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The Effect of Educational Software on Academic Achievement in Computer Curriculum for Basic Seventh-Grade Students in King Abdullah II Schools for Excellence in Jordan

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Abstract
This study explores the effect of educational software on academic achievement in computer curriculum for basic seventh-grade students in king Abdullah II schools for excellence in Jordan. The study follows a quasi-experimental design by dividing the students into an experimental group and a control group of 50 per group. The former was taught through the instructional software, whereas the latter was taught through in-class instruction only. Having completed the implementation of the instructional software, the researcher applied the achievement test to both groups in order to verify the potential effect of the instructional software on students' achievement. The findings reveal a number of results, the most significant of which are that there are statistically significant differences in the students' mean scores attributed to the teaching method in favor of the experimental group which was taught through the instructional software The findings also reveal that there is no statistically significant differences in the mean scores of the seventh grade students in the computer subject attributed to either gender (male, female), or the interaction between the teaching method and gender. A number of implications and recommendations are put forth, the most important of which is the necessity to work on the utilization of modern strategies and methods in teaching computer due to its crucial effect on improving the students' academic achievement.
Keywords: instructional software, seventh grade, computer, achievement.
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INTRODUCTION

The ultimate aim of the educational process has always been to build a conscious, educated individual who is able to adapt and adapt to the society and environment in which he lives. It must be considered the main axis, and his needs must be met, and prepared in a manner that is commensurate with the accelerating technological revolution around the world. These considerations are by resorting to educational technologies and their developments in which the objectives of education are achieved, and the computer and modern educational programs are among the most prominent developments produced by modern technology in the twentieth century. Fields, as a powerful tool for storing, processing and transmitting information . It has become clear from the studies carried out by many of the leading universities in the United States of America on school students of different educational stages, that computer-enhanced education methods led to better results and that students who learned with computer aid outperformed their colleagues who did not use the computer (Baharvand, 2014). In addition, the use of computers in the educational process significantly raised the teacher's performance, and reduced students' complaints about the subjectivity of evaluation, which clearly depends on the objectivity of those in charge of the educational process (Abu Jaja, 2018).

It is known that the computer and its technical programs help to improve education, learning, media and culture, and control people's behavior in their daily lives. The focus in the education process should not be on the computer as much as it is on the educational program in which it is placed. The computer is nothing but a tool for transfer, storage and recording. It is the one which does the real education process (Al Surur, 2018).

The computerized educational software of all kinds allows the learner to learn by himself without the need for in-depth knowledge of computer science, and the use of the computer and its educational software may be the most appropriate form of computerized education programs in teaching different scientific subjects due to its advantages such as the speed of searching for information and displaying it in different forms (Benno , 2017), accompanied by visual and auditory stimuli that increase the fun of learning, and present knowledge to the learner in an interesting and attractive manner that increases his motivation towards learning, and increases his ability to follow up, persevere and continue learning (Al Muhairi, 2019).

THE STUDY PROBLEM

The problem of the current study comes from the urgent need to diversify the teaching methods and methods used, to take into account the individual differences between learners in the field of teaching and learning, such as the use of computers and its educational software as a teaching aid, especially since it has become widespread in various areas of life and that the majority of developed countries use computers and its software. Educational

as an aid in teaching, so the researcher felt the need to conduct a local study related to identifying the effect of educational software on the academic achievement in the computer subject for seventh grade students in King Abdullah II Schools for Excellence in Jordan. This study came to reveal the change in the achievement of class students The basic seventh resulting from the use of two different methods for presenting one educational material, which is a unit (computer culture), one of which is implemented according to the designed educational software, and the second is according to the usual method.

THE IMPORTANCE OF STUDYING

The importance of this study stems from:

•The importance of working on the design of educational software in computer subject for seventh grade students, and the importance of disclosing its impact on academic achievement.

• The importance of the results emanating from the study and the proposals.

• The importance of revealing the differences and similarities between the current study and previous studies.

•Strengthening previous studies and research in this field.

OBJECTIVES OF THE STUDY

This study aimed to:

Designing educational software for computer subject for seventh grade students and identifying its impact on their academic achievement by applying it to an intentional sample of students from King Abdullah II Governmental Schools for Excellence in the Hashemite Kingdom of Jordan.

