



Research Article

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The Effect of Using Active Class Strategy through Educational Games on the Achievement of 7th Grade Students in English Language at Public Schools in Wadi Al-Sir Directorate, Jordan

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Abstract

This study aimed to investigate the effect of using active learning through educational games on academic achievement and retention in the English language subject among seventh-grade students in government schools in Wadi Al-Sir Directorate/Jordan. The study tool (achievement test) was prepared, and six appropriate educational games were designed to teach the educational content. To ensure the validity of the tool, the test was presented to five referees from teachers and educational supervisors in the Wadi Al-Sir Directorate of Education. The researchers also calculated the reliability of the test, and its value was (0.89), which is a good value that meets the purposes of the study, and the difficulty factor and the discrimination coefficient were calculated for each item of the test. The study population consisted of students of the seventh grade in public schools in Wadi Al-Sir directorate of education, and the study sample consisted of (120) students, who were divided into two groups, a control group, and an experimental group, where the experimental group studied using active learning strategy through educational games, while the control group studied using the traditional method, the application took two weeks. The results of the study showed the following: - There were statistically significant differences at the level of significance ($\alpha = 0.05$) between the levels in the measurements: pre, post, and retention for the experimental group. - The presence of statistically significant differences at the level of significance ($\alpha = 0.05$) between levels (remembering, application, synthesis, and total score) in the measurements: pre-, post-, and retention for the control group. - There are no statistically significant differences at the level of significance ($\alpha = 0.05$) in the levels of memory and comprehension in the posttest between the control and experimental group, while there are statistically significant differences in the levels of application, analysis, synthesis, and posttest in favor of the experimental group. - There are no statistically significant differences at the level of significance ($\alpha = 0.05$) in the levels of remembering, comprehension, application, and the measure of retention between the control and experimental group, while there are statistically significant differences in the levels of analysis and synthesis, in measuring retention and in favor of the experimental group. The researchers recommended the necessity of using the strategy of active learning through educational games in teaching other subjects, and for the rest of the classes.

Keywords: Active Class Strategy, Educational Games, Seventh Grade, Public Schools, Students' Achievement

1. Introduction

The world owes to the creators of its sons all the progress it has made in the various sciences. The societies competed with each other to invest all their energies and resources. Above all, human wealth is the engine for all other powers. Without them, wealth and other possibilities become worthless, oil and minerals exist in the ground for thousands of years, and the sun has existed since the beginning of creation and did not turn these sources to the enormous energy that revolves in the wheel of technology only when the human being was able to discover and exploit it, and this was not a coincidence but the result of the work and the effort he did to the extent that scientific progress at the present time does not happen every period as it was before but all there is a new day added by the mental creativity of man in order to develop human life, and achieve progress and prosperity (Mushrifi, 2003).

Therefore, the conflict between the countries of the world today is originally a conflict between the minds of its citizens in order to reach a scientific and technological precedent to ensure leadership, and thus the highest goal of education in this age is the development of thinking in all its forms to maximize the role of the educational institution in the preparation of individuals able to resolve unexpected problems through their ability to think of multiple and varied alternatives according to various situations.

Educators and researchers who have come up with the subject of thinking in their writings have agreed that the main goal of teaching students is teaching them how to think? By creating exciting opportunities that will enable them to interact effectively with future variables, this happened when the development of thinking among students become a major goal for the institutions of education through adopting new teaching methods and strategies that develop students' desire to learn, Priority in development is for teaching methods to meet the needs of the coming period. The modernization of modern strategies in the teaching of English develops students' thinking skills (Khalil, 2007).

The issue of introducing innovative thinking into schools as well as its scientific and educational importance is a matter of growth and progress and facing the challenges of the future in a world that its leader becomes innovative thinking. Therefore, the need to teach creative thinking to our students has become an urgent necessity. There are several reasons for us to seriously consider the introduction of innovative thinking education to our schools.

Active learning is one of the modern educational trends that have a positive impact on the learning process. It conveys the teacher from the role of vector to the guidance in the educational process, and transforms the learner into the thinker and the collaborator by creating a rich environment of teaching and learning active situations that aim to develop higher thinking skills.

There have been many studies on modern strategies in teaching or what is known as active learning for many of the psychological and educational variables, for this purpose our research paper came through which the researcher tries to study the role which the strategy plays in activating the creative thinking skills of the student, through the inclusion of some active learning strategies and the statement of what it is, its characteristics and then its relationship to the creative thinking of students.

