Using a Computer Game-Based Learning Program to Develop Sixth Graders' Grammar Achievement and Attitudes towards Learning English

Hind Rabei Ahmed Gaber

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ABSTRACT

The present study was conducted to investigate the effect of using a grammar computer game-based learning program to develop sixth graders' grammar achievement and attitudes towards learning English. A pre-post control group research design was used to achieve the research objectives. Sixty pupils were randomly divided into two groups: the experimental and the control groups. The experimental group pupils were trained in grammar computer game based program to develop their grammar achievement and attitudes towards learning English. The content was based on the Student's Book" Time for English". The control group pupils were taught the same content through the regular method of teaching. Instruments of the study included a pre-post grammar achievement test and an attitude scale. Analysis of the data obtained by pupils by using (t-test) and the attitude scale revealed that the experimental group significantly surpassed the control one in the post grammar achievement test and the post- performance of the attitude scale. Discussion of these findings, recommendations and suggestions for further researches are presented.

Key words: Grammar, achievement, attitude and computer games.

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استخدام برنامج قائم على العاب الكومبيوتر لتنمية تحصيل القواعد النحوية لدى طلاب الصف
السادس الابتدائي وتحسين اتجاهاتهم نحو تعلم اللغة الإنجليزية

هند ربيع أحمد جابر
معلمة لغة انجليزية بإدارة مغاغة التعليمية

مستخلص

تهدف هذه الدراسة الي التعرف علي أثر استخدام برنامج تعليمي قائم علي استخدام العاب
الكومبيوتر في تدريس القواعد لطلاب الصف السادس الابتدائي لتنمية مهارات التحصيل في
القواعد وتحسين اتجاههم نحو تعلم اللغة الانجليزية. ولتحقيق أهداف هذه الدراسة أتبع
الباحث المنهج شبه التجريبي وأجرى اختبارات قبلية-بعدية للمجموعتين التجريبية والضابطة.
تم تقسيم 60 (طالب وطالبة) عشوائيا الي المجموعتين الضابطه والتجريبية . تم تدريب
طلاب المجموعه التجريبية باستخدام البرنامج التعليمي القائم علي استخدام ألعاب الكومبيوتر
في تدريس القواعد لتنمية تحصيلهم وتحسين اتجاهم نحو تعلم اللغه الانجليزية. المحتوى
التعليمي قائم علي كتاب الطالب. أما المجموعه الضابطه فقد تم تدريسهم باستخدام الطريقه
التقليدية في التدريس لنفس المحتوى التعليمي .اشتملت ادوات الدراسة علي الاختبار القبلي
– البعدى في تحصيل القواعد وايضا مقياس الاتجاه.ولقد اظهرت النتائج وجود فروق ذات
دلالة احصائية (لصالح المجموعه التجريبية) بين متوسط الدرجات التى حصلت عليها
المجموعتان التجريبية والضابطة في الاختبار البعدى للتحصيل في القواعد ووجود فروق ذات
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المجموعتان التجريبية والضابطه في مقياس الاتجاه.مناقشة هذه النتائج،التوصيات
والاقتراحات للابحاث الاخرى قد قدمت بواسطة الباحث.
الكلمات المفتاحية : العاب الكومبيوتر، القواعد النحوية، الاتجاهات

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Introduction:

Learning and teaching English as a foreign language is not a simple mission. The task of learning and teaching a foreign language becomes more difficult when the learners are primary school pupils. There is dissatisfaction about pupil's proficiency related to the regular methods of teaching English.

Sadker &Zittleman (2006) assert that traditional classrooms are usually teacher -centered. The teacher-centered model of instruction, information, knowledge and skills is transferred from the teacher to pupils and the learning process is controlled by the teacher. Traditional learning has a bad effect on our pupils. They used to fill up their minds with information without thinking of the value or the high importance of the information they are learning. They become passive learners and suffer from lack of self-confidence when they face new situations. They depend on their teachers to give them information to pass exams.

Wang & Reeves, (2003) mentioned that in the last 25 years, new technologies emerged such as computers and the internet which attracted many educators to research and focus on improving education. Using modern technology inside our classrooms can be very interesting for our pupils. Raulston, (2009) asserts that using technology in classrooms will potentially enhance students' learning because it has the ability to change teaching.

