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The Effect of Teaching Financial Mathematics by using The Computer on Academic Achievement and Students' Inclination Towards It "An Empirical Study on Students of The Second Stage in The Department of Financial science and Banking

Douaa Kh. Abid
The Secondary School of tolerant students in Baghdad
Douaa.abid.da@gmail.com

Zahraa A. Ali
Mechanical Power Engineering/ Refrigeration and Air Conditioning Technical Engineering- Dijlah University College
Zahraa.am2009@duc.edu.iq

Abstract
This study aims to investigate the impact of using computers to the second phase students in the Department of Banking and Financial science at the Dijlah University College in financial mathematics compared to the conventional normal way and find out their attitudes towards art. In the terms of the study sample size is (195) students from the second phase at the Dijlah College for the academic year 2017-2018 has been selected Intentionally for the application of the pilot study, this study attempted to answer the following :two questions
1-what the Effect of the use of computers in the teaching of financial mathematics to col-.lect the 2nd phase students in simple and compound interest
2-What students' attitudes toward the use of computers as a way to learn financial mathematics. To answer the above questions, the researcher used a computerized program has been prepared by using the slide show program (power point) and applied to the study tools on the selected sample and the collected data were analyzed using the statistical package program (spss) used the one way analysis of variance to verify the equality of study groups in the pretest and test (Kay Square) to compare the study groups and were :the most important findings of the researcher as follows
1-There is statistically significant differences at the level of significance (a = 0.05) between the means of the collection of the first phase students in the dimensional measurement in simple interest separation composite and interest due to the method of teaching .(Computer, Traditional) and in favor of computer teaching method
2-There are positive trends in the first phase students about the use of computers as a way to learn financial mathematics. The study recommended further studies to investigate the

effect of using the computer as a learning tool in the different educational levels and in various fields of science and the study of students' attitudes toward the use of computers in learning

1-Introduction

Technology is not an aim in itself, but it is a means of scientific and technical progress in this area. Technology is characterized as being of an intrusive nature with the goods and services it provides, and it is constantly developing. Every innovation usually leads to a better innovation as a result of human ambition and longing for knowledge and progress. On top of these innovations, which we will talk about, innovations related to computers. The use of the computer has witnessed a great expansion in various fields of life because of its advantages of speed, accuracy, and facilitation of various works. The tremendous benefit from the computer in the educational process and uses the computer as an educational aid with multiple patterns that serve the process of teaching and learning according to the nature of its service software for various educational purposes. And then provide patterns of new experiences for different mental processes. There are many reasons and justifications that tempt us to learn as much as we can from the use of computers in our daily or detailed lives, and to increase the benefits that we derive from this learning. Computer knowledge helps us to get good job opportunities, and it also makes our production work very efficiently and we are able to complete all the tasks that may be impossible to complete manually. As well as, the pleasure that we achieve by using this wonderful device. One of the most important reasons for our use of computers in general is to reduce the time and reduce the cost, as it reduces the cost of the work performed as well as improving the quality. The use of computers in educational institutions is an essential role for development, including programs that help students learn difficult subjects, such as the atom editor in chemistry, Mathcad in mathematics, statistical analysis programs, and many applications in various types of knowledge. The rapid spread of computers is one of the most important aspects of life in which we live, as its use has entered all aspects of economic, social and educational life, and the computer has become a common and mutual language among all people of all ages. Knowing its use has become one of the necessities of life in general and the necessities of educational life in particular. Thus, we offer a method that is characterized by all the specifications of the effective educational method for the teacher to use and employ in an enhanced and exciting way, and thus we provide a great service for students in changing their attitudes towards learning financial .mathematics and raising the level of their academic achievement

1.1-Research Methodology

1.1.1-Research problems

Modern education methods tend to the necessity of providing the student with practical skills in addition to theoretical study, and this method has been applied in Iraqi colleges and institutes on some curricula, and among the curricula taught in the Department of

Finance and Banking is the subject of financial mathematics, which was chosen to be Among the curricula that are taught practically and theoretically, this method of teaching may be reflected on the student's ability to understand the curriculum, negatively or positively, according to the personal differences between students, so the research problems :can be summarized by the following question

Do personal differences (scientific background, gender of the student, the student's use of social media applications, the level of the student in the preparatory stage) affect their understanding of the mathematics curriculum Finance based on practical study

1.1.2-The importance of the research

The importance of the research stems from the importance of the subject itself and its modernity, as the introduction of the practical method in teaching is one of the modern methods in teaching social sciences, and it is hoped that this experience will be reflected positively on the students' ability to absorb the prescribed curriculum and increase their .skills

