



العدد الثاني والعشرون - الجزء الثاني - فبراير - 2025 - السنة الرابعة مجلة علمية فصلية محكمة

# المجلة الأمريكية الدولية للعلوم الإنسانية والاجتماعية

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تصدر عن الأكاديمية الأمريكية الدولية  
للتعليم العالي والتدريب

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بِسْمِ اللَّهِ الرَّحْمَنِ الرَّحِيمِ



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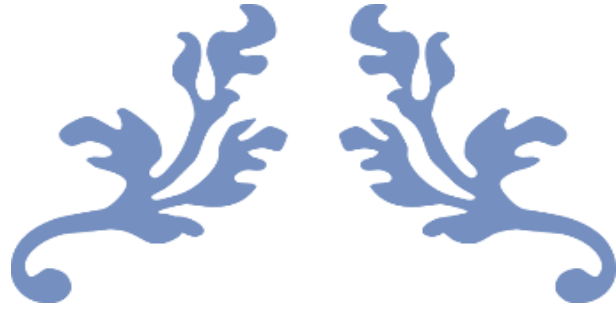
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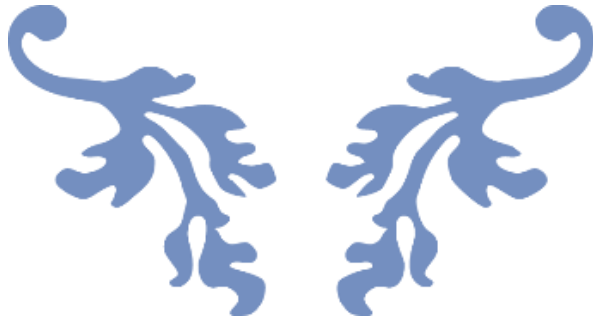
## أعضاء الهيئة الاستشارية

1. أ.م.د. آرام نامق توفيق - كلية العلوم - جامعة السليمانية - جمهورية العراق.
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3. د. جميلة غريب - قسم اللغة العربية و آدابها - جامعة باجي مختار- عنابة - الجمهورية الجزائرية .
4. أ.د. حورية ومان - أستاذ التاريخ المعاصر - جامعة محمد خيضر- بسكرة الجمهورية الجزائرية.
5. أ.د. خالد عبد القادر التومي- باحث في المركز القومي للبحوث والدراسات العلمية - ليبيا.
6. أ.د. رائد بني ياسين- عميد كلية الأعمال - قسم نظم المعلومات - الجامعة الأردنية- فرع العقبة - المملكة الأردنية الهاشمية .
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8. أ.م.د. رضا قجة- علم الاجتماع – كلية العلوم الإنسانية والاجتماعية – جامعة محمد بوضياف – المسيلة – الجمهورية الجزائرية.
9. د. صفاء محمد هادي هاشم- معاون عميد الشؤون الادارية والطلبة - كلية التقنية الإدارية - جمهورية العراق.
10. أ.د. كامل علي الويبة- رئيس جامعة بنغازي الحديثة – ليبيا .
11. أ.د. علي سموم الفرطوسي - كلية التربية الأساسية - الجامعة المستنصرية - جمهورية العراق.
12. د. حدة قرقور - كلية الحقوق - جامعة محمد بوضياف - المسيلة - الجمهورية الجزائرية.
13. أ.د. مازن خلف ناصر- كلية القانون - جامعة المستنصرية - جمهورية العراق .
14. د. محمد عيد السريحي - مستشار وعضو مؤسس لجمعية البيئة السعودية - المملكة العربية السعودية.
15. أ.م.د. محمد عبدالفتاح زهرى- رئيس قسم الدراسات الفندقية- كلية السياحة والفنادق – جامعة المنصورة- جمهورية مصر العربية.
16. م.د. محمد مولود امنكور - كلية العلوم الإدارية والمالية والاقتصادية - الأكاديمية الأمريكية الدولية للتعليم العالي والتدريب.
17. م.د. مروة إبراهيم زيد التميمي - كلية الكنوز - الجامعة الأهلية - جمهورية العراق .

18. أ.م.د. هلال قاسم أحمد المريسي - عميد الشؤون الأكاديمية الأميركية للتعليم العالي والتدريب - جامعة العلوم الحديثة - الجمهورية اليمنية.
19. أ.د. نادية حسين العفون، كلية التربية للعلوم الصرفة- ابن الهيثم- جامعة بغداد، الجمهورية العراقية.



