Journal of the University of Babylon for Humanities مَجلّةُ جَامعةِ بَابِلَ للعُلومِ الإنسَانيّةِ
Vol.32 / No.7/ 2024 المجلد 32 / العدد 7/2024

The Role of Using Computers in Facilitating the Learning Process and Developing the Scientific Side

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Submission date: 25/ 2 /2024 **Acceptance date: 26/ 3 /2024** **Publication date: 16/ 7 /2024**

Abstract:

Computers play a pivotal role in scientific development by enabling complex simulations, data analysis, and modeling. They expedite research processes, leading to faster discoveries and advancements. In education, computers facilitate learning through interactive tools, simulations, and online resources, enhancing access to information and fostering collaborative learning environments.

The aim of the research was to determine the role of computer use in facilitating the learning process and scientific development among students of the College of Basic Education at the University of Sulaimani, the sample of the study was 412 male and female students in all departments.

The tool used to collect data was through a survey form that was a scientific measure, consisting of 16 items to measure computer use and its role in facilitating the learning process and scientific development. SPSS version 25 was used to analyze the data and find the results.

At the end of the study, we reached several conclusions, recommendations and suggestions:

1. It turned out that the role of computers in facilitating the learning process and scientific development is at a high level.
2. There is no statistical difference in the role of computers in facilitating the learning processes and scientific development according to gender.
3. There is no statistical difference in the contribution that computers provide to scientific advancement and the learning process according to the stage variable.

Keywords: use of computers, computer-managed instruction (CMI), computer-assisted instruction (CAI), and computer-aided learning (CAL).

دور استخدام الحاسوب في تسهيل عملية التعلم وتطوير الجانب العلمي

سركوت جمال محمد
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المستخلص:

تلعب أجهزة الكمبيوتر أثراً محورياً في التطور العلمي عبر تمكين عمليات المحاكاة المعقدة وتحليل البيانات والنمذجة. فهي تعمل على تسريع عمليات البحث، مما يؤدي إلى اكتشافات وتقدمات أسرع. وفي التعليم، تعمل أجهزة الكمبيوتر على تسهيل التعلم عبر الأدوات التفاعلية وعمليات المحاكاة والموارد عبر الإنترنت، مما يعزز الوصول إلى المعلومات ويعزز بيئات التعلم التعاونية.

هدف البحث إلى تحديد أثر استخدام الحاسوب في تسهيل عملية التعلم والتطور العلمي لدى طلاب كلية التربية الابتدائية في جامعة السليمانية. وبلغت عينة الدراسة ٤١٢ طالبا وطالبة في جميع الأقسام. وكانت الأداة المستخدمة لجمع البيانات هي استمارة المسح وهي عبارة عن مقياس علمي، مكونة من ١٦ فقرة لقياس استخدام الحاسوب وأثره في تسهيل عملية التعلم والتطور العلمي. واستخدام برنامج **SPSS**الإصدار ٢٥ لتحليل البيانات والحصول على النتائج.

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وفي نهاية الدراسة توصلنا إلى عدة استنتاجات وتوصيات ومقترحات:

١ .تبين أن أثر الحاسب الآلي في تسهيل عملية التعلم والتطور العلمي يأتي على مستوى عال.

٢ .لا توجد فروق ذات دلالة إحصائية في أثر الحاسب الآلي في تسهيل عملية التعلم والتطوير العلمي حسب الجنس.

٣ .لا يوجد فرق إحصائي في أثر الحاسب الآلي في تسهيل عملية التعلم والتطوير العلمي تبعاً لمتغير المرحلة.

الكلمات الدالة: استخدام أجهزة الكمبيوتر، والتعليم المدار بواسطة الكمبيوتر **(CMI)**، والتعليم بمساعدة الكمبيوتر **(CAI)**، والتعلم بمساعدة الكمبيوتر **(CAL)**.

Definition by Researc

1.Introduction

One motivation for the present research derives from the urgent need to understand the influence of computer-facilitated learning environments on student learning. The use of computers as a tool to foster critical thinking, inclusive education, and the development of problem-solving strategies for both group and individual responsibility can help students get more interested in complicated topics and increase their learning.