STUDY HYPOTHESES

1.There are no statistically significant differences at the significance level ($\alpha \leq 0.05$) in the achievement of seventh grade students in computer subject due to the method of teaching according to the designed software, and the ordinary method.

2. There are no statistically significant differences at the significance level ($\alpha \geq 0.05$) in the achievement of seventh grade students (the experimental group) in computer subject due to the interaction between method and gender.

STUDY VARIABLES:

Independent variable: teaching method (educational software).

Dependent variable: academic achievement.

The controlling variable (intruder): gender.

STUDY APPROACH

The semi-experimental approach (a control group with a post-test) was followed, due to its suitability of this method to the nature of this study, according to his knowledge of previous studies in this field, which followed the same methodology, which aimed at designing educational software in the computer and testing its impact on the achievement of seventh grade students in the King's schools. Abdullah II for Excellence in Jordan, and the software was applied to the seventh grade students in the school through a self-learning process, where the learners were provided with the software in the school lab to be used for study during the first two weeks of the shift.

STUDY LIMITS AND LIMITATIONS:

This study was conducted according to the following limits and limitations:

1. Time limits: the study was limited to the first semester of the academic year (2020/2021 AD).

2. Human limits: This study was limited to seventh grade students in King Abdullah II Schools for Excellence.

3. Spatial boundaries: King Abdullah II School for Excellence / Jerash in the staff of the Directorate of Education in Jerash Governorate.

4. Objective limits: The educational content in the educational software was limited to the computer culture unit from the computer book for the seventh grade, which is scheduled for students from the Jordanian Ministry of Education in the academic year (2020/2021 AD).

TERMINOLOGY OF STUDY

1. Educational software: It is: "those materials that are programmed by the computer and are used for any educational purpose, and include different ranges from language learning programs to classroom management programs to educational software aimed at making education more effective and efficient." (Al Hila, 2017).

2 .Achievement: I defined it as "a learning achievement for the subject, which means reaching a certain level of information acquisition and the required skills, and this is determined by standardized tests, teacher reports, or both." (Al-Jalali, 10, 2016).

3. Computer subject: It is one of the subjects taught to school students and includes training them on the use of computers and many related programs.

THEORETICAL FRAMEWORK

Educational software and learning technologies:

The rapid developments that occurred in the world of technology in the twenty-first century, imposed the use of computers in many fields, especially the field of education, as the design or production of educational software

and its use in the field of education helps the teacher and students to achieve the desired educational goals with the least time and effort (Furo, 2015). , compared to traditional methods of education, so the use of the computer as a tool in this process is called computer-assisted education, as there are many fields of computer use in education where it can be used as an educational goal, or as a tool, or as an assistant factor in the educational process, or as an assistant in educational administration (BaniYounis, 2018).

Educational software is also one of the most important uses of computers in the learning process in the current era, as these software of all kinds allow the learner to learn by himself without the need for deep knowledge of computer science (Grossman, 2016), and its use is usually appropriate for teaching various curricula and subjects, given the Because of its many advantages, such as quick access to information, and the ability to display it in different ways that depend on visual, audio and kinetic effects, which increase the fun of the learning process, and provide knowledge in an interesting way to the learner, which increases his perseverance and continuation of the learning process without getting bored (Al Sorour , 2018).

Therefore, it is possible to rely on information and communication technology (ICT) and its tools in the production of educational software that helps to develop and improve teaching and learning methods, which would provide an effective educational environment that helps to motivate and motivate students and remove individual differences among them in an effective manner (Al-Juhani, 2017) .

Several studies, such as (Al-Muhairi, 2019) and (BaniYounis, 2018) confirmed that reinforced learning methods using different educational software led to better educational outcomes, and that students who learned through educational software had higher academic achievement than their peers who learned by traditional methods, especially in subjects in which students face low achievement in their studies such as science, computer, mathematics, and the Arabic languageand other materials.

THE CONCEPT OF EDUCATIONAL SOFTWARE

Educational software is one of the most important uses of computers in education, as they are: "educational materials that are designed and programmed by the computer, and the learner deals with them according to his ability and speed in the learning process. and others) and be supportive of the curriculum and academic content" (Al-Juhani, 2017: 57).