1.1.3-Research aims

A. Giving a theoretical framework for the research topic to form an introduction to the .practical study

B. Measuring the extent to which students are able to comprehend the new curriculum, .which includes the method of practical study

.C. Getting results from practical experience

1.1.4-Research Hypothesis

H0: There is no relationship between the student's personal abilities and the ability to .learn financial mathematics using computer

H1: There is a relationship between the student's personal abilities and the ability to learn .financial mathematics using computer

1.1.5-Research Methodology

The research adopted the descriptive analytical method by building a questionnaire appropriate to the subject of the research and reflecting the research problem as well as its .ability to measure the research sub-hypotheses

1.1.6-Research limits

- .Time limits: the academic year 2017-2018
- Spatial limits: Dijla University College - Department of Banking and Financial .Sciences

1.1.7-Research and community sample

The comprehensive survey method was used by distributing (195) questionnaires to all .students of Dijla University College, Department of Banking and Finance, second stage

2-The theoretical aspect

2.1Technology and human needs, including computers

The world now lives in the midst of a renewed technological development that changes or affects our daily life, and here we are now seeing a huge change in the methods of production and delivery of energy and the innovation of devices and machines used in every home and factory, and all these innovations that control all aspects of life are a product of technological thought that aims to achieve human needs. Since human needs are many and varied, education and educational means were and still are the focus of his thinking, which he is trying hard to develop and present ready-made, easy to understand and com-.prehend. One of the entrances to education that will be later as a director in scientific life

2.1.1-Teaching aids

Teaching aids are the basic foundations upon which teaching operations are built, and they work to achieve the objectives of those operations. Whether the method of teaching is based on the teaching and the educational material or on the educated student as the focus of the educational process, the teacher needs a way to clarify concepts and facts, make them interesting and attractive, draw the learner's attention, and achieve the goals with the least effort, cost and time. Since experiences and skills are not productively achieved unless they are real and realistic and are the result of a practical application, eye-sighting, hearing, personal taste, touching, or real communication, the learner must have means to transfer information to live experiences that are perceptible more than the audible word. And it works on speed in understanding and memorizing facts for a longer period, and basically, the teacher uses an educational method to help him on learning, the same medium .[often does both [Alhassan1990

2.1.2-The computer and the importance of the methodological or teaching book

The use of the computer in education does not cancel the role of the methodological or teaching book, but it supports the book by means of clarification and provides the teacher with new educational strategies that develop his role as a teacher, but does not cancel it. So the lecturer is the basic structure in the educational process. The existing traditional system makes the teacher the first and perhaps the only source of information. This is what the computer, through its educational means, whether software or hardware that is used for the same purpose, tries to modify it. The existing strategy of using the educational computer is to modify the role of the teacher from a transmitter of information to a .guide to the learner

2.1.3-Impact of rapid developments in educational systems

The rapid developments that the world witnessed in many different aspects of life, which came in the form of a flood of technology, affected in one way or another in most aspects of human life. Hence, workers and those interested in education found an urgent need to reconsider educational systems, where technology finds its place in educational systems. Modern methods, which expanded their contents and multiplied their goals, which made

them need modern methods, methods and techniques in education to contribute to providing the learner with a degree of knowledge and necessary skills, develop his thinking and help him address the large increase in the preparation of learners, and among these .modern means was the use of computers in education

2.1.4-The importance of using the computer in education

The computer today plays a leading and purposeful role in accomplishing work and tasks with high speed and in a very short time due to the continuous and continuous development horizontally and vertically, horizontally in the development and expansion of the computer network with competing devices, including the problem of the Internet. And vertically, in adding new generations to the computer through scientific , technical and technological development. The computer has become a permanent and continuous companion for humane, starting with scientists, thinkers, businessmen, academics, technocrats and decision-makers: presidents, kings, leaders, ministers and even students. And workers in the markets, stakeholders , and workers in trade, economic and financial activities, and others [Farhan2011]. The idea of using the computer to manage the teaching process in its beginnings relied on administrative applications in the field of business administration , then it developed little by little until it became an independent topic in itself aimed at helping each student to reach the point of mastery of the subject or study subject. By fragmenting education, which requires dividing the subject or subject into small units that can be measured and evaluated, then a test is given about each unit for each student. To deal with it in a classroom in which there are a large number of students, so computer assistance in this field becomes necessary and even more necessary. Therefore, it has developed many systems and programs that help the teacher in the process of manage his [teaching as required [Almugira1993