Since the goal was to be an effective tool for business, it should have been well read and how to develop the community so that the researchers' users were very efficient in using it However, the scientific reality still comes with some practical problems that match the scientific program, as in all other sciences, which each student should care about in order to solve such scientific problems that may or may be expected to be seen[1].

Many in this field of education emphasize that the adoption of educational techniques Makes teaching a science that has its origins and foundations, as well as being an art that leads to the modernization of education Improving learning outcomes. Pedagogical techniques are effective for conceptual presentation, and continuous adaptation to Learning difficulties for the student, providing immediate feedback and the sequence of presentation experience [2].

Abu Zaaroor adds that the importance of using computers lies in the impact it has on Updating the modalities of education and training because of its advantages beyond other educational means, as it stores Information and retrieving it at the time of need and when the learner wants little time and effort.

There are many reasons and justifications that appeal to us to learn as much as we can about Computer uses in our lives, and many of the benefits we gain from this learning, without this education, we are unable to attain a high degree of literacy. Our productivity is much increased by computer expertise, which also helps us complete the task at hand.

Along with enjoying the pleasure of utilizing this wonderful technology, we will be able to finish all the jobs that might be impossible to complete manually [3].

1.1. The Problem

Technology has a positive and negative impact of any field of life. From this perspective one can say that it has its own influence on the field of education too.

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New technologies, particularly computers, offer teachers and students numerous tools to enhance the teaching and learning process. These tools create engaging activities, making the learning process more enjoyable for students. This increases their interest in studying subjects.

Teachers can access a vast array of resources that are typically unavailable in the classroom due to time constraints. Computers also enable real-time interaction with students, providing them with diverse material and opportunities for interaction [4].

Education not only prepares individuals for careers but also fosters social and cultural understanding for effective citizenship and intellectual capacity. It replicates a small town or city environment, with residential environments, green spaces, roads, parking, and utilities. This creates challenges and calls for the use of technologies like computers and networks to increase efficiency in teaching and learning. Computers can store information about students, teachers, and curriculum, send it to administrators and educational planners, exchange ideas, and manipulate information based on the needs of teachers and students. This approach allows for effective communication and adaptation to the teaching and learning situation [5].

Students are an important part of the community and are interested in developing the community, and although the students have been given great importance and all their needs have been provided for them, they have a good work on the development Saying his document should be paying attention to the scientific side of students and trying to give important information and technology of teaching and advanced programs to the scientific side of the students and to be able to Bringing scientific institutes to the students will increase the responsibility of education and higher education.

but until now the importance of that you have not been given to that side and until now in a logical way and how the education process will be done and the importance of that is in the technology Teaching and especially using computer shall not be given and this is a reason for students' annoyance in the hand of this system especially at this time The technology has been covered with all the life of the world.

Current students learn differently from the past, not all of them are around the university but it seems that the lowest time is for learning, school, and university work Used, teachers should change their curriculum in a way that will help students to benefit more from technology especially computer in the learning process and their time with useless things Three Reina Bat by taking advantage of computer and other technology for education, teachers can be able to withstand all students' silence (from uneven learning to talented and talented people).

Using computer in class to help the success of the cadmium was, but in Kurdistan, there is no need to provide enough technology for schools, and on the other hand, the lack of adequate expertise by teachers to benefit from computer and technology, all these problems and problems on the one hand, the importance and role of technology on the other hand, are encouraging to pay more attention to the field of technology in the learning process, in this way and in light of the researches that have been done, we ask: Is the use of computer in this process effective in scientific development and Student's column.

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1.2. The research questions

The study also tries to answer the following questions; the research may be the infrastructures that can be built in this area?

1.3. The importance of the Study

The present study is expected to be useful because it plays an important role in discovering new treatments, we can show its importance in the following points:

1. It is important for all levels of studying which helps students to pay more attention to computer education.

2. It is important for teachers to pay more attention to the computer in their field and helps teachers to provide an effective lecture to the students.

3. It is important for the people of the education and planning field of the country's education system to pay more attention to the computer and to teach students from the beginning and to open courses and seminars for teachers to introduce them to the current technology.

