was evaluated by a group of experts in educational studies and EFL Specialists. Their recommendations and comments were carefully considered. The test questions were reformed according to their suggestions. Moreover, prior to the main study, a pilot study was conducted, with a group of 20 pupils who were excluded from the sample, to check the reliability of the pre-post test. Cranach's alpha was calculated for all the questions. The total value of the pre-post test of English vocabulary was (0.66).

4-List of Electronic Educational Games

A) Aim of Electronic Educational Games

Electronic educational games aimed at developing English vocabulary for sixth primary pupils. In addition, those games offer motivation, self-learning, concentration, collaboration, and immediate feedback.

B) The Implementation of Electronic Educational Games

The researcher applied electronic educational games on experimental group pupils.

First, the researcher talked to the pupils about the strategy in order to warm them for learning through computer games in school computer lab. The pupils were excited, and they were involved in the teaching/learning process.

C) The Validity of Electronic Educational Games

To test the games validity, the researcher submitted electronic educational games to a group of English Language supervisors, professors and teachers.

Delimitations

The present study will be delimited to the following: -

1. This study is delimited to sixty pupils of the sixth-grade pupils at Efwā Primary Institute.
2. The study will be delimited to two groups representing the control group and experimental group.
3. English vocabulary skills.

Method

The researcher used the quasi-experimental approach. The quasi-experimental approach by dividing pupils into two groups. One of them represents the experimental group (electronic educational games) and the other represents the control group (regular method).

Variables

This study will include the following variables: -

- 1- Independent Variable (electronic educational games).
- 2- Dependent Variable (English vocabulary Skills).

Definitions

This study involves several specific terms. The terms are defined as follows:

1- Vocabulary

Vocabulary refers to all the words of a language, or to the words used by a person or group (Nordquist, et.al, 2015).

Lessard (2013) defined vocabulary as using the words of a language, including single items and phrases or chunks of several words that convey a particular meaning, the way individual words do.

Operationally, vocabulary is defined as a set of words that serves as a useful and fundamental tool for communication and acquiring knowledge. In the current research, learning vocabulary refers to pupils' ability to define, write and use the words to have a correct meaningful sentence.

2- Electronic Educational Games

According to Al-Rubaie. et. al ,2004, p. 225) defined electronic educational games as "software designed to mix learning and entertainment at once, to generate excitement, suspense and a serious want in blended learning with entertainment, the educational games contain a scientific material that is supposed to be offered to pupils, so that the game program to promote concepts and skills, the pupil can carry out the game successfully only by understanding it and learning about the taught concepts and skills .The electronic educational games are based on the spirit of competition to arouse the pupil's motivation more and expel boredom and monotony from the game.

Operationally, the researcher is defined electronic educational games as it is electronic educational software that uses multimedia and mixes learning with entertainment to attract the pupil's attention, thinking and feels fun. It's done according to a set of specific actions, in accordance with the rules and laws of the game, to achieve educational goals, and the role of the teacher while overseeing play, Supervision and guidance.

Results and Discussion

The present study included discussion of the findings in the light of study hypotheses. In addition, it discusses the results in the light of theoretical background and related studies.

Statistical Techniques of the Study

The researcher has used the Statistical Package for Social Sciences program (SPSS 22) to compute the results of the treatment and their statistical analysis.

Therefore, the following statistical techniques were used:

1. Pearson Correlation coefficient: to identify or determine the correlation relationship between the different items of tests and the total mark of each test in addition to the scale relationship or correlation to the total mark.
2. Chornbach-Alpha: to calculate the reliability of study scales via analyzing the items differentiation or discrepancy.

In order to test the study hypotheses, the researcher used these statistical techniques:

1. Mean and Standard Deviation.
2. Independent samples t-test: to compare between the mean score of the experimental and control groups in the pre and post application of English vocabulary.
3. Paired samples t-test: to compare between the mean score of the experimental group in the pre and post application of English vocabulary.
4. Eita square (η^2): to investigate the effect size of the experimental treatment upon the development of English vocabulary skills before and after the treatment.