2.1.5-The effect of computer use in education

The computer, which has established itself in many areas of life, will make a far-reaching contribution to the progress of students, as the world around them invests in and uses the computer. Therefore, it is logical for students to get acquainted with the computer in the stage of study is under the guidance and direction of teachers in preparation for the life that awaits them and the world around them. That the chances that the computer and the .[challenges it poses make it a priority for education [Kindil2006

2.1.6-The computer as an educational tool

The computer is an advanced means of transferring and distributing many educational materials using modern communication networks. In addition, the computer has many advantages and characteristics that make it a unique and highly effective educational tool. : [The following are the most important of these advantages [Al-Issa, 1990

1-Everyone who deals with a computer enjoys the feature of positive interaction between the computer and the person who uses it, which is different from the viewer's relationship .(with television, where the viewer's attitude is negative (watching and listening only

2-The computer provides individual care to everyone who uses it through mutual interaction, and thus it achieves an essential pillar of education that many teachers cannot apply .in their classes, in which the number of students is increasing
3-The computer provides students with great opportunities for experimentation and adventure without fear or intimidation. In dealing with the computer, students are liberated from fear and what causes it to curb their desire to explore new horizons and achieve advanced achievements, although the fear of making mistakes and being reprimanded is an issue, which does not exist in dealing with computers in the field of learning and .education
4-It is known that the computer as a machine does not feel tired, as it is characterized by patience, so the computer gives way to training, which relieves the psychological pressure that accompanies facing problems. of his students .
5-Experiments have proven that the computer is a huge motivating force for the student, and teachers are taken to invest this feature to the fullest extent, especially in the field of some subjects that they were considered difficult or boring in the past, such as mathematics with its various branches and levels
6-The computer achieves many constructive educational trends, such as education through exploration. Learning through observation and exploration is one of the things that are supported by the philosophy of education in our time. Exploration stimulates the ability .for renewed learning
7-The computer plays an important role in taking into account individual differences in terms of abilities, skills and different levels of learners and achievement, as the computer hands the reins of leadership in the learning process to the student himself, which helps to support self-confidence and openness domain in front of collection and growth

2.1.7-The computer as a problem-solving tool

All educators realize the great importance of problem-solving skills, and therefore focus in their work on providing the opportunity for students to acquire these skills that help students to think logically, allowing them to approach situations in a creative manner. Educational researchers emphasize the importance of these skills as basic skills to face .the demands of life
- :In this field, the importance of the computer is clear as follows
1-The computer rids students of the burden of arithmetic operations that they were performing with paper and pen when analyzing problems that hindered the process of thinking and solving problems.
2-The use of the computer to solve a problem that includes some variables allows shifting the center of attention from solving mechanisms to the relationships around which the .study revolves
3-Learning computer programming is an important method that allows students to develop problem-solving skills.

2.1.8-Benefits of using computers in education

Although some educators question the ability of computers to solve and address education problems, The use of the computer has benefits that cannot be overlooked, and these :benefits are as follows

1-The computer provides sufficient opportunities for the student to work at his own speed, .which is close to the concept of teaching

2-The computer provides the student with immediate feedback, according to his response .in the teaching situation

3-Flexibility, as the student can use the computer at the appropriate time and place

4-The computer provides an element of suspense in the presentation of the lesson

5-The ability of the computer to store the student's responses and monitor his reactions, which enables the detection of the student's level and the diagnosis of areas of difficulty .that he encounters, as well as monitoring his progress in learning

6-The computer enables the student to self-evaluation

7-The computer enables the teacher to effectively deal with the students' varying knowl- .edge backgrounds, thus achieving consideration the differences are individual

8-The computer facilitates the student's awareness of the dynamism and activity of the .learning process, that is, the realization that learning is a dynamic and active process

9-Enables technical computer capabilities, charts, tables, animations, geographic shapes, etc

The teacher aims to provide a teaching environment that is as close as possible to the real teaching situation, especially the situations that are not possible practically, dangerous or .(costly (planetary movement, nuclear reactions

10-The computer saves time and effort of the teacher and student and directs them to- .wards teaching interaction

11-The computer contributes to increasing the student's self-confidence and develops a .[positive self-concept [Abdel Hafez, 2001