1.4. The aims of the Study

Mainly, the aims of this study are to know:

1. The level of computer impact on scientific development and facilitating the learning process.
2. The level of computer impact on scientific development and facilitating the learning process according to gender changes.
3. The level of computer impact on scientific development and facilitating the learning process according to Stage changes.

1.5. The limit of the Study

This study is confined to the:

- **Humanity limit**: Students at the College of Basic Education in Sulaimani University
- **Historical limit**: 2023-2024 study years.
- **Location limit**: Sulaimani city.
- **Subject limit**: Computer use, Students' scientific Side, learning process.

1.6. Define terms:

First: Computer:

An electronic device capable of saving, downloading, and holding information very quickly with a group of instructions called Software [6].

The automatic device that uses electronic system that makes accounts and analyzes and does many other things and then the results are short and presented differently [7].

This electronic data has the ability to process, save and return data very quickly through the information given from the human being and the commands are given [8].

Definition of Computer Theory

An electronic device used to store and process large amounts of information and is able to perform accounting operations quickly.

Definition of Computer Practice

The value that the computer obtains through the tool used to collect information from the responses of the members of the study sample.

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Second: Scientific Aspect

It is also known as cognitive psychology. It is a secondary field of psychology that examines the inner mental processes that teaches people how people think, feel, speak and solve problems.

Cognitive development is the result of a series of learning and changes in which the learner plays a major role [9].

Definition of Scientific Aspect Theory

It is the experience and knowledge that an individual has acquired after a series of learning's and changes.

Practical Definition of Scientific Aspect

The value that the scientific aspect gains through the tool used to collect information as a result of the responses of the members of the research sample.

Third: Learn

Learning is the change in behavior through expertise and training and involves continuity. That is, the individual must strive to achieve his goals.

Learning is the process of adapting an individual to the environment and changes in the external world through responding to various stimuli of the external environment [9].

Definition of Learning Theory

"It is the core energy of students that encourages them to participate in scientific activities actively, is considered a major factor for success in the educational process.

Definition of Learning Practical

It is the score that learning motivation receives as a result of students' responses to the survey criteria.

2.Theoretical Background

2.1. The Concept of Computer

An electronic device known as a computer is controlled by instructions kept in its internal memory. It may receive input, process it in accordance with predetermined guidelines, generate output, and store the information for later use [10].

A computer is a device that can be programmed via computer programming to automatically perform a series of logical or arithmetic operations. Programs are generic collections of operations that can be followed by modern computers. These applications give computers the ability to do a remarkably broad range of jobs. A computer system is a "complete" computer that has all of the peripheral devices needed for "full" functioning, the operating system (primary software), and the necessary hardware. This phrase can also refer to a collection of linked computers that collaborate, specifically a computer network or computer cluster [10].

2.2. The Use of Computers in Teaching-Learning Process

The integration of computer resources and technology-based techniques into the day-to-day activities, tasks, and administration of education is known as computer usage [11] felt that students might utilize computers as a tool to aid in their education, as a tutor to guide them, and as a tutee to teach instructions that are coded into a computer [12] has articulated three computer jobs:

- Learning about the computer
- learning with the computer

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- Learning from the computer.

2.3. Later on, the three uses suggested by (Luehrmann, 1972) are expanded to five:

1. **Acquiring Knowledge of Computers** (computer literacy and awareness training or course).
2. **Learning with Computers**: Computers are utilized to either give extra practice on certain abilities, such as drill-and-practice software, or to instruct students, such as through tutorial software.
3. **Computer-assisted instruction** (where students choose how to utilize the computer to solve problems, participate in simulations or games, or modify previously acquired knowledge).
4. **Learning about Thinking with Computers**: Using programming languages like LOGO/BASIC, computers are utilized to help students establish new thought patterns that may aid them in a variety of learning scenarios.
5. **Managing Computer-Assisted Learning** (computer-assisted learning indirectly: record-keeping, diagnostics and remediation, communication, upkeep of student profiles). Two major sets of curricular practices have been developed in response to the topic of how instructors might use computer resources to improve and sustain students' learning [13],[14].

These are: (1) studying computers and how society is affected by them; this is known as computing studies; and (2) learning with, though, and from computers; this is known as curriculum-integrated computer learning. Both sets of curriculum methods now demand a sizeable share of the resources used by schools.