Results Related to the First Hypothesis

The first hypothesis stated: " There is no statistically significant difference between the mean scores of the control group and the experimental group in the pre-test of English vocabulary."

In order to verify the validity of this hypothesis, t- tests for independent samples were used to compare the mean scores of the two groups on the pre-test. The results of the t- test proved to be statistically consistent with the hypothesis. The following table shows results concerning the first hypothesis which addressed the differences between the mean scores of the control group and those of the experimental group on the pre administration of a pre post English vocabulary test Regarding the results obtained from the pre-test to ensure the equivalence and homogeneity of the two groups of participants on English vocabulary before starting the treatment, the results are revealed in the table (4).

Table (4) presents descriptive statistics result of English vocabulary pre-test.

Group	N	Mean	S.D.	T-value	Sig
Control	30	16.93	6.119	.422	Not
Exp	30	17.70	7.848		

The findings show that the mean score of the experimental group was (17.70)with a standard deviation of(7 .848)and the mean score of the control group was(16.93) with a standard deviation of(6.119)This indicated that the two groups were alike in an English vocabulary pre-test before conducting the treatment with electronic educational games strategy. Consequently, the first hypothesis was accepted, and the results can be illustrated in the following figure: (1).

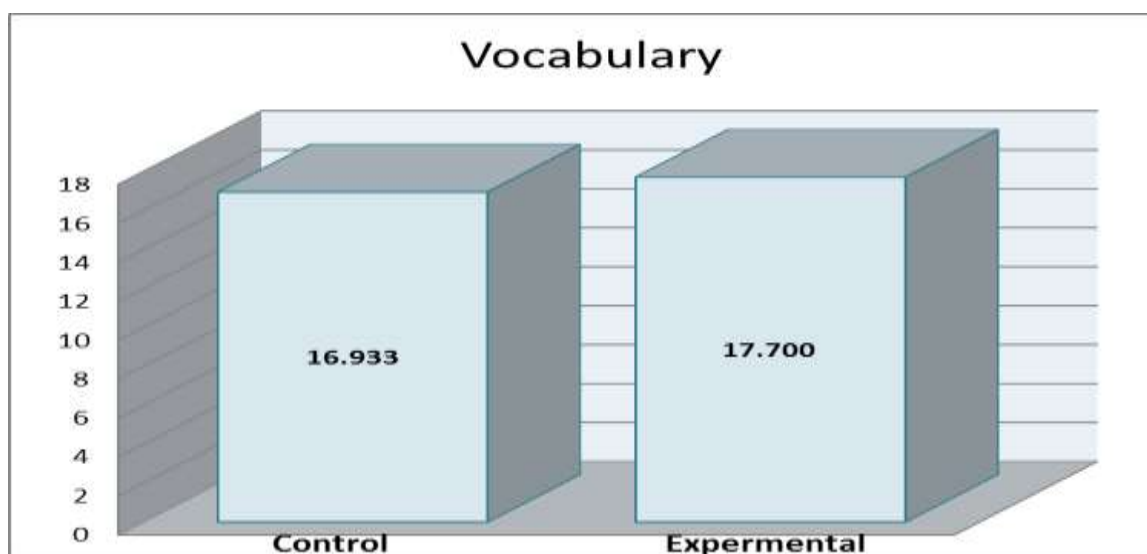


Figure (1)

The mean scores of the control and experimental groups in pre-test of vocabulary

Results Related to the Second Hypothesis

The second hypothesis stated "There is a statistically significant difference between the mean scores of the control group and the experimental group in the post-test of English vocabulary in the favor of the experimental group".