1.1 The concept of active learning

After the results of studies and research confirmed that the traditional method used in our schools does not contribute to the creation of real learning, there have been repeated calls for the development of new teaching methods that make the learner the focus of the educational process, and involve him in learning in an effective way and always put him in a position where he is forced to exert effort and think about what he learns, through reading, speaking, deep thinking, writing, and self-ability to organize what he learns (Abdel Rahman et al., 2015).

From the above, it is clear that the nature of active learning is based on the active participation of the learner in the learning process, the use of higher thinking skills such as analysis, synthesis and evaluation, and the learners' interactive activities that require movement and performance in solving a problem related to what they learn or demonstrate in real life situations.

Mckinney (1998) defined active learning as "a teaching method that requires the learner to do more than just negative listening to the teacher", Ahmed and Ali (1999) defined it as "learning in which the learner actively participates by reading, searching, and participating in class and extracurricular activities, in which the teacher guides the learning process " (Majdy, 2009).

Therefore, active learning is a method of teaching that actively involves students in the learning process and encourages them to think about what they are learning, by placing them in learning situations that lead them to work, exert effort and actively participate continuously, in which the teacher is director and guidance and designer for the necessary situations for the learning process.

1.2 Principles of active learning

The active learning strategy is based on a set of principles that can be summarized in the following points:

- The students participate in the selection of the work system and the educational situation, activities and tasks effectively and positively.
- Encourage student discussions and involve them in self-evaluation.
- Developing students' mental skills and activating higher thinking skills.
- Diversity and variety of learning resources.
- Follow learner-centered teaching methods, and strategies.
- Provide feedback to students immediately.
- Focus on discovering students' values, beliefs and guidance (Al-Jadi, 2012)

With regard to the importance of active learning, Jibran (2003) shows that its importance is shown by the positive results that the learner experiences in terms of knowledge, skills and attitudes. These results were confirmed and supported by educational research on active learning, including:

- Develops the desire to learn and makes learning more enjoyable, which increases students' integration into work.
- Helps to create positive interaction between students and develop social relationships within the classroom.
- Develops self-confidence and the ability to express an opinion.
- Develops motivation in the mastery of learning as well as positive values and attitudes of students.
- Enhances the spirit of responsibility and initiative among students (Abdel Rahman et al., 2015).

The researcher believes that the learner must learn more than just listen, he should think, discuss and exchange views while respecting the views of others, accept criticism, and try to arrive at the logical results based on consultation.

1.3 Characteristics of active learning strategies

Active learning is essentially the basis of what is known as authentic learning, which is now one of the most modern trends where it aims to maximize the growth that every learner can attain in every aspect of mental, psychological, and social growth, where Hindi (2002) mentioned the characteristics of active learning as "an organized, planned and purposeful learning of the activities and actions of the learner and that it is a special ability of the learner that the teacher cannot substitute for, and that occurs in different organizational forms that are learner-centered." Jarwan (2002) claimed that active learning characteristics are:

- Active participation of the learner.
- Focus on how to develop more basic learning skills.
- Instruct the learner to use multiple different sources.
- Emphasis on the learner's positivity in the skills and strategies of higher thinking such as

- analysis, synthesis, evaluation and problem solving.
- To provide an effective and appropriate learning environment by providing different educational means and methods that are appropriate to the differences of learners.
- Emphasis on the learner's self-assessment and the extent to which he / she is connected to learning by defining the criterion of judgment of job and purpose of it (Jarwan, 2002).

The work done by the student himself, through active learning or participating in it is more valuable to him compared to that of another person. Active learning increases cognitive abilities and helps in developing life skills and increases the student's ability to retain information, and active learning as a modern educational strategy includes many of the educational methods in the framework of what is known as modern teaching strategies or modern teaching methods, which can be used in science education to develop many skills, including creative thinking skills, and we will try to include some of them and indicate their relationship to innovative thinking and the following is explained below:

- 1- Conceptual maps and innovative thinking: Al-Khataibah (2005) points out that many studies and research in the past years have dealt with the search for methods, and educational tools derived from a number of learning theories. The Ausubel theory, which emphasizes cognitive learning, is one of the cognitive theories which deal with the cognitive processes that occur within the cognitive structures of the learner, which relate to how knowledge acquired, organized and stored, and how this knowledge is used to achieve further learning (Al-Khataibah, 2005).

Concept maps are an educational application of Ausubel's theory of meaningful learning, a guide to how the concept relates to other concepts. It also clarifies the relationships between main and sub-concepts, clarifies the most important ideas, and clarifies the horizontal and vertical relationships between concepts (Martin et al., 1990).