THE IMPORTANCE OF SOFTWARE IN THE EDUCATIONAL PROCESS:

The importance of educational software in the educational process is shown in the following (Al Suroor, 2018).
Educational software works to motivate students to interact more with the educational material and stimulate teamwork among them. Stories and films can be shown, which increases the learner's comprehension of the topics at hand, and educational materials can be produced in different models to display the educational material and facilitate the educational process and the process of presenting the required material. Facilitates the work of projects that are difficult to do manually, using simulation methods.

TEACHING TECHNIQUES:

The twentieth century witnessed a great scientific, knowledge and technological revolution, the impact of which reached various fields and fields of life, and the educational system was the most affected by it. Many educational trends and theories appeared that aimed to absorb the large volume of science and knowledge (Helsel, 2012). Early on, educators were keen to introduce modern technologies into the educational process, so multimedia was used, such as audio, images, and video, to add interactive features to the educational process, in order to transform abstract concepts into tangible concepts that the student can better understand and comprehend (Al Yateem and Habbush, 2014).

The scientific and cognitive revolution directs educational efforts from using audio-visual aids in the educational process to studying the educational situation as a whole (Al-Hamrouni, 2011). As the education process is an organized process, it consists of several parties, namely the teacher, the learner, the educational material, the teaching aids, and the learning environment. The teacher prepares the teaching aids and the educational environment to serve the educational process and achieve the learning goals (Hamidsheh, 2016). Therefore, the educational curricula were affected by the huge technological revolution and the explosion of knowledge in all fields, and the computer entered the educational process strongly as an educational method because of its role in increasing the activation of the role of the learner and arousing his motivation (Ali, 2013).Because of the importance of using computers in increasing learners' motivation, the Jordanian Ministry of Education began to gradually introduce computers into the educational system until the computer became a main tool in the educational systemstarting from the seventh grade to the end of the secondary stage (Al-Manzlawy, 2005).

STAGES OF DEVELOPMENT OF EDUCATIONAL TECHNOLOGIES:

Educational technologies developed and passed through several stages until they reached their current concept. As indicated by (Othman, 2015; Mustafa, 2012; Shamma and Ismail, 2008, Memnun, Hart &Akkaya, 2019), the stages of development of educational technologies can be summarized as follows:

1. The stage of visual education: providing the learner with experiences through the use of tools that address the sense of sight, which is the basis of the learning and teaching process, such as the use of pictures, drawings,

models and maps.
2. Audio-visual education stage: Gaining experiences for the learner through the use of tools that address the senses of hearing and sight at the same time, such as the use of television, radio and recording devices.
3. The stage of education using educational means of communication, so the concept of communication began to appear, which is the process of interaction between the teacher and the learner, so the interest in learning methods began more than the attention to devices and tools. The teacher (the sender) has new experiences (message) that he wants to convey to the learner (the future) by using a specific tool (communication means).
4. The stage of education in light of the concept of systems: the system is a group of ordered and organized elements that integrate with each other to achieve common goals. The educational system is an integrated system and the educational materials are basic components of this system.
5. The American Educational Communication Technology (AECT) defines educational technologies as the theory and practice of designing, developing, using, managing, and evaluating processes and resources for learning.

TEACHING TECHNIQUES AND TEACHING AIDS.

Most of those working in the educational field use the term "Instructional Aids" as a term synonymous with the term "Instructional Technique", but in fact, educational aids are part of educational technologies. For any educational situation, then these solutions are evaluated, and to achieve this, it is necessary to start analyzing the content of the scientific material, then defining the educational goals accurately, then choosing the appropriate teaching strategy, then choosing the appropriate educational method to achieve the goals. Montague, Warger& Morgan, 2015) As for educational aids, as defined by Kinder, "they are tools and means that address the senses, which the teacher uses to transfer experiences to the learner in the educational situation, to raise the efficiency of the educational process, and achieve the desired goals" (Al-Hamrouni, 2011).

MODERN TRENDS IN THE FIELD OF EDUCATIONAL TECHNOLOGIES:

Many modern technological innovations appeared, most notably the computer, and the computer had a prominent role in the development of educational technologies, especially its interaction with a number of technologies such as the Internet and satellite communication, so the concepts of self-learning and the uniqueness of education appeared, computer-assisted learning, micro-education, distance learning , online learning, e-learning, and programmed education (Mustafa, 2012), and all recent trends have called for the learner to be the focus of the educational process, and the teacher to be the facilitator and guide of the learning process (Al-Hamrouni, 2011.)