## مقال العرو





بِسْمِ اللَّهِ الرَّحْمَنِ الرَّحِيمِ ، الحمد لله على فضله ونعمته ، والصلاة والسلام على رسوله الكريم وآله ، أما بعد

يسرنا أن نقدم لكم العدد 22 ج2 من المجلة الأمريكية الدولية للعلوم الإنسانية والاجتماعية، الذي يضم مجموعة من البحوث العلمية المتميزة التي شارك بها باحثون من مختلف دول العالم. يشتمل هذا العدد على أعمال بحثية مقدمة في المؤتمر العلمي الدولي الثامن عشر، بالإضافة إلى مجموعة من الدراسات التي جاءت خارج نطاق المؤتمر، مما يعكس تنوعاً علمياً وثراءً في المواضيع المطروحة.

لذا دأبت هيئة التحرير على تطبيق معايير التقييم العلمية شأنها بذلك شأن المجالات الرصينة المثيلة في حقل التخصص والنشر العالمي ، فعرضت البحوث على محكمين لهم مكانتهم العلمية في فضاءهم العلمي ، ويعودون لجنسيات مختلفة ، ومن جامعات متباينة ، منها الجامعات الحكومية التي ترجع بمرجعيتها إلى بلدان العالم المختلفة ، فضلا عن الاستعانة بخبراء من جامعات خاصة اثبتوا بشكل علمي أنهم أهل للتحكيم واطلاق الحكم على علمية البحث المقدم للمجلة ، وصلاحيته للنشر.

حرصت هيئة التحرير على عرض البحث المقدم من لدن كاتب البحث على محكمين اثنين ، وتقديمه لهما ، بتوقيتات زمنية محددة ، فإن اتفق المحكمان على صلاحية البحث ، تم تحويله إلى مرحلة التنضيد والنشر ، بعد التأكد من دقة تطبيق تعليمات النشر الخاصة بالمجلة . وإن اختلف المحكمان في التقييم المطلق على البحث المقدم ، حول البحث لمحكم ثالث ، فإن قبله ، تم تحويله للمرحلة الثانية التنضيد والنشر ، وإن رفضه ، عندئذ يرفع البحث من قائمة البحوث المعدة للنشر.

لم يختلف منهج هيئة التحرير في آلية قبول البحوث ، وعدّها للنشر عن غيرها من المجالات العلمية ؛ لأن الرصانة العلمية هو هدفها الذي تسعى للوصول إليه ، واعتمدت نظاما دقيقا في استقبال البحوث ، وتقديمها للمقومين ، واشعار الباحثين بقبول النشر ، وفقا لأمر إداري يصدر عن المجلة ، يعد مستندا في صحة نشر البحث في المجلة ، مع تثبيت العدد الذي نشر فيه مذيلا بإمضاء رئيس التحرير.

احتوى هذا العدد في طياته مجموعة من البحوث ، والتي تحمل موضوعات متنوعة ، ذات الطابع الإنساني والاجتماعي ، ضمن تخصص المجلة ، وكل الأفكار التي طرحت تحمل الرؤى العلمية وأبعادها ، والنظرية التي يؤمن بها أصحاب تلك الأفكار ، لذلك كانت المجلة دقيقة ؛ لأجل عرض تلك الأفكار من دون التدخل فيها ، مع متابعة كونها لا تؤدي إلى خلق الفوضى العلمية ، أو تحريض للعنف ، أو للتطرف العلمي والمجتمعي.

نحن فخورون أيضا أن هذا العدد يصادف حدثاً مميزاً في مسيرة المجلة، حيث تم اعتمادنا من قبل المكتبة الوطنية المغربية للحصول على الاعتماد القانوني، ومنحها التسلسل الرقمي الدولي (ISSN) للنسخة الإلكترونية وأيضاً للنسخة الورقية. هذا الإنجاز يعكس التزامنا بتقديم محتوى علمي رصين ومتنوع، ويسهم في تعزيز مكانة المجلة كمصدر مرجعي معترف به عالمياً.

هيئة تحرير المجلة

28/02/2025 الرباط - المملكة المغربية

الملاحظة القانونية

البحوث المنشورة في المجلة لا تعبر عن وجهة نظر المجلة ، بل عن رأي كاتبها



**The impact of using information technology in creativity / An Exploratory study of the opinions of a sample of workers in the College of Information Technology / University of Nineveh**

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**Abstract :**

In light of the modern technology that the countries of the world are experiencing, the current research addressed two variables of high importance, which are information technology and creativity as tools that can affect organizations' ability to keep up with new technology. This encouraged researchers to conduct a survey study to determine the impact of using information technology on creativity. The study adopted the descriptive analytical approach, where employees in the College of Information Technology were identified as a sample for the research. A set of statistical methods were used to determine the results through the SPSS-V-24 program. The number of questionnaires distributed to employees in the college under study was (53) questionnaires as a tool for collecting and analyzing data in the field. The study reached some conclusions, the most important of which are: There are positive correlations and Significant influence between the dimensions of information technology and the dimensions of creativity combined and individually at the level of the college under study, where the dimensions (computer programs, self-confidence) became the highest in terms of correlation and influence. The study also presented several proposals, the most important of which is: Supporting creative employees in the college under study by providing material and Significant incentives to encourage them to improve the work environment and develop their capabilities.