Piirainen-Marsh and Tanio(2009)assert that using educational computer games can provide learners with instructional opportunities that ensure engagement with language and help them to improve their

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linguistic skills. Juul(2005) cited in Peterson (2016) defines a game as "a rule−based formal system with a quantifiable and variable outcome, where different outcomes are assigned different values, the player invests effort to influence the outcome, the player feels attached to the outcome, and the consequences of the activity are negotiable and optional"

Playing computer games require some skills to help pupils use computer programs. It also requires some skills to help pupils deal with information displayed on the screen. Hedberg (2010) illustrates that integrating computer games within classroom instructions can be challenging. The challenges are computer technical problems, teachers' preparation, perception of games, physical states, teachers' background, class and time schedule and class expectations. Computers' support at our schools is too weak and many pupils may have a little knowledge about using the mouse, the keyboards or the monitors.

Computer Grammar Games and Grammar Achievement

Computer technology now is the most recent and important technology to be used to deliver foreign language instruction. Although this technology is several years old, progresses within the past decade have made widespread usage of computers economically suitable. Chapelle (2001) states that "everyday language use is so tied to technology that learning language through technology has become a fact of life with important implications for all applied linguists, particularly for those concerned with facets of second language acquisition."

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As a result, games can increase pupils' achievement, which means that there are improvements and differences in learners' test scores, ability of communication, knowledge of vocabulary and other language skills like reading and writing. Riedel (2008) emphasizes the advantage of playing computer games in improving learners' achievement, "We are teaching a new generation of pupils which requires unconventional teaching strategies to apply and practice them in the classroom".

Grammar Computer Games and Pupils' Attitudes

In the process of language learning, actions and attitudes have a significant relationship and it is very important to understand the language attitudes. Kara (2009) declares that "positive attitudes lead to display positive behaviors towards content of the study, and participants feel interested with the course and striving to learn more. Such learners have the ability and enthusiasm to solve problems, acquire new information and skills which help pupils to engage them emotionally for daily life situations".

Lai & Li (2011) assert that educators should provide pupils with more opportunities to use the language in the classroom's environment that will help them to develop their self-efficacy beliefs and gain a positive attitude toward learning. Language teaching could be provided by the use of technological advancements effectively inside classrooms. Lisle (2012) confirms that learning through game-based language which learners can carry out in meaningful and situation based tasks, is receiving more attention.

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Attitudes and achievement

The importance of attitude stems from its' effect on pupils' achievement. There is no doubt that the enthusiasm to study and learn English is affected by learner's positive attitudes towards learning English as a foreign language. The Pupils' attitudes affect their achievement and their desire to continue studying and learning the target language. Kara (2009) declares that the pupil's attitude, opinions and beliefs have influence on pupil's behavior and consequently on their performance in the process of target language learning. It is argued that the learner's positive beliefs have tendency to increase more positive attitudes towards the target language learning.

Yurtseven, Alcı, and Karataş (2014) confirm that there is a relationship between attitude and achievement. Mustafa (2015); Sardegna, Lee, & Kusey(2018), illustrate that an attitude is also a powerful predictor of academic performance and achievement in English courses .

Context of the problem

In EFL classes, teachers seem to be depressed to find some learners who only repeat what their teachers have said without even thinking about the importance of the data given. They suffer from the stuffing of curriculum which prepares pupils only for the final exams. They also suffer from the lack of their positive attitudes towards learning English.

EFL teachers should use different modern techniques to involve pupils and motivate them to learn foreign language. Especially at the

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school where the researcher is working, the researcher felt that there was an urgent need to respond and internalize new technology in these classrooms. To document the research problem the researcher developed a questionnaire on 6th graders. The researcher conducted a grammar test on 6th graders in order to test their grammar achievement.

1.4- Statement of the problem:-

The problem of the present research was manifested in 6th year primary school pupils' need for enhancing their grammar achievement and attitude. Depending on the results obtained from administrating the questionnaire and the test showed that the primary school pupils 'grammar achievement and attitude skills were in need to be developed. Hence, this research investigated the effect of using a grammar computer game-based learning program to develop sixth graders' grammar achievement and attitudes towards English.

1.5- Objectives of the Research:-

This research attempts to identify the effect of using grammar computer games on:

1- developing 6th graders' grammar achievement.

2- developing 6th graders' attitudes towards learning English as a foreign language.

1.6- Questions of the Research:-

The problem of the study was stated in the following main questions:

1- What is the effect of using grammar computer games on developing 6th graders' grammar achievement?

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2- What is the effect of using grammar computer games on developing 6th graders' attitudes towards learning English?

1.7- **Hypotheses of the Research:-**

The following hypotheses had been tested:-

1- There would be statistically significant differences (favoring the experimental group) between mean scores obtained by the subjects of the experimental and the control groups in the post – performance of the grammar achievement test.