SECOND: PREVIOUS STUDIES

This part includes a presentation of previous studies related to the subject of the study, and these studies were presented in chronological order from the oldest to the most recent.

The study of Al-Samirat (2010) aimed to know the effect of using computerized software on the academic achievement of the students of Karak University College in the Computer Principles course. Semi-experimental in conducting his study, and the results of the study concluded that there are statistically significant differences in the total arithmetic mean on the achievement test in favor of the experimental group, as well as the presence of statistically significant differences in the total average in favor of females in achievement, as well as an effect of the interaction between method and gender.

The study of Fargoun (2011) aimed to measure the impact of the use of cooperative learning through social software (blogs and instant messaging) on the achievement and performance of students of the Department of Educational Technology at the Faculty of Islamic Education in a computer course (2), as the researcher followed the experimental approach and the descriptive analytical approach in conducting his study The study sample consisted of (46) male and (47) female students, they were divided into two groups (experimental and control), (23) male and (24) female students in the experimental group and (23) male and (23) female students in the control group. And to test the hypotheses of the study, the researcher prepared the educational content of the program after reviewing the computer course (2), and the achievement test that included (5) verbal questions and (24) true-false questions with a final score of (80). There are differences in students' achievement due to the method of teaching, and there are differences in the average performance of the two groups on the post-test with regard to general performance and computer use in favor of the experimental group, and there were no differences in the performance of the experimental group due to gender.

Al-Hassan's study (2012) also aimed to identify the impact of using computer-assisted education (CAI) software on students' acquisition of computer application skills. 234 students, who were randomly divided into two groups, an experimental group with (119) students and a control group with (115) students. To test the study hypotheses, the researcher prepared the educational software and the achievement test with a final score of (100). The estimations of the experimental group members were higher than the average estimations of the control group members on the post-test. The results also indicated that the experimental group students benefited from the software in learning computer application skills.

The study of Al-Zahrani (2012) also aimed to reveal the effect of educational software in developing the

skills of using some computer programs among students of the second year of secondary school in Al-Baha region. The researcher used the experimental method on two equal experimental groups of (25) students per group. The observation card, and the results of the study concluded that there are no statistically significant differences between the average scores of the students of the first experimental group who learn by self-using educational software, and the average scores of students of the second experimental group who learn using educational software in addition to the regular share in the post test of the following skills: (Send Fax using word text editor program, create appointments using outlook program, create database using program) after setting pretest for both groups.

Al-Ghamdi's study (2018) aimed to reveal the effectiveness of a suggested educational software in developing the achievement and skills of second-grade students in the computer course, as the researcher followed the quasi-experimental approach in conducting his study. They were randomly divided into two groups, one of them is a control group taught in the usual way, and the other is an experimental one that is taught according to the proposed educational software, with (24) students per group. The researcher also followed the experimental method in conducting his study, and the study concluded that there are statistically significant differences between the average scores of the students of the experimental and control groups in the post-measurement of the achievement test in favor of the experimental group. Observation and for the benefit of the experimental group.

The study of Nihad and Faseeh (2019) also aimed to identify the impact of the use of computerized educational programming with data presentation in giving educational content in the subject of computer applications and the effect of this method on the performance of students in the computer subject, as the researcher followed the quasi-experimental approach in conducting his study, and the study sample consisted From (30) students of the course were randomly divided into two groups, an experimental group with (15) students and a control group with (15) students as well. The experimental group was taught the educational content through the educational software, while the control group was taught in the traditional way. (The lecture), and the results of the study showed that there were statistically significant differences for the experimental group in their post-test performance.

COMMENTING ON PREVIOUS STUDIES:

After presenting a set of previous studies, it is possible to comment on these studies through two types:

THE SIMILARITIES:

The current study was similar to the Al-Samirat study (2010), the Farjoun study (2011), the Hassan study (2012), the Al-Zahrani study (2012), the Al-Ghamdi study (2018) and the Nihad and Fasih study (2019), in terms of the goal and the tool used, which was educational software in teaching a course The computer, as it was similar to the aforementioned studies in terms of the method used.