2.4. The Concept of Learning

Learning is about making a change, whether it be in one's attitude, ability, or comprehension of a scientific law. In the same way that our look changes as we age, this shift is not accidental or natural. Learning is usually an intentional process that results in a change that is largely lasting. We aim to learn when we go to class, read a discussion paper, or browse through a book!

Other forms of learning, like experience, can happen spontaneously. Every learning experience usually involves a part of us that wants to remember, comprehend, and improve upon what happened so that it doesn't happen again.

2.5. Learning

actions taken in order to fulfill educational goals. Though they occur in a cultural and social setting, they are carried out independently, with people integrating their newly acquired knowledge with preexisting cognitive structures.

a procedure that individuals go through to pick up new information and abilities, which in turn affects their attitudes, choices, and behaviors [9].

2.6 The Main Theories of Learning

- The Behaviorists - (behaviorism: Stimulus – Response)
- The Neo-Behaviorists (Neo-behaviorism: Human Mind)
- The Gestaltists (Insight)
- The Cognitivists (Cognitive development: Learning to think)
- The Humanists (Active nature of Learner) (Western Governors University, 2020)

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2.7. The Development and Learning theories

Before expressing his views, Vygotsky presented three theoretical groups in several writings that discussed the relationship between development and the impact of the learning process.

In a seminar at the Her zines Institute in San Petersburg in 1933, he talked about the relationship in a long and far way and mentioned the ores related to this. Vygotsky has sorted the theories in three groups, and we have also noted his theory as the fourth theory[15].

First Group/ Development precedes teaching

These theories point out that children's development is always ahead of the teaching process. In other words, the teaching process will not benefit children until they reach a certain mental development level, which is ready to understand subjects set for an older age.

Jean Piaget leads this group and cites examples about how children reach a certain age, and it will not be of any use, how much do we talk about a specific topic. Vygotsky writes about such theories:

"They believe that the conclusions and abilities of children's understanding, their worldview of the world and their understanding of physical relationship causes, their dominance over abstract logical and logical thinking forms, were created in spontaneity, without any effect on their school's re-education"[15].

Vygotsky's purpose is to play a major role in the above processes, in the school's digital and learning process code this means the capacity to understand and develop the capability to comprehend abstract and logical thinking, and the ability to analyze the causal relations, i.e. when an event causes a new event.

These theories see no connection between children's development and school practices. Vigo writes: [16].« The first is predicated on the idea that learning has no bearing on a child's developmental processes. It is believed that learning is an entirely external process that does not actively contribute to advancement.

Second Group/ Development and teaching are parallel

These kinds of theories believe that development and lessons are the same. They are united and mixed. Development and re-lessons of schools are similar and similar in two geometric forms. They, each point in the first form is opposite to another point in the second form. Therefore, from the perspective of this type of theory, it cannot be said that development is ahead of lessons or vice versa

William James's theories (1842-1910) and **Edward Sorendayk** (1874-1949) fall into the cells of this group, which in many places are sourced from the theory of behavior[15].

Third Group/ Growth and teaching are competing

These theories have a completely different interpretation and they think that the process of developing children first comes and then they start not giving, and a while they think that both processes are exactly the same.

In short, these theories are a mixture of the first and second groups. In this regard, **Johan Herbert's** theory (1776-1841) insists that official science helps to develop knowledge [16].

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Fourth Group/ Teaching precedes development

Vygotsky has provided a theory in other studies, which we list under the fourth group. The content of this theory is contrary to the above theories, meaning that it is not right for children to reach a specific level; they cannot understand a specific subject. School can change the speed of children's development

In order to achieve this, Vygotsky believes that the level of teaching must be slightly above the level of students, in order to bring them to life and try harder. Any teaching at the level of these students means that they do not teach anything and there is no learning process [17].

"It's good to not say only when it's good to develop," Vygotsky said.

Vygotsky considers this issue very complicated. So, he thinks its right to understand that development will lead to a dyspnea or vice versa

One must understand two problems well:

First: What connection exists between public development and learning?

Second: What are the details of this relationship with school children?