2.2-The nature of the computer and the importance

The nature of the computer can be explained as follows

2.2.1-The concept of an electronic computer

An electronic computer is a device that has the ability to follow instructions sent to it for the purpose of processing incoming data. But he does not think, but rather he receives the raw materials represented by the different symbols (data) and by following certain instructions he processes these symbols, where he obtains the required useful information. The development in the computer industry led to a reduction in its size and an increase in its effectiveness. The main reason for this was the development in the design of electronic circuits. A computer is made up of a group of devices, each with its own mission. And the computer: a programmed electronic device that accepts some inputs in the form or programs and performs operations on them or the so-called processing, then outputs the . results in the form of outputs or stores them by Storing

2.2.2-A brief history of the development of the computer

In 1632, the English mathematician William Otterd introduced a new tool called the Slide Rule. In 1642, the French scientist Blair Pascal introduced the first Calculating Machine, called the Pascal Calculator. In 1671 AD, Von Leibnitz developed the basic concept of the first Multiplying Calculating Machine. It was actually shown for the first time in 1694 AD. This machine performs the multiplication process as a series of successive addition operations, and this machine is characterized by being manual [Al-Balushi, 1989]. In 1786, Johann Van Muller proposed the idea of building the Difference Engine, followed by Charles Babbage in 1812, who began developing the difference machine. It was designed to calculate various mathematical functions, and Babak completed its manufacture in 1822 AD [Al-Wardi, 1986]. In 1823, the English scientist Charles Babak presented a new mechanical calculator that he called the Difference Engine. It relies on some mathematical theories and was adopted by an insurance institution to calculate life insurance schedules. Baback also presented a mechanical computer called the Analytical Engine in 1833 AD. Charles Babbage was considered the father of numerical computers when he . presented a detailed machine project

The British Navy calculated and provided him with financial assistance to complete his project, but he did not succeed in performing the task. In the year 1833 AD, work began again and alone to complete an analytical calculator, and he continued working on it until 1842 AD, but it did not reach its end. In 1853 the first successful analytical calculator appeared in Sweden. In 1854, the scientist Paul proposed building a computer based on the zero and one digits. In 1858 the first successful computer appeared in the United States of America. In 1890, Dr. Herman Hollerith built a computer into a new mechanic to assist in the census operations that were taking place in the United States of America. He found that the time taken to prepare the census results using this computer was a quarter of the time it took to prepare similar results manually, and he established the first computer company The mechanism is the nucleus of the famous computer company IBM. In the year 1930 AD the Differential Ana machine was invented and this machine is capable of calculating differential equations. In 1932 Babak invented a machine that can generate mathematical tables and these tables depend on successive differences of functions, enabling them to perform a series of arithmetic operations Smith Babbage machine, during the years 1937-1944 AD, Dr. Machine Electro Mechanical, named MARK1 (MARK1), uses electromagnetic relays to perform the calculations. It is the first digital automatic calculator, with the support of IBM, and this machine consists of 78 devices connected to each other and works by directing a series of instructions for that. These instructions are on perforated paper [Al-Balushi, 1989] The first fully electronic calculator with its internal working concept is the Enlace Electronic Numerical Integrators & Computer, which was designed by J.P. Eckert and my clients J.W. Gauchely, both from the Moore School of Engineering at the University of Pennsylvania, completed in 1946 and the Enlace was faster than any calculator of its time. Electronic computers at this time in their history had an internal storage for memory, but it was used only to store numbers for arithmetic operations. It was developed for the US Army. Developed in 1945 AD, Dr. Neumann. John

Von Neumann The idea of designing the EDVAC electronic calculator, which is based on the idea of internal storage. EDVAC=Electronic Discrete Variable Automatic Computer In 1949, the Electronic Delayed Storage Automatic Computer was made at Cambridge University. In the year 1950 AD, the Standards Electronic Automatic Computer was made .[in the National Bureau 12Of Standards [Al-Wardi1986

2.2.3-Methods of using computers in the teaching and learning

:The methods can be dealt with as follows

1-The first level (CAI): It is the level at which the computer helps the teacher, assists him .and complements his roles, and it is what we term Computer Assisted Instruction

2-The second level (CMI): It is the level at which the computer is a substitute or a substi- .tute for the teacher, and it is what we call Computer Management Instruction

3-The third level (CBTH): It is the level at which the computer is used to help students develop new patterns of thinking that may help them learn in different situations that re- .quire logic and analysis

4-Computer Based Thinking In general, the computer contains many applications and .programs that can serve the process