Table (5) shows results concerning the third hypothesis which showed the differences between the mean scores of the control group and those of the experimental group on the post administration of a pre post English vocabulary test

Group	N	Mean	S.D.	T-value	Sig	Effect size
Control	30	16.86	4.96	3.359	0.01	0.163
Exp	30	21.2	5.033			

T-test for independent samples was used to compare the mean scores of the control and experimental groups. Table (5) proved that there was a significant difference between the results of the control group and the experimental group, as the t value was (3.359), which is statistically significant at (0.01) Therefore, the third hypothesis is accepted, concluding that there is a significant difference in English vocabulary between learners taught with electronic educational games and those taught by the traditional method in

favor of the experimental group. Moreover, in order to make sure that the results obtained from the t-tests are reliable and to measure the effect of electronic educational games strategy on pupils' vocabulary, the effect size of this strategy on pupils' vocabulary was calculated according to the following Formula suggested by (Dunlap, 1994).

$$\eta^2 = \frac{t^2}{t^2 + df}$$

And "d" value using the following formula:

$$d = \frac{t}{\sqrt{df}}$$

Where **d** = the calculated effect size, **t** = the estimated t value and \sqrt{df} = the square root of degrees of freedom. The referential framework for identifying the effect size of t- values is as follow: -

Table (6) the referential framework for identifying the effect size of t-values

Effect size (d value)	Degree
From 0.2 till less than 0.5	Small
From 0.5 till less than 0.8	Medium
0.8 or more	Large

As shown in table (6), the calculated effect size value of the instructional strategy on pupils' vocabulary was (0.163). Therefore, it can be inferred that electronic educational games strategy had a large effect on the experimental group pupils' vocabulary performance on the post- test as compared to that of the control group

pupils receiving conventional teaching. This improvement can be illustrated in the following figure: (5)

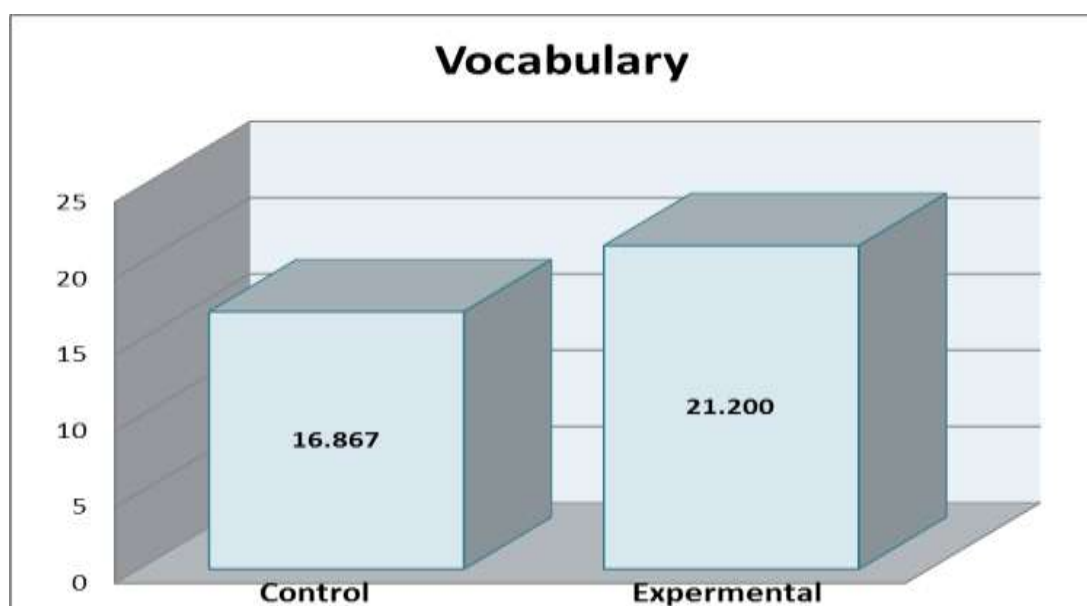


Figure (2)

The mean scores of the control and experimental groups in post-test of English vocabulary

Results Related to the third Hypothesis

The fifth hypothesis stated, "There is a statistically significant difference between the mean score of the experimental group in pre-t and post- test of English vocabulary in the favor of the post-test".