Previous Studies

1- Ahmed's study, Asmaa Al-Taj Al-Zein (2020) entitled "The Impact of Computer Use in Teaching on the Academic Achievement of Fourth Grade Students Basis in the Computer Course", and the aim of the study was to measure the impact of the use of computers in teaching on the degree of academic achievement of students of the basic stage, as well as the role of the computer in the possibility of raising the level of interaction of students with the content of the course.

Through this study, the researcher aimed to identify the advantages of using computers in education and to detect any difficulties that may face computers being used in the classroom.

The results of this study stated that the computer enhances the level of student interaction and that it has many other advantages, and the study also found that there are a number of obstacles that limit the use of computers in education and in light of this, the researcher made a number of recommendations, the most important of which is the provision of computers and accessories and educational assistance software, and the need to allocate a financial budget sufficient to prepare the infrastructure and prepare it for information technology, connect schools to Internet networks and provide the necessary technical and technical support.

2- Ugochukwu and Nwamaka (2019) study entitled "Computer Applications in Education. Through this study, the researchers found that the use of computers positively affects the activity of education and improve its quality and results. The researchers believe that the use of technology as multimedia projectors in the classroom will motivate learners to participate and interact with educational and training curricula. The study found that the use of the computer system in education and training makes the surrounding environment interesting, participatory and interactive, which will contribute to the development of skills and knowledge of learners and ease of knowledge transfer.

3- Ahmadi, Mohammad Reza (2018) entitled "The Use of Technology in English Language Learning. The study concluded that to ensure the success of the process

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of using computers or technology in education and training, teachers must be convinced of the benefit and advantages of technology and its impact on improving learning and teaching, and that teachers must be supported and trained to link technology and employ it in teaching. The study also proved that if technology is used appropriately, it will achieve many advantages for teachers and learners. The study indicated that the use of technological techniques will contribute to learning and training and create a high motivation for learners to learn effectively, in addition, technological techniques play an important role in developing learners' creativity, increasing their excitement for interest, self-development, developing thinking skills, making education and training more focused, enhancing learners' independence and helping them to feel confident effectively.

4- Raja, R. and Naga Subramani, P. (2018) study entitled "Impact of modern technology in education"-The study concluded that technology has a positive impact on education and teachers and learners must make good use of this technology and work to reduce the disadvantages that may result from the use of this technology.

The Researcher have Benefited from previous studies:

1. A sense of the existence of the problem research and the extent of its importance in order to conduct scientific research.
2. Previous researches provide a general framework for this research because they have received a lot of benefits in the subject matter ،especially in the context of theory.
3. More importantly ،the research and follow-up of previous research have been used.
4. The benefit of the information of the previous research procedures has been seen in the way of the analysis of data and statistical analysis.
5. Preparation of research instruments and how to extract the truth and stability of the instruments has benefited them.

3. Methodology and Research Design

This section is a part of explaining the method applied by the researcher, describing the characteristics of a research sample, as well as explaining how research tools are created, with assurance. In fact, the stability of the instrument is one, while pointing out how field research is conducted and using statistical tools used in analyzing the data of the research.

3.1. The Method

The researcher in this research used survey ingenuity because it returns to investigate a link between the changes and to show the differences between them in the purpose of analyzing and analyzing the phenomena of the investigation.

3.2. The Population and Sample

Determining the research community is considered one of the most important works of the research, a research community in all the provinces that the researcher is doing research.

The research community consists of 2235 students (1759 girls) and (476 boys), of which 412 received as an example of the study.

Researchers have received this information from the Basic Education College

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Table (1):The Population and Sample

	Population	Sample
gender	number	number
male	476	99
female	1759	313
total	2235	412