- Text editor (Word): It is the most widely used application for text processing, through which the student is taught typing, text formatting, and development Creative thinking, as well as through which information can be saved, and arranged in files that are .easy to refer to at any time
- Electronic tables (Excel): It is used for tabular data, and through this it is possible to provide graphs that are useful in analyzing results, making statistics, teaching mathe- .matics, engineering and financial matters
- Power Point applications: This is characterized as one of the most applications that can be used in the teaching process, as the teacher can prepare slides and teaching panels that are used in the teaching process. It will be used in the presentation of the article. Educational programs, including scientific in an interesting and attractive way .accompanied by movement, sound and image
- Programming language (Auto Cad): This language is used to make drawings and .[maps [Al-Mustarihi1999

2.2.4-Methods of using computers in teaching

Opinions differ on the use of computers in teaching, as it can be used in the following :forms

1-Individual teaching: where the computer undertakes the process of teaching, training .and evaluation in a complete and essential way, i.e. it solves teacher's place

2-Computer-assisted teaching: in which the computer is used as a teaching aid for the .teacher

3-As a source of information: the information is stored in the computer and then used .when needed

4-The computer as an assistant for teaching globally: As a result of this importance, we

find that most schools in the countries of the world currently use the computer as an assistant in teaching (CAI), and it is a major part of traditional lectures. The results of many studies indicated that the use of the computer as a teaching assistant (CAI) provides a useful and manipulative teaching method, and that it is better than traditional methods such as recitation and lecture widely. There are many researches that indicate the effectiveness of the computer in providing more opportunities for social relations, opportunities for better teaching, and making students more willing to work in the form of groups around the computer than other educational activities. The traditional, that the first is more effective than the second in increasing students' achievement, in developing their inclinations towards what is taught to them, and what resulted from its use of accompanying learning that continues after students graduate from school. The ability to provide experiences in different forms , and in agreement with the psychological characteristics of students, and work to involve their senses in learning well, and to develop their inclinations towards .the subject

- The importance of teaching methods that modern education emphasize including . the method of technical teaching
- The technician is concerned with the process of linking the use of computers in teaching, increasing achievement and developing a tendency toward the subject. The importance of using the computer in learning because of its ability to provide experiences in .different forms as one of the modern educational technologies
- Paying attention to the teaching of statistics as one of the branches of mathematical subjects and its key, and it has a great connection with other sciences and the life of .the student and society
- The scarcity of studies examining the impact of computer use on students' achievement and developing their inclinations towards statistics subject according to the researcher's knowledge
- Enriching the Arab library with more scientific studies on computers
- The results of the study can be used to develop the educational process in Iraq and keep pace with the global development in the field of computer uses computer in teach- .ing

2.2.5Areas of computer use in the educational process

:It can be taken as follows

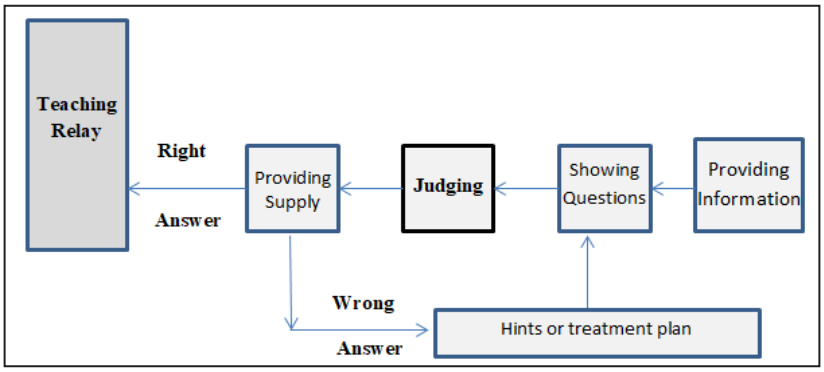
1-Computer Managed Instruction CMI

2-Computer Assisted Instruction CAI

3-The computer as an educational subject: This field confirms the so-called computer literacy or computer culture, and that whoever works on the computer does not have to be .a specialist in computer science or computer engineering

4-The computer as an educational tool (learning from the computer) and it consists of two directions: The first direction: Computer Aided Education (CAI), in which the student is exposed to different types of educational programs. We can consider (CAI) one of the most popular means of learning from the computer, and it can be either educational

programs that start with providing information and questions and judge the answer and then provide feedback, or exercise and practice programs that provide the student with additional exercises related to specific skills. These programs can be represented by the :following diagram



,[Scheme (1) the sequence of the teaching and learning process using the computer [Abdel Hafez2001

The second trend: Computer-managed education (CMI): This type depends on purely .administrative matters on the educational side

5-Computer as Philosophy Education: This field depends on issues from the pattern of the impact of computer use on student thinking, or the effectiveness of the computer for .providing learning in time and the specified location

6-Learning about thinking with a computer: This type depends on learning skills and processes or using one of the higher programming languages and computer games that deal with these processes