The concept map consists of a concept, a mental construct that results from the common characteristics of the phenomenon or from the mental perceptions that the individual has for objects and is placed inside an oval or circular or a square shape. It also consists of words that are used to connect two or more concepts. It also consists of occasional links that are sometimes created and are a link between two or more hierarchical concepts that are in the form of a cross-section, and are finally composed of examples that are sometimes drawn to reflect specific events or acts that are examples of concepts and often flags, so it is not surrounded by an oval or circular shape (Al-Khataibah, 2005).

Atallah (2001) defined it as "a process or tool that organizes ideas and meanings and clarifies the relationships between the concepts contained in a unit or subject of the curriculum. The conceptual map helps the student to organize his knowledge in order to deepen his understanding of the learning of this unit".

Al-Al-Khataibahh (2005) dealt with it as: "Two-dimensional planning drawings, in which the concepts of the subject are hierarchical, ranging from the most comprehensive, least private concepts at the top of the pyramid to the less comprehensive and more exclusive concepts at the base of the pyramid, these concepts are surrounded by frameworks linked to each other by a name with the type of relationship." (Al-Khataibah, 2005)

- 2- The method of cooperative learning and innovative thinking: The interest of educators in cooperative learning began in the 1960s as a result to the efforts of some scientists such as Dewey to activate the role of the learner in the educational process through its inclusion under a small group or a large group in order to obtain information and scientific knowledge as well as its active and positive participation in Learning process and the success of that process.
- 3- Innovative inquiry and thinking: Learning in the survey provides many opportunities for the learner to exercise his or her thinking abilities such as designing experiments, finding solutions, controlling variables, inventing methods of measuring, collecting and presenting data in order to build meaning based on his analysis of the data obtained, and learning to

create an independent environment for knowledge acquisition. According to Richard Sokhman, the creator of the widely used surveying and surveying program in the United States, the survey is the way people learn when left alone. For Sokhman, the survey is a natural way for the learner to learn about the environment (Ambo Saidi and Baloushi, 2009).

1.4 The Problem of the Study

The low levels of achievement in the English language in Jordan represent a problem that affects the Jordanian educational system, learners, educational leaders and students, efforts have not been stopped to find the best teaching methods that contribute effectively to improve the level of student achievement in English, the application of the concept of active class is one of these modern trends, the study problem was highlighted through the work of the researcher in the teaching sector, and through her knowledge of many previous studies and educational literature.

Where the English language is of special importance and interferes with all activities of life, in order for English to become more meaningful and understandable when learners understand linguistic concepts and its meaning through their activity, starting from the importance of knowing the extent to which teachers practice active learning in their schools, the researcher felt the need to conduct such a study.

1.5 Hypothesis of the Study

The researchers proposed the following hypothesis:

H1: There are no statistically significant differences at the level of significance ($\alpha=0.05$) in the academic achievement of the English language subject for the seventh-grade students in public schools in Wadi Al-Sir directorate of education in the measurements: pre-, post- and retention, among the members of the experimental group.

H2: There are no statistically significant differences at the level of significance ($\alpha\leq 0.05$) in the academic achievement of the English language subject among the seventh-grade students in the Public schools in Wadi Al-Sir directorate of education in terms of measurements: pre-, post-, and retention, among members of the control group.

H3: There are no statistically significant differences at the level of significance ($\alpha\leq 0.05$) in the academic achievement of the English language subject among the seventh-grade students in the Public schools in Wadi Al-Sir directorate of education in post-measurement, between individuals of the control and experimental groups.

H4: There are no statistically significant differences at the level of significance ($\alpha\leq 0.05$) in measuring retention, between individuals of the control and experimental groups.

2. Previous Studies

The study of Asha et al, (2012) aimed to investigate the impact of active learning strategies on developing self-efficacy and academic achievement. Where the number of study members reached (59) male and female students, chosen from among the second-year students of the University College of Educational Sciences, specializing in a class teacher. In order to achieve the objectives of the study, a self-efficacy scale and an achievement test were used in the educational guidance material, and the validity and reliability of the scale were verified by appropriate methods. The results of the study revealed that there are statistically significant differences between the results of students in the two study groups in self-efficacy and academic achievement in favor of the experimental group. This study concluded with a set of proposals calling for interest in employing active learning strategies in different school subjects and for various academic levels.