The following table shows results concerning the third hypothesis which addressed the difference between the mean scores of the experimental group on the pre- post administration in English vocabulary.

Table (7) presents t- test results of the pre -post /test experimental group in English vocabulary

Exp-group	N	Mean	S.D.	T-value	Sig	Effect size
Pre-test	30	17.70	7.84	3.870	0.01	0.341
Post-test	30	21.20	5.033			

Table (7) indicates that there is statistically significant difference at (0.01) level in English vocabulary between the mean scores of the experimental group on the pre - test and the post-test in favor of the post-test scores since the estimated t-values was (3.870).

Thus, it can be safely said that the t-test results proved to be statistically consistent with the hypothesis. In other words, the third hypothesis was confirmed. In addition, the estimated effect size value (0.341) shown in the above table indicates that teaching by using electronic educational games strategy had a very large effect on the experimental group pupils' vocabulary and EFL performance on the post- test as compared to their overall speaking on the pre -test. This improvement can be illustrated in the following figure (3)

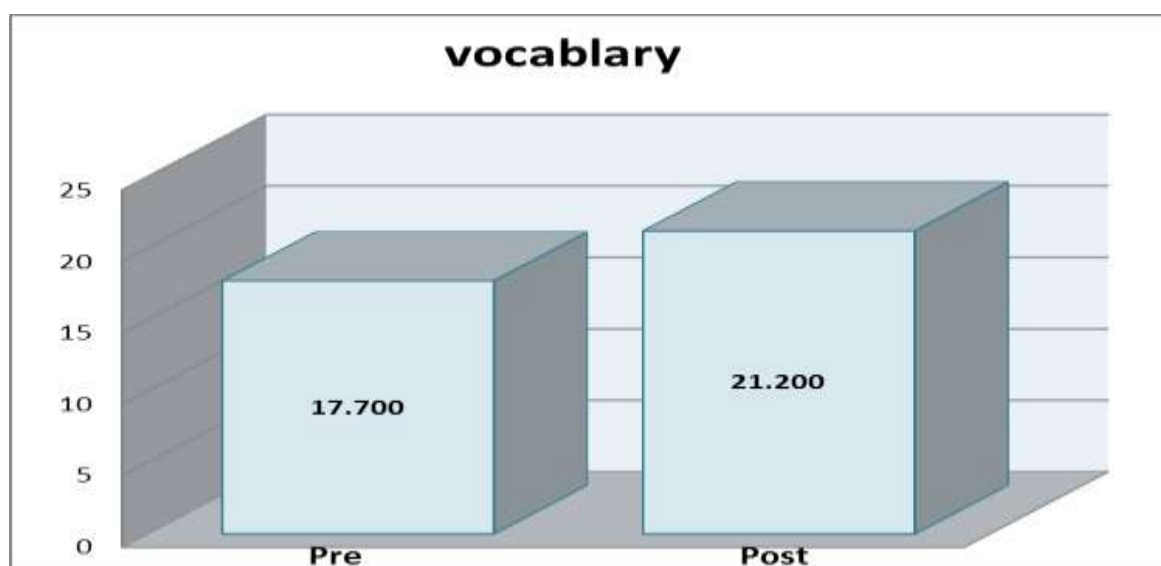


Figure (3)

The experimental group mean scores on the pre-test and post- test in English vocabulary

Discussion and Interpretation of the Findings

Based on the findings of this study, the results revealed that using electronic educational games strategy had a significant impact on developing the pupils'

vocabulary. Results can be resorted to the various techniques and learning experiences provided for the target participants. The EFL pupils developed positive understandings for performing the new strategy. By the end of administering the post test, pupils changed their views of electronic educational games seeing it as part of learning and necessary to inform instructional decisions; this was obvious through pupils' answers to vocabulary questions in the post test and when observing them in their actual classroom learning. Results also revealed that using electronic educational games create a positive atmosphere in which pupils are encouraged to learn effectively and positively. Consequently, some findings and their interpretation can be summarized as follows:

1. Teaching by using electronic educational games also enabled pupils to express themselves freely in different situations as participating according to their competencies and learning styles because the strategy considered the individual differences among pupils.
2. Using electronic educational games enabled pupils to be more motivated, active and co-operative in the English language class compared with the conventional English language class. Moreover, it enabled pupils to develop self confidence in using language appropriately without fear. This may reflect their responses in the different situations of acting their roles.