7-Managing Learning with Computer: This type focuses on helping the teacher or school manage the teaching process, such as word processing, spreadsheets, databases, and li-(brary retrieval systems. [Abu al-Rab2001] (System

2.2.6-Types of Teaching Programs

:It can be taken as follows

1-The Drill and Practice method: This method is the first and the most common and widely used, as the role of the computer in it is an assistant to the teacher in the teaching process through repetition in solving puzzles to consolidate the understanding of the student after reviewing the foundations and rules adopted in the solution in order to The (student) is aware of the solution method, and through work, the student can repeat the steps and the solution in order to consolidate the understanding and then move to the stage of student evaluation to indicate the extent of his comprehension and understanding -:of Article [Sana Hadi2001], and the method of exercise and practice benefits including

- .Provide the student with immediate nutrition when faced with the problem
- It gives the student training on concepts, skills and facts, which are useful for .teaching mathematics, statistics and languages
- The possibility of providing the teacher with immediate nutrition for each stu-

dent's performance
2-Tutorial: In this method, the teaching program provides information in small units, each of which follows a special question about those After that, the computer analyzes the student's response and balances it with the answer that the author of the teaching program has put into the computer, and in light of this, immediate feedback is given to the student, and the teaching program here takes the place of the teacher and the whole interaction ".takes place between the student and the computer
3-Simulation: It is the representation or construction of models to implement scientific experiments that cannot be implemented in the classroom due to time, danger, or difficulty in achieving them (such as chemical experiments, physical phenomena, nuclear reactions ... and others), so the electronic calculator helps the student to better understand the educational material [Al-Issa1993]. And a model The computer is not only easier, simpler, and less expensive than the physical model, but it may be the only possible model it was created to represent some real situations, for example, things that might happen as a result of a defect in an atomic reactor, which cannot be represented by a real physical model, .[but scientists know many things about that through computer models[Al-Mughira1993
4-Solving Problems: There are two types of these programs, the first type relates to what the student writes himself, and the other relates to what is written by other people in order to help the student solve problems. In the first type, the student identifies the problem logically, Then writes a program on the computer to solve that problem, and the computer's job here is to perform the calculations and sufficient treatments in order to provide the student with the correct solution to this problem. In the other type of these programs, the computer does the calculations, while the student's job is treating one or more variables. In an arithmetic problem related to triangles, the computer can help the student to provide him with the factors. All he has to do is reach the solution to the problem [Al-Heila 2000
5- Dialogue: The direct dialogue between the student and the computer is one of the foundations of computer-assisted learning. This dialogue is conducted with the intention of teaching a specific subject, and the entire information is provided to the student through a text programmed on the computer, and the student knows the sequence he wants to dis- .play the information, as well as be able to re-display the article was previously presented
6-Educational Games: Another style that is characterized as games and includes a discussion between two or more players, one of whom is the computer, and the software of the games depends on laws that can change during the game and in light of the data and results [Abdel Hafez 2001]. We can describe educational games as programs that deal with various issues with educational goals and in an interesting way that creates in the student a desire to strive and continue to implement the game that is designed primarily to .develop his strength of observation, logical thinking and reasoning skill
7-Certification for Testing: It is one of the patterns the task is in the teaching process because it improves the quality of the tests and increases their accuracy in measuring the extent of the student's knowledge, and to free the teacher from managing the test and :correcting students' answers. The computer is used here in two directions
Learning management: the computer runs the entire test and is responsible for ●

. doing it

- Test construction: The computer here is a store for a variety of questions that the teacher uses when constructing tests[Al-Saadi 1995].

8-Expert programs and artificial intelligence: Expert programs depend on declaring the relationships and rules that govern between the variables. Which depends on accumulated experience, such as when the application is to translate texts in previously unknown conditions. Expert programs are those programs that gather a lot of experts in a talk show in the manner in which a thinking person deals to lead him to conclusion or diagnosis, where it is possible to store specialized computer expert programs to answer questions in the field of his specialization, and there are expert programs for each field such as medicine, engineering, law and geography and other things, the student can ask the computer about any point in the field that suffices him from consulting senior specialists, because the consultation of these people has been programmed in advance with the computer, and the possible possibilities for the correct answer have been developed, and the expert programs ask the student prior questions, address his answers and give him possible solutions[Al-Heila,2012].