Scheyvens, et al. (2008) conducted a study aimed to investigate the impact of employing active learning strategies in teaching geography and the importance of these strategies in engaging learners

in the educational situation compared to the usual methods of education in which the teacher dominates the educational position, and it does not provide the opportunity for learners to actively participate in it. The study emphasizes the importance of employing active learning strategies in teaching geography, and the rejection of all beliefs that employing active learning strategies is difficult to implement in many educational situations, because it requires students to have prior knowledge of the content of the educational position, and that the application of most active learning strategies require a great effort on the part of teachers and students alike.

Abu Wazna (2017) study aimed to uncover the effect of using integrated educational games on developing critical thinking skills and self-efficacy in the subject of science among eighth grade female students in Jordan, where the researcher used the quasi-experimental approach, and the study sample consisted of (87) students from the eighth grade At the UNRWA Preparatory Girls' Second Nozha School, as they were distributed into two groups, one of them was experimental, consisting of (40) female students and another control group consisting of (47) female students. The study tools were represented in building integrated educational games, testing critical thinking skills and a measure of self-efficacy, and among the most important results of the study was the presence of a statistically significant effect of using integrated educational games in science teaching in developing creative thinking skills for the benefit of the experimental group and improving the level of self-activity in favor of the experimental group.

Saher (2015) study aimed to uncover the effect of using the two styles of games and role-playing on developing scientific concepts in the science subject among third-grade basic students. The researcher used the descriptive and analytical method, and the semi-experimental curriculum in its study, and the sample of the study consisted of (84) students of the third basic grade who were intentionally chosen from the basic school of Tunis, and it was divided into three groups equally in each of them (28) students, the first experimental group studied in the style of educational games, and the second experimental group studied with role-playing style, and the control group was studied in the usual method, and the study tools were represented in the content analysis tool (tools) unit from the science book for the third grade basic, and the test of scientific concepts, which consisted of (40) paragraphs of multiple choice, among the most important findings of the study is the presence of statistically significant differences at the level of significance (0.05) between the average scores of the first experimental group that were studied with the educational games strategy and the average scores of the control group that was studied in the usual way in testing scientific concepts. In favor of the members of the first experimental group, there are statistically significant differences at the level of significance (0.05) between the mean scores of the second experimental group that were studied with the role-playing strategy and the average scores of the control group that was studied in the usual way in testing scientific concepts for the benefit of the members of the second experimental group, there are statistically significant differences at the function level (0.05) between the average scores of the first experimental group that were studied using the educational games strategy and the average scores of the second experimental group that were studied with the role-playing strategy in testing scientific concepts. In favor of the members of the second experimental group, there are statistically significant differences at the level of significance (0.05) between the mean scores of the students in the three groups together, the first experimental and the second experimental, and the control group in the post-test, and in favor of the second experimental group, which was studied in the style of (role-playing).

Klopp's study (2014) aimed to uncover the effect of employing songs and educational games on developing concepts and some science processes among third-grade students in general sciences. The researcher used the descriptive and quasi-experimental approach in her study, and the sample was chosen from third-grade students from the Common Beach School (B), it was divided into three groups. The first experimental group was (34) male and female students, who studied by employing songs. And the second experimental group of (34) male and female students, which studied in the usual way, and in order to achieve the objectives of the study, the researcher prepared the scientific concepts test and the science processes test. Which was applied to the two experimental groups and the control group, before and after, to determine their equivalence, and the results found that there were statistically

significant differences in the average scores of students in testing the concepts and science processes of students in the second experimental group that studied educational games in the pre and post application in favor of the post. As well as the existence of statistically significant differences in the average scores of students in testing the concepts and science processes of students between the first experimental group, which was studied with songs, and the control group in favor of the first experimental group, and the presence of statistically significant differences in the average scores of students in testing the concepts and science processes of students between the second experimental group, which was studied in educational games, and the control group in favor of the second experimental group, and the presence of statistically significant differences in the average score of students in testing the concepts and science processes of students between the first experimental group that studied by songs, and the second experimental group that studied by educational games in favor of the second experimental group.

Najdi and Al-Sheikh (2012) study aimed to reveal the importance of educational games for students' attitudes towards learning chemistry, from the viewpoint of middle school students, in Jerusalem schools, where the study organized one educational game, after completing the study, which consisted of three samples, and each group learned before and after using the educational game, a questionnaire was distributed to the individuals of the samples to determine their orientations towards the use of educational games, in the subject of chemistry. The study revealed a positive trend towards learning chemistry after using educational games, and based on this result the study recommended providing different types of games in teaching chemistry due to its importance in building a positive effect towards that subject and carrying out the study on a larger sample and in other educational materials.