2- There would be statistically significant difference (favoring the experimental group) between mean scores obtained by the subjects of the experimental and control groups in the post – performance of the attitude scale.

1.8-**Delimitations of the research:-**

a) Participants of the study were60 pupils enrolled randomly to experimental group (30 male and female pupils)and the control group (30 male and female).

b) The researcher applied the program in one term; one hour a week.

c) This research investigated some selected grammatical skills that had been judged by a panel of EFL experts; these skills include the pupils' ability to:

1- make wh- questions with how (simple past tense).

2- recognize adverbs of manner.

3- use simple past tense of movement verbs.

5- use past continuous ; when clauses.

6- make affirmative and negative statements with could.

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7- use the present and past tense of the verbs be and can.

8- when clauses; affirmative and negative statements.

9-make wh- questions with when and how long.

10- identify new adjectives .

11- use if clauses; Expressing conditions and emotions/ attitudes; expressing consequences.

12- make complete sentences.

13- use conjunctions.

1.9-**Significance of the research**:

The present research tried to fill the gaps in the review of literature concerning teaching English as a foreign language by using modern technology like computer educational games to develop 6th graders grammar achievement and attitude. The current study is important for

Students to:

1- create a rich language environment to motivate and encourage pupils to change their attitude positively toward learning English as a foreign language.

2- help them to show and build positive attitude towards learning English and to enhance their achievement.

3- enable pupils to enjoy learning grammar by using computer games and they will like the process of learning new structures and not to get bored inside the classroom.

4- help pupils to be more self-dependent during learning new aspects of language.

5- give quick feedback for what they will achieve.

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Teachers to:

1- emphasize the role of the teacher as a facilitator .

2- help them to be aware of using modern technology and strategies in teaching English.

3- use new tools for teaching English.

4- create an environment which will be full of enthusiasm and encouragements.

For curriculum designers:

1- Curriculum designers will benefit from educational computer grammar games to enhance pupils' grammar achievement and help them to have positive attitude towards English generally and towards grammar particularly.

2- It will help curriculum designers to design new courses to make the most out of their pupils' book through self-evaluation, speed feedback and full understanding.

1.9-**Definition of Terms:-**

A) **Computer Games:**

Juul (2005), defines games as "a rule-based formal system with a variable and quantifiable outcome, where different outcomes are assigned different values, the player exerts effort in order to influence the outcome, the player feels attached to the outcome, and the consequences of the activity are optional and negotiable"

The operational definition:

Computer games are electronic medium which have been designed to teach pupils grammar to develop their achievement. They also have the

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whole characteristics of educational gaming environment that help pupils to enhance their attitudes and achievement.

Attitude:

Ajzen (2005) defines attitude to language learning as a hypothetical construct that cannot be observed directly and must be inferred from responses that reflect evaluations of the attitude object.

The operational definition:

Attitude is a state of thought which makes pupils sensitive to their actions or reactions .It is a psychological and mental state which can be expressed by favorable or unfavorable manner towards learning a foreign language or new experiences.

Achievement

According to McCoy, Twyman, Ketterlin-Geller & Gerald Tindal (2005 p 9-12) "Academic achievement can be defined as learned proficiency in basic skills and content knowledge.

The operational definition:-

Achievement focuses on pupils' performance or outcomes concerning the grammatical points they have learned in the training program.

1.10-Material and Methods:-

This part presents the experimental design, the participants, the instructors, the variables, description of instruments and the training program.

Research Method:

The researcher adopted the experimental approach due to the nature of the study which aims at finding the impact of the grammar computer

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game-based learning to develop sixth graders grammar achievement and attitudes towards learning English.

The Experimental Design:

The study used the quasi-experimental design which requires two groups of pupils; the experimental group and the control one. The control group and the experimental one were exposed to pre-post instruments of getting data. The experimental group only was instructed and trained through a program based on using computer games to develop pupils' grammar achievement and attitudes towards learning English.

Duration of Experiment:

The experiment lasted for two months, one hour a week.

Participants:

1- The experimental Group:

Participants of the experimental group (30 male and female pupils) were randomly chosen. They were instructed and trained by using grammar computer games to develop their grammar achievement and attitudes towards learning English. This was performed through the grammar course which is normally assigned to be taught during the second term.

2- The control Group:

Pupils of the control group (30 male and female pupils) followed the regular methods of teaching in the grammar course. They were not exposed to training through the prepared program.