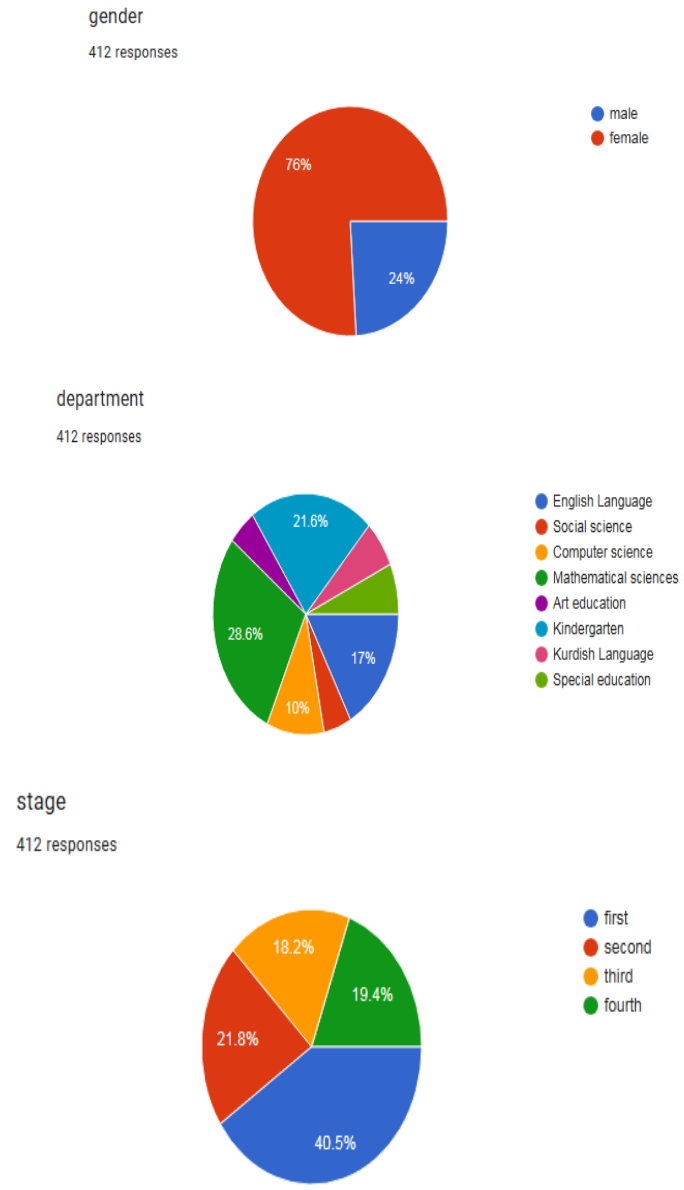

Figure 1(gender, department and stage)

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3.3. The Tools Used in the Study

Reaching the research goal depends on preparing a scientific scale that is specific to measurement" and to achieve the goals of the research, researchers rely on a scale that researchers prepared, which consisted of" 16 items" to measure because the scale is compatible with the sample of this research, and the correctness and location have been determined.

3.4. Validity and Reliability of the Test

Several factors need to be taken into account in order to create a test that is relevant and well-designed for the test-takers. The instructor should intend to create a test that is dependable and legitimate before creating any form of test. These factors are thought to be beneficial traits or essential components of a precise evaluation.

3.4.1. Validity

Examine the test's face validity and content validity; these are the most practical methods for a teacher or curriculum designer to confirm the test's validity [18].

According to [19], the goal of any test should be to give an accurate assessment of the specific talent that it is intended to measure. Stated differently, a test will not be considered valid if it assesses more than one language ability or element concurrently. One of a test's most crucial components is validity. The extent to which a test measures what it is intended to assess is known as test validity. Taking into consideration a test's face validity is the most crucial step in test design before it is administered.

A. Face Validity

The majority of communicative test designers believe that face validity is the most crucial kind of test validity. In fact, a lot of academics contend that a test needs to appear legitimate in terms of the material's replication.

If the test appears genuine, face validity can offer a prompt and reasonable guide, and students' motivation is sustained. The majority of pupils will strive more if the exam appears fair. The test won't have face validity if the students feel it has little bearing on anything. As a result, students won't put forth much effort to complete the assignment. As a result, the test's reliability will be impacted [19].

[20] defines face validity as to whether the tests appear reliable in the sense that both educators and learners think the assignment measures the things it purports to measure. Similar to this [21] claims that if a test appears to measure what it is intended to assess, it has face validity. This suggests that test takers, educators, and educational authorities might not accept a test that lacks face validity. Because of this, it's possible that the candidates won't execute on it to the best of their abilities.

B. Content Validity

The degree to which the test items accurately reflect the course content that has been studied over the course of a week, month, or year is known as the test's content validity [22],[23].