Abdel-Aal (2012) study aimed to identify the effectiveness of using educational games in developing achievement, and the trend towards science for people with learning difficulties in the sixth grade in the elementary stage, the researcher followed the experimental approach, among the study tools that the researcher used: an achievement test to ascertain the students' learning difficulties, a measure of the attitude and treatment of these difficulties. The results of the study showed: the superiority of the experimental group over the control group in the post-achievement test, as well as in the trend scale, which shows the effectiveness of educational games in developing achievement, and the trend for pupils with learning difficulties in the sixth grade.

3. Methodology

3.1 Study Approach

The experimental method was used in one of its designs, two experimental and control groups, with three measurements taken: pre, post and retention, because it suits the purposes of the study.

3.2 Study population

The study population consisted of all the seventh-grade students in government schools, whose number (2354) male students, and (1186) female students at Wadi Sir District during the first semester 2019/2020.

3.3 The Study Sample

The sample of the study consisted of (120) students of the seventh basic grade, and they were chosen by the intentional method, where the Aisha Secondary School for Girls was chosen as a control group and their number was (30), and Marj Al-Hamam Basic School for males as a control group, their number is (30), and Marj Al-Hamam Basic School for Girls as an experimental group, their number (30), and Al-Baraa School for males as an experimental group, their number is (30), and Table (1) shows the distribution of the study sample according to the group variable.

Table 1: Distribution of the study sample according to the group variable

Group	Frequency	Percentage%
Control	60	50
Experimental	60	50
Total	120	% 100

3.4 The study two tools

3.4.1 Achievement Test

It was designed to demonstrate the effectiveness of using active learning such as educational games, and the preparation of the achievement test passed the following stages:

1. Getting acquainted with the fifth and sixth units of the English language curriculum for the seventh basic grade, in order to analyze the educational content and define the special behavioral goals, the facts, concepts, principles and procedures that the book contained in these two units, and each unit included three lessons, that is, an average of six lessons for each of the two units.
2. Determining the vocabulary of the achievement test and preparing it in a preliminary form according to the specification table, and the test contained forty questions, which are questions that measure different mental levels, such as knowledge and remembering, comprehension, application, analysis, and composition according to Bloom's classification.
3. Presenting the achievement test and the table of specifications to six arbitrators who are experienced and competent to express their views on it.
4. The teaching process lasted for two full weeks.

3.4.1.1 Validity of the Tool

The validity of the tool (the achievement test) was verified by presenting it to a group of referees from among the faculty members at Al-Balqa Applied University, and based on their observations, recommendations and suggestions, some test items were deleted, and other items were reformulated, where the questions that were collected were considered On it is 70% of the arbitrators, and in light of this the test came out in its final form, and Appendix (2) shows the items of the achievement test.

3.4.1.2 Reliability of the Tool

The test's reliability was measured by the method of applying the test and then re-applying it after two weeks on a group of 30 students, who were not part of the study sample, as the reliability coefficient (Pearson Correlation Coefficient) was calculated and its value was (0.89), which is a good value that meets the purposes of the study The difficulty factor was calculated for each of the test items, using the following equation:

$$\text{Difficulty factor} = \frac{\text{the number of students who incorrectly answered the paragraph} \times 100\%}{\text{The number of students who tried to answer}}$$

The discrimination factor was also calculated for each of the test items, using the following equation:

$$\text{Discrimination factor} = \frac{\text{Number of correct answers in the upper group} - \text{the number of correct answers in the lower group} \times 100\%}{\text{The number of students who tried to answer in one of the two groups}}$$

3.4.2 Educational Games

The researchers designed six educational games to be used in the study, according to the following steps:

1. Review studies and research that dealt with the use of educational games in teaching English, and other educational topics.
2. Designing six educational games:
 - The fastest game
 - Different places game.
 - The models game.
 - The numbers hut game.
 - Instruction game
 - Sequence game.
3. Taking into account the stages of using educational games, from the preparation stage, the implementation stage, the evaluation stage and the follow-up stage.
4. The educational games were presented to the referees to express their views, in order to determine their weaknesses and strengths, their suitability for teaching the English language subject to the seventh grade students, and the extent to which they achieve the desired educational goals, and the judges made some observations, which were taken into consideration.

3.5 Procedures of the Study

- Study tool preparation.
- Applying the pre-test to members of the two groups: the control and experimental, in order to ensure the parity of the control and experimental groups before applying the method of learning by playing, and the results of Table (2) show the “T” test for two independent groups to examine the parity of the control and experimental groups.