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3- The instructor:

The researcher herself was the instructor who taught the experimental group.

This group was trained through the grammar computer games, while the control group was taught by the researcher too.

4- Variables:

A)-The Independent Variable

Training sixth graders through using grammar computer games to develop their grammar achievement and attitudes towards learning English as a foreign language.

b)- The Dependent Variables

1)- developing sixth grades' grammar achievement.

2)- developing sixth graders attitudes towards English.

c)-The control Variables

1- Language proficiency

2- Years of studying English

3-Age (all participants were in grade six)

4- Level of the participants' performance in the pre-test of grammar achievement.

-t-test was used to measure the statistical differences between the groups in their achievement in English. The subject's results in English final exam of the school year (2020 -2021) were recorded and analyzed.

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4- Instruments of the Study

To investigate the effectiveness of using grammar computer game – based learning to develop six graders' grammar achievement and attitudes towards learning English, the researcher designed:

a) A test assessing the pupils' grammar achievement. A (pre-post) grammar achievement test.

b) Grammar computer games.

b) A scale assessing the pupils' attitude towards learning English.

A-General Objectives of the Program

The program aimed to develop sixth graders' grammar achievement and attitudes through using grammar computer games and by providing opportunity for pupils to engage actively in meaningful activities in English.

B-Validity of the Program

To prove the program's validity, the researcher asked a group of EFL specialist then the researcher modified, added and changed some activities to the program according to their comments.

5- Objectives of the program

The grammar computer game-based program was designed by the researcher to:

  a) develop sixth grades' grammar achievement.

  b) develop sixth graders attitudes towards English.

6- Constructing the program

 The grammar computer games program was designed and built by the researcher through the following steps:-

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1) reviewing the related literature.

2) stating the general and behavioral objectives of the program.

3) judging the list of objectives by the jury as for;

‒linguistic stating.

‒relatedness of the behavioral objectives to the general objectives of the program.

‒ suitability to the subjects involved in the research.

3) building up the frame of grammar computer games including the objectives, content areas and methodology of presentation and evaluation of techniques.

4) having the frame evaluated by a panel of TEFL experts.

5) building up the whole program the instructor's manual and student's book, showing teaching procedures and steps of using grammar computer games.

6) Judging the whole program by the same jury as for its content and general form to approve its validity and suitability to the subjects and objects of the research.

7) **Experimental group and control group**

‒ The experimental group was exposed to the program to test its effect.

‒ The control group was exposed to the exact same conditions as the experimental group except for the suggested program to test if there will be a difference between the experimental and control group .

9‒ **Procedures of teaching**;‒

1) The training program included both a teacher's guide and student's book.

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2) The researcher made sure that the computer lab is well–equipped with sufficient computer sets.

3) The researcher gave students sufficient information on the importance of using technology in teaching grammar.

4) The researcher presented the task and made sure that pupils were clear about the subject covered and how it related to the current syllabus.

5) The researcher gave the pupils guidelines to follow the steps they should use to complete the game.

6) The researcher taught pupils how to use computer games.

7) The researcher moved the conclusion which brings closure and encourages reflection.

8) The teacher provided pupils with constructive feedback.

Findings and Discussions:

Analysis of the obtained data is presented along with findings, discussions, recommendations, and suggestions for further research. t–test was used to analyze the data obtained by the participants in the post –performance of the grammar achievement test.

Findings:

–The Pilot Study:

A pilot study was conducted about a month prior to the administration of the program to estimate the validity and reliability of the test. A group of (30) sixths graders were selected representing different levels of achievements: high, middle, and low. 't'–value (11.060*) is significant at (0.01). See table (1) below:

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Table (1)

Means, Standard Deviation, Mean Difference and "t" value of the highest and lowest
quarters in grammar achievement test.(N=60)

Part	Group	Mean	Std. Deviation	Mean Difference	"t" value	Df
Total	Pre-Test	24.33	3.379	8.222	11.060*	58
	Post Test	16.11	2063			

*significant at 0.01.

Hypothesis1:

Hypothesis (1) predicted that there would be a statistically significant difference , favoring the experimental group, between means of scores obtained by the participants of the experimental and the control groups in the post performance on the grammar achievement test.

Analysis of data obtained using t-test shows that the experimental group achieved a higher degree of improvement than the control group on the grammar achievement test since t-value **(26.691*)** of the post test is significant at **(0.01)** level and beyond and thus the first hypothesis is accepted. Table (l) presents a summary of the analysis of the data obtained on the post grammar achievement test of both groups. For pupils' raw scores on this test, see table (2).