THE DIFFERENCES:

This current study differed from some previous studies, including Al-Samirat study (2010), Farjoun study (2011), Al-Hassan study (2012), Al-Zahrani study (2012), Al-Ghamdi study (2018) and Nihad and Fasih study (2019), in terms of the academic stage, except for that. The current study differed from some previous studies in terms of the study population and the sample.

The researcher benefited from previous studies by expanding his knowledge of these studies in theory and references, as well as how to prepare and implement the achievement test, how to choose the sample, use appropriate statistical methods, and interpret the results of the current study.Perhaps the most prominent feature of this study is that it focused on students of the basic stage, and it is one of the first studies in the limits of the researcher's knowledge, which will use the effect of educational software in teaching computer subject, and measure its impact on the achievement of basic stage students in Jerash Governorate. A unit of study was taught from the seventh grade curriculum of the computer subject, and focused on the entire subject using educational software that came to solve the problem of shortcomings and poor achievement of students in the subject.

METHOD AND PROCEDURE

STUDY COMMUNITY:

The study population consisted of all seventh grade students in King Abdullah II Schools for Excellence in the Hashemite Kingdom of Jordan.

THE STUDY SAMPLE:

The sample of the study was chosen in an intentional way, where (100) students were selected from the seventh grade students at King Abdullah II School for Excellence / Jerash, they were divided into two groups, with (50) male and female students for the experimental group, with (25) male and (25) male students. Female students and (50) male and female students for the control group, consisting of (25) male students and (25) female students.

STUDY TOOLS:

To achieve the aim of the study, the following tools were used:

FIRST: THE EDUCATIONAL OBJECT:

A. COMPUTERIZED EDUCATIONAL OBJECT (SOFTWARE): The computerized and software educational material has been prepared according to several stages:

1. The educational object from the Computer Culture Unit consisted of the computer book for the seventh grade basic / Part One, which is scheduled for students from the Jordanian Ministry of Education for the academic year (2020/2021 AD) and included the following lessons: computers, areas of computer use, viruses, proper computer handling, jobs in information technology.
2. The stage of computing (programming) the educational object

After reviewing the educational literature and knowing the stages of preparing the computerized lessons, the researcher prepared a paper design for the educational technical software after analyzing the content of the lessons used. And because of the interaction between the student and the program, and the possibility of using multimedia such as video, audio, moving and static images, and different types of texts, the researcher followed in preparing the educational technical software major steps during the design and presentation of the software, which consisted of five lessons. Each lesson contains a set of screens and scenes, where each scene is a lesson consisting of (6-9) slides in addition to a scene that includes a short test for each lesson consisting of (4-6) slides. These lessons included in the study unit are: the first lesson the computer, the second lesson the areas of computer use, the third lesson Viruses, the fourth lesson, the proper handling of the computer, the fifth lesson in information technology, and the student chooses the title of the lesson to be learned by clicking on the file of the lesson.

Each lesson contains a set of educational slides so that each lesson begins with a slide containing the lesson map, which facilitates the student's transition to each part of it easily and easily, and he can return from it to the map slide, which enables him to move between the parts of the lesson, where each lesson consists of several elements as follows Introduction, educational objectives, educational content, exercises.

The student chooses any element of the lesson to move to it and display its content and return to the lesson map or move to the next element in sequential order by pressing the Next button. Through the possibility of muting or adjusting the volume level or presenting or delaying the video, it contains a feedback that helps the learner by interacting with his response to the exercises and provides a set of audio, text and graphic instructions and instructions during use, and the student can exit the program in an easy way through the exit button. Lessons are in the same style, in accordance with the standards of using multimedia and designing educational software.It was presented to a group of arbitrators, educational and technical specialists (computer subject supervisors and a group of teachers and programmers), and based on the feedback, some screens, videos, images and colors were modified.

B. TEACHING OBJECT FOR THE USUAL TEACHING METHOD:

The educational object of the Computer Culture Unit consisted of the computer book for the seventh grade basic / Part One, which is scheduled for students from the Jordanian Ministry of Education for the academic year (2020/2021 AD) and included the following lessons: computers, areas of computer use, viruses, proper computer handling, jobs in information technology.

SECOND: THE ACHIEVEMENT TEST (POST-TEST).