Table 2: Results of (T) test to examine the equality of the control and experimental groups in the pretest

Pre-test levels	Maximum score	Control (n = 60)		Experimental (n = 60)		"T" value	The level of significance *
		Mean	Deviation	Mean	Deviation		
Remembering	6	2.833	1.649	2.767	1.095	0.261	0.795
Comprehension	11	5.133	2.703	4.850	2.441	0.603	0.548
Application	8	2.500	1.610	2.617	1.439	0.418	0.676
Analysis	6	1.400	1.061	1.250	1.398	0.662	0.509
Synthesis	9	1.617	1.519	1.750	1.052	0.559	0.577
The pretest	40	13.483	5.534	13.233	4.155	0.280	0.780

It is clear from the results of Table (2) that there are no statistically significant differences in the levels measured by the pre-test, according to the group variable, and this indicates the parity of the control and experimental groups before applying the method of active learning by playing using educational games.

- Teaching the control group in the traditional way.
- Teaching the experimental group using active learning through using educational games.
- The education process lasted for two full weeks.
- The post-test was applied to the control and experimental groups.
- A retention test was applied to members of the control and experimental groups two weeks after completion of education.
- The questionnaire was collected from the sample, coded, entered into the computer, and statistically processed using the Statistical Package for Social Sciences (SPSS).
- Extract the results, analyze and discuss them.

3.6 Study design

The study contains the following variables:

- a. Independent variables
 - Use active learning (educational games) with the experimental group.
 - Not to use active learning (educational games) with the control group and to adopt the traditional teaching method.
- b. Dependent variables
 - Post-achievement at its levels: (remembering, comprehension, application, analysis, and synthesis).
 - Achievement and retention of its levels: (remembering, comprehension, application, analysis, and synthesis).

3.7 Statistical processors

After unpacking the answers of the sample members, they were coded and the data entered using the computer, then the data was processed statistically using the Statistical Packages for Social Sciences (SPSS) program using the following statistical treatments:

- Frequencies, averages, percentages, and standard deviations.
- T-test for two independent groups (Independent t-test).
- The MANOVA multivariate analysis of variance test, using a statistic Wilk's Lambda.
- The Sidak post-hoc test

4. Results of the Study

This study attempts to examine the effect of active learning through play on academic achievement and retention in the English language subject for seventh grade students in public schools in Wadi Al-Sir Education, and before conducting a hypothesis test, a pre-test was conducted to examine the parity between the two groups (experimental and control), and the results of the table. (2) showed that.

4.1 Results related to the first hypothesis:

There are no statistically significant differences at the level of significance ($\alpha=0.05$) in the academic achievement of the English language subject for the seventh-grade students in public schools in Wadi Al-Sir directorate of education in the measurements: pre-, post- and retention, among the members of the experimental group.

To examine the hypothesis, the researcher used the multivariate analysis of variance dependent test (MANOVA) and the statistician (Wilk's Lambda). Table (3) shows the arithmetic averages, while Table (4) shows the results of the multivariate dependent analysis of variance.

Table 3: The arithmetic averages of the experimental group in the measurements: pre, post, and retention

Level	pre	post	Retention
Remembering	2.767	4.100	2.783
Comprehension	4.850	6.650	5.683
Application	2.617	5.083	3.300
Analysis	1.250	3.417	3.183
Synthesis	1.750	5.283	4.483
Total	13.233	24.533	19.433

Table 4: Results of MANOVA, and statistician Wilk's Lambda, to examine the significance of the differences between levels in the measurements: pre-, post- and retention, for the experimental group

Level	The value of Wilk's Lambda	"F" value	Df of Numerator	Df of denominator	Sig
Remembering	0.455	34.767	2	58	*0.00001
Comprehension	0.689	13.082	2	58	*0.00001
Application	0.285	72.652	2	58	*0.00001
Analysis	0.446	36.071	2	58	*0.00001
Synthesis	0.268	79.143	2	58	*0.00001
Total	0.127	199.061	2	58	*0.00001

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It is evident from the results of Table (4) that there are statistically significant differences at the level of significance ($\alpha=0.05$) between the levels in the measurements: pre-, post- and retention, for the experimental group, to find out which levels in the three measurements were the best, the Sidak post-hoc test was used between the levels, and Table (5) shows the results of the dimensional comparison.