Table (2)

Means, Standard Deviation, Mean Difference and "t" value between pre-post Performance of
the Experimental and Control Groups on Grammar Achievement Test (N=30)

Part	Group	Mean	Std. Deviation	Mean Difference	"t" value	df
Total	Pre-Test	37.47	1.833	18.533	26.691*	29
	Post Test	18.93	4.394			

*significant at 0.01 level

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Comparison between the pre-post performances of the experimental group on the grammar achievement test:

Comparison of the results of the experimental group on the pre-post test of the grammar achievement test shows that this group achieved a significant degree of improvement on post testing than on the pre testing since t- value (**26.691***) is significant at 0,01 level. See table (3).

Table (II)

't'-test results of the pre-post grammar achievement test of the experimental group (number of participants=30).

Table (3)

Means, Standard Deviation, Mean Difference, "t" value and Eta Squared (η2) between pre-post Performance of the Experimental and Control Groups on Grammar Achievement Test

Group	N	Mean	Std. Deviation	Mean Difference	"t" value	F	Sig	df	Eta	Eta Squared (η2)
Pre-Test	30	37.47	1.833	18.533	26.691 *	2.401	0.048	29	0.793	0.629
Post Test	30	18.93	4.394							

*Significant at 0.01.

To ensure the effect of grammar computer game-based learning on grammar achievement of the two groups, Eta –Squared formula is used. As shown in table(3) Eta –Squared value (0.561)is highly significant. Nasser (2006) mentions that when Eta-Squared value (η2) is more than 0.6 it means that the significance is high.

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Pre-test of the grammar achievement:

Comparison of the mean scores of both the experimental and the control group on the grammar achievement test showed that t-value (14.249*) is not significant at 0,05 level .For pupils' raw scores, see table (4) .

Table(4)

Means, Standard Deviation, Mean Difference and "t" value of Both the Experimental and Control Groups on the Pre-administration of Grammar Achievement Test (N=30)

Part	Group	Mean	Std. Deviation	Mean Difference	"t" Value	df
Total	Experimental	37.47	1.833	8.600	14.249*	58
	Control	28.87	2.751			

*Significant at 0.01.

Post-test of the grammar achievement test:

Comparison of the mean scores of both the experimental and the control group on the grammar achievement test showed that t-value and Eta Squared ($\eta2$).are accepted

Table (5)

Means, Standard Deviation, Mean Difference, "t" value and Eta Squared ($\eta2$) of Both the Experimental and Control Groups on the Post-administration of Grammar Achievement Test (N=30)

Group	N	Mean	Std. Deviation	Mean Difference	"t" value	F	Sig	Df	Eta	Eta Squared ($\eta2$)
Experimental	30	37.47	1.833	8.600	14.249*	1.019	0.458	58	0.561	0.314
Control	30	28.87	2.751							

*Significant at 0.01.

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Hypothesis 2:

Hypothesis (2) predicted that there would be a statistical significant difference (favoring the experimental group) between mean scores obtained by the subjects of the experimental and control groups in the post – performance of the attitude scale.

Table(6)

Means, Standard Deviation, Mean Difference and "t" value of both

Means, Standard Deviation, Mean Difference and "t" value of Bath

the Experimental and Control Groups on the Pre-administration of

The Attitude Scale (N=30)

Part	Group	Mean	Std. Deviation	Mean Difference	"t" Value	Df
Part 1	Experimental	10.17	1.895	3.733	8.887*	58
	Control	6.43	1.305			
Part 2	Experimental	8.80	1.518	3.733	10.195*	58
	Control	5.07	1.311			
Part 3	Experimental	2.03	0.765	2.267	8.835*	58
	Control	4.30	1.179			
Part 4	Experimental	2.37	1.402	2.33	6.773*	58
	Control	4.70	1.264			
Part 5	Experimental	1.83	1.877	2.667	6.517*	58
	Control	4.50	1.225			
Total	Experimental	25.20	0.551	0.200	1. 989**	58
	Control	25.0	0.000			

Significant at 0.01*

Significant at 0.05**

Discussion:

The present study was conducted to investigate the effect of using grammar computer game-based learning to develop sixth graders'

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grammar achievement skills and their attitudes towards learning English. The participants were introduced to the different skills through implementing the grammar computer game based learning.

Results of the present study are encouraging and promising as they show that there are statistically significant differences between the means of participants' scores on the pre-post tests in favor of the post applications. This indicates that the participants' scores on the pre-post tests are in favor of the post applications. This indicates that the participants' grammar achievements skills and attitudes have been developed.