After analyzing the content of the educational material, determining the educational goals to be achieved through the educational material, and creating a table of specifications, the researcher prepared an achievement test based on the educational goals and the table of specifications, with the aim of measuring the educational achievement of students, and this test in its final form consists of (20) paragraphs of Multiple choice type, each paragraph has four choices, one of which is the correct answer and the total mark for the test is from (20) marks. In order to verify the validity of the test, it was presented to a group of arbitrators specialized in educational techniques and computer teaching methods. The stability of the test was verified by applying it in its final form to an exploratory sample consisting of (20) male and female students from outside the study sample, and the same test was re-applied to the same sample after A week, the correlation coefficient was calculated using Pearson's equation and its value was (0.81), and this value is acceptable for the purposes of this study. The internal consistency coefficient was also calculated using Cronbach's alpha equation and its value was (0.85), and this value is sufficient for the purposes of this study. Difficulty and discrimination coefficients were also calculated for the achievement test, and Table (1) shows this:

TABLE NO. (1): DIFFICULTY AND DISCRIMINATION COEFFICIENTS

Paragraph number	Coefficient of Difficulty	Coefficient of Excellence	Paragraph number	Coefficient of Difficulty	Coefficient of Excellence
1	0,30	0,51	11	0.55	0.34
2	0,65	0.23	12	0.25	0.32
3	0,35	0,58	13	0.35	0.60
4	0,35	0,25	14	0.45	0.63
5	0,45	0,25	15	0.35	0.66
6	0,20	0,34	16	0.25	0.32
7	0,30	0,52	17	0.40	0.45
8	0,20	0,26	18	0.30	0.36
9	0,40	0,34	19	0.40	0.47
10	0,35	0,52	20	0.50	0.28

Table No. (1) shows that the difficulty coefficients for the achievement test ranged between (0.30-0.55), and accordingly, all the difficulty indicators for the test are acceptable and within the normal limit, as it appears from the previous table that the discrimination coefficients for the test items ranged between (0.23-0.23) 0.66), and accordingly, all discrimination coefficients are considered acceptable and within the normal and appropriate limit for conducting the study.

The apparent validity of the test: The test was presented to a group of (10) arbitrators with experience and expertise from the disciplines of computer teaching methods and curricula, measurement and educational evaluation, and educational supervisors for computer subject, with the aim of expressing their opinions about the accuracy and validity of the test content, and its suitability for the targeted participants in the current study. In terms of: Clarity of the paragraphs, the linguistic formulation, and their suitability to measure what they were set for, and adding, modifying, modifying or deleting what they deem appropriate from the paragraphs. Make any modifications.

STUDY PROCEDURES:

To achieve the objectives of the study, the researcher performed the following actions:

1. Determining the study problem, its importance, objectives, questions and variables, in light of the effect of using educational software on the achievement of seventh grade students in computer subject.
2. Building and developing study tools by reviewing the theoretical literature and previous studies, according to the constructivist theory for each of the achievement test and study plans for the first unit of the seventh grade computer book (Computer Culture).
3. Submit an application to the Education Directorate of Jerash Governorate to obtain a letter facilitating the task of applying the study.
4. Distributing the study tools and applying them to the study sample members and providing them with any clarification, after obtaining a letter facilitating the task.
5. Collecting the results of the achievement test (post-test) after confirming the response of the study sample members to it.
6. Conducting statistical analyzes of the responses of the sample members, and extracting the results to answer the study's questions and achieve its objectives.

STATISTICAL MANIPULATION:

To achieve the objectives of the study and answer its questions, the following statistical methods were used:

1. The T-test was used to identify the differences in the achievement of seventh-grade students in computer subject matter due to the method of teaching according to the designed software, and the regular method?
2. The (two way-ANOVA) test was used to identify the differences in the achievement of seventh grade students in computer subject due to the interaction between method and gender?

RESULTS

This study aimed to find out the effect of educational software on academic achievement in computer science for seventh grade students in King Abdullah II Schools for Excellence in Jordan.The following is a presentation of the results in light of the study hypotheses:

FIRST HYPOTHESIS: There are no statistically significant differences at the significance level ($\alpha = 0.05$) in the achievement of seventh-grade students in computer subject matter due to the method of teaching according to the designed software, and the usual method. To examine this hypothesis, the (INDEPENDENT SAMPLE T-TEST) test was used. To find out the differences between the two methods as follows:

TABLE NO. (2) (INDEPENDENT SAMPLES TEST.