Table 5: Results of the (Sidak post-hoc) test between levels in the three measurements: pre, post, and retention

Levels	Measurement	Posttest	Retention
Remembering	Pretest	*1.333-	0.0167-
	Posttest		*1.317
	Retention		
Comprehension	Pretest	*1.800-	0.833-
	Posttest		*0.967
	Retention		
Application	Pretest	*2.500-	0.683-
	Posttest		*1.817
	Retention		
Analysis	Pretest	*2.167-	*1.933-
	Posttest		0.233
	Retention		
Synthesis	Pretest	*3.533-	*2.733-
	Posttest		*0.800
	Retention		
Total	Pretest	*11.333-	*6.200-
	Posttest		*5.133
	Retention		

* Statistically significant at the level of significance ($\alpha=0.05$)

It is clear from Table (5) that:

- Students' achievement at the level of remembrance in the post-measurement is better than that of students at the same level in the two measures: pre- and retention.
- Students' achievement in terms of understanding and comprehension in the post-measurement is better than students' achievement at the same level in the two measures: pre-test and retention.
- Students' achievement at the application level in the post-measurement is better than students' achievement at the same level in the two measures: pre-measurement and retention.
- Students' achievement at the analysis level in the post-measurement and retention is better than students' achievement at the same level in the pre-measurement.
- Students' achievement at the level of composition in the post-measurement and retention is

better than that of students at the same level in the pre-measurement. Also, students' achievement in post-measurement is better than their achievement in retention measurement.

- Students' overall achievement in post-measurement and retention is better than students' achievement in pre-measurement, and students' achievement in post-measurement is better than in retention measurement.

4.2 Results related to the second hypothesis, which stated the following

There are no statistically significant differences at the level of significance ($\alpha \leq 0.05$) in the academic achievement of the English language subject among the seventh-grade students in the Public schools in Wadi Al-Sir directorate of education in terms of measurements: pre-, post-, and retention, among members of the control group.

To examine the hypothesis, the researcher used the MANOVA multivariate analysis of variance test. And statistician Wilk's Lambda Where Table (6) shows the arithmetic averages, while Table (7) shows the results of the multivariate dependent analysis of variance.

Table 6: The arithmetic averages of the control group in the measurements: pre-, post, and retention

Measurement/ Level	Pre	post	Retention
Remembering	2.833	3.883	2.867
Understanding and comprehension	5.133	6.533	6.233
Application	2.500	4.250	3.400
Analysis	1.400	2.667	2.217
Installation	1.617	4.267	3.483
Total marks	13.483	21.600	18.200

Table 7: Results of repeated multiple-measurement variance analysis (MANOVA), And statistician Wilk's Lambda to examine the significance of the differences between levels in the measurements: pre-, post-, and retention, for the control group

Level	Wilk's Lambda Value	F- Value	The degree of freedom of the numerator	The degree of freedom of the denominator	The level of significance
Remembering	0.754	9.444	2.00	58.00	*0.00001
Understanding	0.960	1.209	2.00	58.00	0.306
Application	0.772	8.587	2.00	58.00	*0.001
Analysis	0.905	3.309	2.00	58.00	0.056
Installation	0.704	12.207	2.00	58.00	*0.00001
Total marks	0.694	12.809	2.00	58.00	*0.0001

Statistically significant at the level of significance ($\alpha \leq 0.05$)

It is evident from the results of Table (7) that there are statistically significant differences at the level of significance ($\alpha \leq 0.05$) between the levels of goals (remembering, application, Installation and overall score) in the measurements: pre-, post- and retention, for the control group, to find out which levels in the three measurements, between (Sidak post-hoc test) were the best, a Sidak test was used to compare the levels, and Table (8) shows the results of the Post comparison.

Table 8: CEDAC test results for a dimensional comparison between levels in the three measures: pre, post, and retention

Level	Measurement	Pre	Post	Retention
Remembering	Pre		*0.967-	0.005
	Post			*0.917
	Retention			
Application	Pre		*0.850-	0.867
	Post			*1.717
	Retention			
Installation	Pre		*1.517-	0.717
	Post			*0.800
	Retention			
Total marks	Pre		*5.583-	2.333-
	Post			*3.250
	Retention			

Statistically significant at the level of significance ($\alpha \leq 0.05$)

It is clear from Table (8) that students' achievement in:

- Students' achievement at the level of remembrance in the post-measurement is better than that of students at the same level in the two measures: pre- and retention.
- Student achievement at the application level in the post-measurement is better than students' achievement at the same level in the two measures: pre-measurement and retention.
- Students' achievement at the level of Installation in the post-measurement is better than that of students at the same level in the two measures: pre-measurement and retention.
- Academic achievement in the post-measurement is better than academic achievement in the two measures: pre-measurement and retention.