9-Individualization Education or self-learning: recent educational trends emphasized the importance of individualizing education, and focused on self-learning as a strategy that holds the learner responsible for his learning and takes into account his personal abilities and needs, and enables him to learn according to what these abilities allow and through the speed that suits him, where the learner races himself in learning and sets incentives for himself, and perhaps in the use of the computer, a choice of the most appropriate methods and the most voluntary tools for implementation strategies for self-learning and individualization of education[Hamdi,1989].

The challenges of the future 2.2.7

The challenges of the future require the development and modernization of education without fear that technology will replace the teacher. Rather, using it in the presence of a conscious teacher who is aware of its uses will be an incentive to develop students' mental abilities, and an incentive to increase the quality of the educational process. This is no longer the traditional role. The teacher is palatable in this time of indoctrination and listening to the learners, but rather he moved to guidance, guidance and supervision of the educational process, and education moved to centering on the learner and trying to make him move from memorization and memorization to creativity and innovation through modern means in the educational process[Al-Balawi 2001].

2.2.8-The relationship between computer and mathematics

The computer has a strong relationship with mathematics. The computer has contributed to the development of many theories that have found a special place for them in the mathematics curricula in all the different stages of education. Examples of these mathematics are: the principles of number theory, the concept of category, the basic concepts of geometry, the principles of associative geometry, and the inequalities in Algebra and geometry, principles of probability, transformations engineering, numerical analysis, linear

and branching programming, and then the computer contributed to the development of mathematics in a way that has become difficult and difficult now to keep pace with those responsible for the mathematics curricula for this development, so those responsible for the curricula tended to pay attention to the basics, and to abandon the details unnecessary to keep pace with this development, and this means that the computer contributed to the introduction of new mathematics, as it was the reason for deleting some old topics or .[treating them in a new way[Magdy1987

3-Questionnaire form analysis

A questionnaire has been built and distributed to the students of Dijla university college, the second stage, and after clarifying the purpose of this form and explaining it to the students, it was collected and found that (184) forms were valid for analysis, and were .analyzed using the Statistical Packages Program for Social Sciences

3.1-Statistical analysis of the first hypothesis

H0 = There is no relationship between the student's scientific background and the ability .to learn financial mathematics using the computer

H1 = There is a relationship between the student's scientific background and the ability .to learn financial mathematics using the computer

Table (1) results of the questionnaire form

Total	Commercial	Literary	Scientific	
81	19	20	21	Existence
103	31	55	38	Non-Exist
184	50	75	59	Total

The calculated Chi-Square value reached 2.105, which is less than its tabular value of 5.991 (at the significance level of 0.05) and (the degree of freedom of 2). This means rejecting the existence hypothesis and accepting the null hypothesis, meaning that there is no effect of the student's scientific background on his ability to learn mathematics. Fi- .nance using the computer, and as shown in the following table

Table (2) Results of analysis of the first hypothesis

Sig	Tabular CHI-Square	Calculated CHI-Square
0.349	5.991	2.105

To enhance the testing of the first hypothesis and the validity of the results of the Chi-Square test, the ANOVA test was used to analyze variance to compare the averages of three samples. 3.00 at the level of significance (0.05) and degree of freedom (2, 181) and this confirms the validity of the results of the Chi-Square test, by accepting the null hy- :pothesis as shown in the following table

Table (3) ANOVA for the first hypothesis

Sig	Test F	Average of squares	Degree of freedom	Sum of squares	Variance analysis
0.35	1.048	0.231	2	0.463	Between groups
		0.221	181	39.972	Inside groups
			183	40.435	Total

F tabular value at significance level (0.05) =3.00

Statistical analysis of the second hypothesis 3.2
H0 = There is no relationship between the gender of the student and the ability to learn financial mathematics using the computer
H1 = There is a relationship between the gender of the student and the ability to learn financial mathematics using the computer

Table (4) The results of the questionnaire form

Total	Student(female)	Student(male)	
81	32	49	Lack of
103	66	37	Existence
184	98	86	Total

The calculated Chi-Square value reached 10.997, which is greater than its tabular value of 6.634 (at the level of significance 0.01) and (degree of freedom 1). This means that the existence hypothesis is accepted, that is, there is a relationship between the gender of the student and the ability to learn financial mathematics using the computer. The null .hypothesis was rejected, as shown in the following table

Table (5) results of the analysis of the second hypothesis

Sig	Tabular CHI-Square	Calculated CHI-Square
0.001	6.634	10.997

To enhance the test of the second hypothesis and the validity of the results of the Chi-Square test, the Independent - samples T-tast test was used to analyze the variance to compare a sample with two averages, and the test result was the presence of significant differences between the sample communities, as well as the calculated T value of 3.40 is greater than The tabular value of 7, which is 2.32 at the significance level (0.01) and the degree of freedom (1, 182), and this confirms the validity of the results of the Chi-Square .test, by accepting the hypothesis existence, as shown in the following table