Group	Number	Average	Standard deviation	Degrees of freedom	T	Sig
Software (experimental)	50	17.36	1.84			
Traditional (control)	50	12.88	1.97	98	11.707	0.000

It is clear from the previous table that there are statistically significant differences at the significance level (α = 0.05) in the achievement of seventh-grade students in computer subject matter that are attributed to the method of teaching. Zero and the acceptance of the alternative, which confirms the existence of differences in students' achievement due to the method of teaching, and by looking at the arithmetic averages, we find that the average achievement of students who were taught the unit allocated through the instructional strategy was (17.36), while the arithmetic mean of the students who were taught according to the method The traditional (12.88), which is a clear difference and confirms the results of the statistical analysis that there is a difference in the average achievement of students in the two groups.

THE SECOND HYPOTHESIS: There are no statistically significant differences at the significance level (α = 0.05)) in the achievement of seventh grade students (the experimental group) in computer subject due to the interaction between method and gender. The gender and method are as follows:

TABLE NO. (3) BIVARIATE ANALYSIS

Contrast source	Sum of squares	Degrees of freedom	Average squares	F	Sig
Method	501.760	1	501.760	135.003	0.000
Gender	3.000	1	3.000	0.807	0.324
Method*Gender	1.000	1	1.000	0.269	0.605
The error	356.800	96	3.717		
Total	23722.000	100			

It is clear from the previous table that there are no statistically significant differences at the significance level (α = 0.05) in the achievement of seventh-grade students in computer subject matter that are attributed to gender. The nullity and the lack of the ability to prove the alternative hypothesis, which confirms the existence of differences in the achievement of students due to gender for the students of the experimental group, as it is clear from the previous table that there are no statistically significant differences at the level of significance (α = 0.05) in the achievement of the seventh grade students in the subject of computer attributable to the interaction between the method and gender variables, as the calculated (F) value reached (0.269) with a significance level of (0.605), and therefore the null hypothesis is accepted and the ability to prove the alternative hypothesis confirms the existence of differences in students' achievement due to the interaction between the method and gender variables.

DISCUSS THE RESULTS

FIRST: DISCUSSING THE RESULTS RELATED TO THE FIRST HYPOTHESIS

The results of the statistical analysis showed that there were statistically significant differences in the average scores of students on the achievement test for computer subject, according to the different method in which the students were taught. And breaking the stalemate that plagues traditional teaching methods, in addition to what the researcher noticed about the students' demand for learning through new educational software, and this is related to students' love for change and the demand for everything that is new, as this is one of the structural features of students at this age, and the results of these The study is consistent with the results of the study of each of the Samirat study (2010), the Farjoun study (2011), the Hassan study (2012), the Al-Zahrani study (2012), the Al-Ghamdi study (2018) and the Nihad and Faseeh study (2019).

SECOND: DISCUSSING THE RESULTS RELATED TO THE SECOND HYPOTHESIS

The results of the statistical analysis showed that there were no statistically significant differences in the average scores of students on the achievement test for computer subject according to the gender of the experimental group students. Developmental and structural characteristics are very close, considering that they are still in the adolescent stage and have not yet entered the adolescence, which is the age at which each of them began to form ideas, beliefs and tendencies different from the opposite sex.

The results of the statistical analysis also showed that there were no statistically significant differences in the average scores of students on the achievement test for computer subject for the interaction between each of the teaching method and the gender of the student, and the researcher believes that this result is related with what was stated in the hypothesis of the second study, which showed that there are no differences due to gender. And since there is no effect of gender on the average student achievement, its interaction with the method used in teaching students will not have a noticeable effect.

RECOMMENDATIONS:

After reviewing the results of the statistical analysis, the researcher recommends the following:

1.The necessity of working on using modern strategies and methods in teaching computer subject because of their clear impact on improving the academic achievement of students.

2. Working to generalize this type of studies to be adopted by other researchers and to expand the research and investigation department to other study stages.
3. Working on providing training and educational courses for computer teachers to adopt educational methods and strategies based on building and developing various educational software that serves the public interest of students.
4. Conducting more studies on other study subjects and it is impossible to link and predict what came in this kind of studies with other similar studies.

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