For instance, in hearing comprehension, the components of listening skill must be included in the test for it to be valid and have a high degree of content validity.

A test with a high degree of content validity for evaluating writing is considered valid. If an exam stimulates linguistic, rhetorical, and cognitive processes, it has content validity. This demonstrates the degree to which the exam items motivate learners to

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incorporate their information, experiences, opinions, and attitudes into grammatically and rhetorically sound writing.

According to [24], a writing test possesses content validity when its items necessitate pupils to integrate information, skills, and techniques that are essential to the composition process.

3.4.2. Reliability

Reliability is one of the most important characteristics of high exam scores. It is frequently characterized as the measurement's consistency across various test formats, raters, times, student instruction, and other factors [25],[26].

When the same test is administered to the same group of students again, at two distinct times, under the same conditions, with the same ability, and it is consistently graded, the test is said to have reliability. There's a good chance that the results will be extremely similar. A test is considered more reliable if the results are more similar [21]. Ensuring student familiarity with the assessment procedure, limiting the candidate's selection of topics and genres, and gathering an adequate number of examples are all necessary to ensure the reliability of writing assessments [20].

We can refer to this as a stable or stable transaction (stability) in the findings, taking into account the separation of the stipulated time period [27]. Stability through retesting is the amount one can obtain psychologically. Which account, depending on stability through testing and retesting, is necessary to create the level of community fear, The researcher used person's correlation coefficient to find the stability of the study.

Pearson's correlation coefficient is a measure used to measure the strength of the relationship between two variables in statistics and scientific research. Pearson's correlation coefficient is between -1 and +1, with a positive value indicating a positive correlation between the two variables, a negative value indicating a negative correlation, and a value of 0 indicating no relationship

3.4.3 Test – Retest Method

Psychological scale literature emphasizes the principles of knowing the truth or should not be more than two weeks from the first principle under the light of this researcher's application, conducting a research scale on 20 students, which was randomly taken from the College of Basic Education, and after passing (14) Day after the first application, the researcher repeated the practice on the same example above and after the form was reviewed according to the relationship between the first application and the second application using the reason for linking Pearson and we can point to the result of the grade Make it sticky (0.85). And with this grade, we can see which scale is stable.

3.5. The Statistical Instruments

Multiple approaches for calculating descriptive statistics were employed to describe the test-takers' performance on the writing test. Descriptive statistics are a precise means of characterizing the properties of the score distribution, and the researcher computed them for two reasons. Additionally, they serve as the foundation for additional statistical analyses that examine connections and distinctions between various score distributions, assess the dependability of the ratings, and offer meaningful explanations for scores [28].

The mean scores, standard deviation, analysis of variance, and standard error of the mean were all used in descriptive statistics. A specialist in statistics computed these

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several statistical tests. A t-test (paired and unpaired) was also used to compare the students' performance in the pre-test and post-test mean scores in the EG and CG, based on the calculated findings.

3.6. The T-test for difference between two means:

$$t = \frac{\bar{x}_1 - \bar{x}_2}{\sqrt{\frac{S_1^2}{N^1} + \frac{S_2^2}{N^2}}}$$

Where:

$\bar{x}_1$ $= mean\ of\ experimnetal\ sample$

$\bar{x}_2$ = *mean of control sample*

N^1= number of cases in $experimnetal\ sample$

N^2 = number of cases in *control sample*

S_1^2=*variance of experimental sample*

S_2^2= *variance of control sample* [29].

T-test for the Significant Difference between two Mean Scores

This equation was used to looking for statistically significant difference if any between the two means in pre-test and post-test writing of both EG and CG at 0.05 level of significant.

$$t = \frac{\bar{x}_1 - \bar{x}_2}{\sqrt{\frac{(N_1-1)S_1^2 + (N_2-1)S_2^2}{N_1 + N_2 - 2}\left(\frac{1}{N_1} + \frac{1}{N_2}\right)}}$$

Where: $\bar{x}_1$ $= mean\ of\ experimnetal\ sample$

$\bar{x}_2$ = *mean of control sample*

N^1= number of cases in $experimnetal\ sample$

N^2 = number of cases in *control sample*

S_1^2=*variance of experimental sample*

S_2^2= *variance of control sample* [29].