4.3 The results related to the third hypothesis, which stated the following:

There are no statistically significant differences at the level of significance ($\alpha \leq 0.05$) in the academic achievement of the English language subject among the seventh-grade students in the Public schools in Wadi Al-Sir directorate of education in post-measurement, between individuals of the control and experimental groups.

To examine the hypothesis, the researcher used the T-test for two independent groups. The results of Table (9) show that.

Table 9: T-test results for two independent groups to examine the significance of differences in the levels measured by the post test, according to the group variable

Levels of posttest measurement	Experimental (n = 60)		Control (n = 60)		T Value	The level of significance
	Average	Deviation	Average	Deviation		
Remembering	4.100	1.374	3.883	2.233	0.640	0.523
Understanding and comprehension	6.650	2.349	6.533	3.275	0.224	0.823
Application	5.083	1.788	4.250	2.729	2.059	*0.042
Analysis	3.417	1.487	2.667	1.612	2.648	*0.009
Installation	5.283	2.026	4.267	2.510	2.441	*0.016
post test	24.533	6.573	21.600	9.287	2.019	*0.046

*Statistically significant at the level of significance ($\alpha \leq 0.05$), Degrees of freedom (18), the tabular value of t (1.96)

The results of Table (9) show that there are statistically significant differences in the levels of application, analysis, Installation, and dimensional measurement according to the group variable.

These differences show the superiority of the experimental group over the control group, while there are no statistically significant differences in the levels of remembering, understanding and comprehension measured by the post measurement, and this indicates that there is an effect of learning using educational games on academic achievement.

4.4 Results related to the fourth hypothesis, which stated the following

There are no statistically significant differences at the level of significance ($\alpha \leq 0.05$) in measuring retention, between individuals of the control and experimental groups.

To examine the hypothesis, the researcher used the T-test for two independent groups. The results of Table (10) show that.

Table 10: T-test results for two independent groups to examine the significance of differences in the levels measured by the post test, according to the group variable

Levels of posttest measurement	Experimental (n = 60)		Control (n = 60)		T Value	The level of significance
	Average	Deviation	Average	Deviation		
Remembering	2.783	2.034	2.867	2.004	0.226	0.822
Understanding and comprehension	5.683	2.581	6.233	2.971	1.083	0.281
Application	3.300	2.479	3.400	2.644	0.214	0.831
Analysis	3.183	1.372	2.217	1.627	3.519	*0.001
Installation	4.483	2.190	3.483	1.935	2.650	*0.009
Retention measurement	19.433	7.536	18.200	8.324	0.851	0.397

*Statistically significant at the level of significance ($\alpha \leq 0.05$), Degrees of freedom (118), the tabular value of t (1.96)

It is evident from the results of Table (10) that there are statistically significant differences in the two levels of analysis and Installation according to the group variable, and these differences show the superiority of the experimental group over the control group. While there are no statistically significant differences in levels of remembering, Understanding and comprehension, application, and retention measurement, this indicates that the method of learning using educational games helps students to retain knowledge that develops higher mental levels, such as analysis and Installation, for longer periods of time compared to traditional methods of education.

5. Discussion

With technological advances, there has been a need to develop diverse strategies based on learners (students) using the active classroom strategy, allowing them the opportunity to work faster, compete among themselves and the ability to self-learn through role-playing, and carry out various activities that suit all levels without exception and linked to the educational material, and experimentation which led to the modification of educational practices, and improve their performance, as the learner is an active participant in the educational process.

The teacher showed participation at the beginning when he viewed the idea of an active class, and acceptance of the idea, in the hope that the program will produce its results, has shown its willingness to implement the idea because of its ideas and modern methods to keep pace with the requirements of the current era, for students in the experimental group and based on the teachers' observation and participation, the students' reactions were good, and after continuing the experiment They are eager to English class and interact more with strategy. This was reflected in their performance in the various skills contained in the following module, which led to the teacher's enthusiasm to continue. At the end of the experiment, the teacher commended the teaching method through the active class strategy and adopted it in the coming years.

6. Conclusion

There are no direct previous studies that have dealt with the interaction between learning by playing and students' past achievement level. The researcher explains this result through the fact that the improvement that occurred as a result of using the play-based teaching method had an effect on the various educational levels of the students, and this would reflect that play is a characteristic associated with the human being, the interaction of students through play reflects the extent of the human need to learn through activities, especially since all students have previous experiences of learning through play when teaching them the language and many natural and social concepts, so we find that students at different levels of achievement have improved through learning by playing.

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