The participants' scores on the pre-grammar achievement test and the attitude scale were unsatisfactory. Before implementing the program, their performance showed that they are in bad need of being trained on the skills of grammar achievement and to develop their attitudes towards learning English. Consequently, training them through the computer grammar game –based learning gave them enough opportunity to fill the gap in their knowledge of the target skills and to score higher on the post tests.

To support the result in terms of the first hypothesis that proves the impact of using grammar computer game-based learning on pupils 'grammar achievement. It should be mentioned that new educators think about how to modify and adapt new methods and strategies which could be used inside English classrooms. One of these strategies is using computer games which help pupils benefit and expose a less stressful learning environment. It encourages them to be more

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enthusiastic and motivated about learning and acquiring new English skills.

According to Hostetter,(2002) computer games are excellent learning tools because they provide learners with opportunities of adjusting the difficulty levels of games and playing them again for many times.

Ugurel,(2003) asserts that computer educational games support active learning and multiple intelligence. While using computer games inside classrooms help learners to make knowledge permanent, they also make learning enjoyable. In addition, educational games could be used as for teachers by helping them realize the importance of using games to gain learners' attentions and keep them engaged to classrooms activities. Computer games would benefit learners by allowing them to learn while having fun and make them less worried about grades and errors .Moreover, games give learners more opportunities to learn and use grammatical rules and increase their productive skills like speaking.

The Pupils' Reaction to the Program:

To obtain more in‑depth information on the implementation of using grammar computer games to develop sixths' graders grammar achievement and attitudes from the participants, the researcher conducted an informal interview with the participants after the program was over. The pupils' responses to the interview questions were carefully recorded and coded by the researcher. Responding to the question: "What do you think of the program management and implementation?" All pupils indicated that the most important way for

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them to be motivated to learn English and to find the classroom more interesting.

The pupils indicated that using this program in English grammar course was beneficial and helpful for them to learn and score achievement in grammar and to change their attitudes positively towards learning English.

Difficulties Encountered During the Implementation of the Program:

The researcher encountered some difficulties throughout the implementation of the program. These are:

-the unsuitability of numbers of computer sets with the pupils 'number, as the pupils numbers were more than computer sets.

-at the beginning of the program, some pupils did not know how to deal with and use the mouse or the keyboard.

Recommendations:

The study presents evidence to implement using grammar computer game-based program to develop pupils' grammar achievement and attitudes towards learning English. Based on the findings of the study, the following recommendations can be made for teachers of English, supervisors, faculties of education and researchers.

A- Teachers of English:

1- Teaching English grammar inductively through using grammar computer games in order to increase the pupils' achievement and to enhance their attitudes towards learning English.

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2- Teachers should change their role from instructors who dominate the class into educators whose role is to organize, help, guide, coordinate and support the pupils to communicate and acquire language.

3-Teachers should cope with modern technology and new trends in methods and strategies of teaching.

4-Teachers should be aware of their pupils' needs, individual differences, interests, abilities, learning styles while using computer games.

5-craeting an appropriate learning environment to enable pupils to practice what they have learned and to enhance their attitudes .

6- Enriching the curriculums with authentic situations and activities that enhance pupils' use of grammar.

B- Supervisors of English:

Supervisors of English are responsible for promoting the methods and strategies used by teachers in schools through the following:

1- They should conduct training courses to acquaint teachers with using grammar computer games and their importance in teaching - learning process and practical ways of how to implement it

2- they should encourage teachers to implement new strategies inside classrooms.

c-Education program managers:

1- since active learning strategies are time consuming, it is important to decrease number of pupils inside classrooms.

2- the managers and administration should support schools with new technology equipments like computers, CDs, internet, Smart boards.

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3- the program manager should increase English language periods to allow teachers to concentrate on learning and developing pupils skills and practicing the language.

Suggestions for Further Study:

In the light of the results obtained in the present study, the following suggestions are hoped to be helpful in the field of teaching English as a foreign language in general, and teaching grammar in particular:

1- the present study focused on the use of grammar computer games to develop grammar achievement and attitudes towards English.

2- there is a need to develop grammar computer game based learning program to help instructors achieve the goal of promoting vocabulary retentions and motivations.

3-EFL teacher preparation program designers are advised to include

4- The present study can be replicated on a larger sample of EFL pupils.

5-Investigating the effect of using computer games based learning program on developing pupils' listening and speaking skills.

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