3.7. The Pearson Correlation Coefficient with a Spreadsheet

To calculate the Pearson product-moment correlation coefficient simply, one can enter a formula of correlation coefficient into Excel spread sheet. This technique is very useful in saving considerable time and effort in calculating the correlation coefficient of two tests of scores [30].

In the current study, to find correlation coefficient in both ways of scoring (intra-rater and inter-rater) reliability, this technique was utilized.

4. Result and Discussion

4.1. Presenting and Analyzing the Results

This section is dedicated to showing the results we have achieved based on all the information that can be obtained in the list of research goals and discussing these results.

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Researchers often rely on the results to compare the results within the framework of the theory of the changes in the research, and then the most obvious ones that can be obtained from the results are presented in the results and in the confirmative of the recommendations and recommendations.

4.1.1. The aim of highlighting the level of computer impact on scientific development and facilitating the learning process

After treating data from the research community in general, the center of grades in the scale of the computer impact on scientific development was (42.03) removing the value scale (5.90) and after comparing this center with the default center for the scale (32) Using t-test, the sample shows that the calculated sectarian value reached (34.59) and that is larger than the value of the table reached (1.96), which has statistical evidence of the level of 0.05 as explained in table 2:

Table (2): The results of the sectarian testing on the scale of the fear of the nation

N	Mean	Std. Deviation	Default center	T value		Level of evidence 0,05
				T.test	Z.test	
412	42.03	5.90	32	34.59	1.96	evidence

This result means that there is a statistical lying difference in the level of social fear between the center of the sample grades of research and the default center in the scale of the fear of the nation.

4.1.2. The aim of highlighting the level of computer impact on scientific development and facilitating the learning process according to gender changes.

To achieve this goal, they use the test for two independent examples, and the number of males reached (42.86) grades and the average of the scale (4.65) in the center of grades for the female of the sand reached (41.76) the grade syllable (6.23) degrees, in detail. The use of these two centers of authority, which has a calculated value of (1.62), after reviewing the value of the table's sectarian value, is (1.96) at the level of evidence (0.05) we can see that there is no statistical evidence which means there is no difference in the fear of ethnicity among children according to the change of gender.

Table (3): the results of the sectarian testing in the scale of the fear of the nation by the changing gender

gender	N	mean	Std. Deviation	df	T value		Level of evidence 0,05
					T.test	Z.test	
male	99	42.86	4.65	410	1.62	1.96	No evidence
female	313	41.76	6.23				

This result also points out that there is no difference between male and female in the level of social fear, which indicates the fear of the nation by male and female as one.

4.1.3. The aim of highlighting the level of computer impact on scientific development and facilitating the learning process according to Stage changes.

After analyzing the data using statistical tools **one-way ANOVA** the results showed that the value (f) is (1.027) and the score of freedom between groups (3) within groups (408) at the level of evidence (0.381), explained this means that there is no statistically significant difference among students according to different stages of education to benefit from the use of computers in the learning process.

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Table (4): the results of the sectarian testing in the scale of the fear of the nation by the changing stage

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	107.388	3	35.796	1.027	.381
Within Groups	14223.202	408	34.861		
Total	14330.590	411			

4.2. Conclusions, Recommendations and Suggestions

4.2.1. Conclusions

The current study has come up with some significant conclusions, such as:

1. After analyzing the data, it appears that using computer has a positive work on learning
2. There is no difference between male and female gender to learn by computer
3. There is no difference according to stage student to learn by computer
4. Using computer creates a motivation for learning by the student

4.2.2. Recommendations

Relying on the conclusions, the current study recommends the following:

1. Using computer in learning process by teachers in all levels of studying
2. Opening training courses for teachers and experts in this field
3. Doing workshops and seminars for teachers and encouraging them to use computer in the statement

4.2.3. Suggestions

The following are suggestions for researches to be conducted in the future:

1. Doing field research to show the importance of this field
2. Caring about computer in the way of studying
3. The students' municipality with computer to take benefit from it in learning
4. Conduct similar research and related academic achievements.
5. Conduct research on new teaching tools in the field of education

CONFLICT OF IN TERESTS

There are no conflicts of interest

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