Table (6) Independent - samples T-tast test for the second hypothesis

Connotation	Sig	T_test
Having an effect	0.001	3.40

Value of (T) tabular at significance (0.01) and degree of freedom (1.182) =2.32
Statistical analysis of the third hypothesis 3.3
H0 = There is no relationship between a student's use of social networking sites and the ability to learn financial mathematics using a computer
H1 = There is a relationship between the student's use of social networking sites and the ability to learn financial mathematics using a computer

Table (7): Results of the questionnaire form

Total	Unused	used	
81	9	72	Lack of
103	4	99	Existence
184	13	171	Total

The calculated Chi-Square value reached 3.607, which is less than its tabular value of 3.841 (at the significance level of 0.05) and (degree of freedom of 1). This means rejecting the existence hypothesis and accepting the null hypothesis, meaning there is no effect of the student's use of social networking sites on his ability
.To learn financial mathematics using the computer, as shown in the following table

Table (8) results of analysis of the third hypothesis

Sig	Tabular CHI-Square	Calculated CHI-Square
0.058	3.841	3.607

To enhance the test of the third hypothesis and the validity of the results of the Chi-Square test, the Independent - samples T-tast test was used to analyze the variance to compare a sample with two averages, and the result of the test was that there were no significant differences between the sample communities, as well as the calculated T value of 1.95 less From the tabular T value of 1.645 at the significance level (0.05) and the degree of freedom (1.182) and this confirms the validity of the results of the Chi-Square test, with .acceptance. The null hypothesis is as shown in the following table

Table (9) Independent - samples T-tast test for the third hypothesis

Connotation	Sig	T_test
Having no effect	0.052	1.95

value of tabular (T) at the significance level (0.05) and the degree of freedom (1.182) = 1.645
Statistical analysis of the fourth hypothesis 3.4
H0 = There is no relationship between the level of the student in the preparatory stage and .the ability to learn mathematics computer finance
H1 = There is a relationship between the level of the student in the preparatory stage and the ability to learn financial mathematics using computer

Table (10) Results of the questionnaire form

Total	Between 60_55	Between 65-61	Above 65	
81	80	1	0	Non_Exist
103	2	50	51	Existence
184	82	51	51	Total

The calculated Chi-Square value reached 68,993, which is greater than its tabular value of 6,965 (at the level of significance 0.01) and (degree of freedom 2). This means that the existence hypothesis is accepted, that is, there is an effect of the level of the student in the preparatory stage in his ability to learn financial mathematics using the computer, and :rejecting The null hypothesis, as shown in the following table

Table (11) Results of the fourth hypothesis analysis

Sig	Tabular CHI-Square	Calculated CHI-Square
0.000	6.965	68.993

To enhance the testing of the first hypothesis and the validity of the results of the Chi-Square test, the ANOVA test was used to analyze variance to compare the averages of three samples, and the test result was the presence of significant differences between the sample communities, in addition to that the calculated F value of 1309.23 is greater than the tabular F value Which is 4.61 at the significance level (0.01) and the degree of freedom (2.181) and this confirms the validity of the results of the Chi-Square test, by .accepting the existence hypothesis and as it is shown in the following table

Table (12) ANOVA for the fourth hypothesis

Sig	Test F	Average of squares	Degree of freedom	Sum of squares	Variance analysis
0.00	1309.2	21.205	2	42.41	Between groups
		0.016	181	2.93	Inside groups
			183	45.34	Total

4-Conclusions and recommendations

4.1-Conclusions

1-The student's scientific background has nothing to do with the ability to learn financial .mathematics using the computer

2-There is a relationship between the student's gender and the ability to learn financial .mathematics using the computer

3-There is no role for social media and the student's ability to learn mathematics and Fi-.nance by using the computer

4-Although the vocabulary of financial mathematics is different from mathematics in the middle stage, there is a relationship between the level of the student between the middle .stage and the ability to learn financial sports using the computer

4.2-Recommendations

1-Computer awareness for students by the professor and full supervision of the mechanism of using computers in calculating arithmetic operations in the mathematics of money and investment.

2-Introducing students to the importance of using computers in calculating operations related to the mathematics of money and investment.

3-Increasing the number of scientific trips to banks to establish communication links between students and banks.

4-Develop interesting methods and skill to increase enthusiasm and competition among students in the use of computers.

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