The research revealed that the experimental group outperformed the control group in English vocabulary skills. The experimental group means score was significantly higher than that of the control group in the most of skills. Moreover, the experimental group pupils were also better than the control group in their ability to learn English vocabulary. The experimental group pupils performed better in all of English vocabulary skills on the post-test. This proves that using electronic educational games helped the experimental group pupils to develop their skills in English vocabulary.

Conclusions

Absence of innovation and the regular methods of teaching English vocabulary in EFL classroom where pupils have a passive learning role provided the researcher an opportunity to investigate the effectiveness of electronic educational games on pupils' learning and find out whether it has a positive effect on pupils' motivation. Hence, the current research proved that using electronic educational games was effective in developing pupils' vocabulary skills. Within the delimitations of the research and based on the results of the study, the following conclusions have been drawn:

- 1- Electronic educational games facilitate collaborative learning but, in the same time, pupils may learn at their own speed and cognitive level.
- 2- Electronic educational games Contribute in increasing pupils familiarity with new technologies.
- 3- Electronic educational games encourage pupils to challenge and compete with others.

Recommendations

Based upon the results of the research and the above-mentioned conclusions, the following recommendations are suggested:

1- Learners of English Language:

- 1- EFL learners should be encouraged to use electronic educational games to enhance English vocabulary.
- 2- Pupils should play their roles in learning English vocabulary skills. They must participate actively in different activities in the classroom to use the language in real life situations.

2- Teachers of English are recommended to:

- 1- Encourage group work and pair work during the process of learning English vocabulary.

- 2- Evaluate reading, writing and listening of English vocabulary during the whole year regularly to help pupils be accustomed to such a skill and overcome their fear and problems.
- 3- Use more active learning strategies and activities during the process of learning and teaching English vocabulary.
- 4- Exchange their ideas and experiences with other teachers of English from different countries.
- 5- Use the computer and the internet in teaching to enable pupils to use it in learning.

3- Curriculum developers:

- 1- Curriculum developers are advised to integrate the use electronic educational games in the English curriculum.
- 2- Curriculum developers Put into consideration the new methodologies when design the educational curricula, especially those related to teaching languages.
- 3- Curriculum developers should design educational curricula which are related to the real-life to make the pupils more attractive for the studying.
- 4- Curriculum developers must insert different activities in the curriculum which help pupils work cooperatively and give them the opportunity to learn more.

4 -English language experts, specialists, and supervisors are recommended to:

2. Organize scientific conferences and seminars with experts from different countries all over the world to exchange experiences and promote the level of education in Egypt.
3. Organize workshops for teachers of English about using active learning strategies in teaching English language in general because of these strategies on developing the language skills.

5. Other researchers are recommended to:

1. Conduct studies based on using electronic educational games to develop some other English language skills such as speaking, writing, reading, listening, spelling and pronunciation
2. Adopt using electronic educational games strategy through in enriching the pupils with vocabulary in English at different educational stages.
3. Conduct studies to investigate the effect of using electronic educational games strategy on improving the weak pupils' achievement.

Suggestions for further research

Based on the results of the present study, the following recommendations should be conducted:

1. A study to investigate the effect of using electronic educational games on developing Pupils' motivation towards learning English language.
2. A study to investigate the effect using electronic educational games on developing productive skills (speaking and writing).
3. A study that investigates the effectiveness of using electronic educational games on the pupils' attitudes towards English as a foreign language.
4. A study to find out the effect of positive attitudes of teachers towards using electronic educational games on developing the English writing skills for their pupils.

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