**Keywords:** Information Technology, Creativity

أثر استخدام تكنولوجيا المعلومات في الإبداع / دراسة استطلاعية لآراء عينة من العاملين  
في كلية تكنولوجيا المعلومات / جامعة نينوى

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#### الملخص:

في ظل التكنولوجيا الحديثة التي تعيشها دول العالم تناول البحث الحالي متغيرين على درجة عالية من الأهمية وهما تكنولوجيا المعلومات والإبداع كأدوات يمكن أن تؤثر على قدرة المنظمات على مواكبة التكنولوجيا الجديدة، وهذا ما شجع الباحثين على إجراء دراسة مسحية لمعرفة أثر استخدام تكنولوجيا المعلومات على الإبداع، واتبعت الدراسة المنهج الوصفي التحليلي، حيث تم تحديد العاملين في كلية تكنولوجيا المعلومات كعينة للبحث، وتم استخدام مجموعة من الأساليب الإحصائية لتحديد النتائج من خلال برنامج SPSS-V-24 ، وبلغ عدد الاستبانات الموزعة على العاملين في الكلية محل الدراسة (53) استبانة كأداة لجمع وتحليل البيانات ميدانياً، وتوصلت الدراسة إلى بعض الاستنتاجات أهمها: وجود ارتباطات موجبة وتأثير معنوي بين أبعاد تكنولوجيا المعلومات وأبعاد الإبداع مجتمعة وفردية على مستوى الكلية محل الدراسة، حيث أصبحت الأبعاد (برامج الحاسوب، الثقة بالنفس) هي الأعلى من حيث الارتباط والتأثير. كما قدمت الدراسة عدة مقترحات من أهمها: دعم العاملين المبدعين في الكلية محل الدراسة من خلال تقديم حوافز مادية ومعنوية لتشجيعهم على تحسين بيئة العمل وتنمية قدراتهم.

الكلمات المفتاحية: تكنولوجيا المعلومات، الإبداع

## Introduction

Developments in Information Technology and scientific progress have brought about fundamental changes in most areas of life, which has led to an increased awareness of the requirements of change and development in the present and future, to keep abreast of all the novelties and developments that make managers and workers able to adapt and interact positively with the circumstances surrounding them and this makes them highly creative. These changes have made organizations make radical changes in attitudes and management methods by finding modern creative ways by focusing on the human element, which is the essence of the creative process by creating the appropriate environment and this will lead to the success of the organization. Creativity also has an important role in providing a favourable climate for employees to develop their abilities and skills, solve the problems they face in their workplaces and perform the tasks assigned to them in creative ways, which leads to raising the level of job performance of employees. Creativity can be seen as one of the most important components of the development of the individual and the organization, as it works to create and generate viable ideas that contribute to the development of the administrative process through the use of Information Technology. The idea of this research came from the importance of the fundamental and pioneering role played by Information Technology in making many organizations able to face challenges efficiently and effectively and requires them to make efforts and use highly creative methods in their programs and policies so that they can grow and develop.

### **The first axis: The methodological framework of the study**

In this topic, we discussed the problem of the study, its importance, objectives, possible study design, hypotheses, study methodology, study limits, data collection methods and study sample, in light of the following:

#### **First: The problem of studying**

In light of modern and contemporary environmental developments and information technology, the organization under study, presents great challenges and difficulties, and to face these challenges, the organization under study must exert more effort and keep up with technological development and creative capabilities so that the organization under study can survive and continue until its growth and development, and the research problem enables sufficient knowledge of the dimensions of Information Technology on the one hand and its close relationship in creativity on the other, and based on the foregoing, the research problem can be raised in the following questions:

1. Does the Faculty of the study sample have a clear vision of the dimensions of Information Technology and creativity?
2. Does the study sample have a clear perception of the relationship between Information Technology and creativity?
3. Does the study sample have a clear perception of the impact between Information Technology and creativity?

#### **Second: The importance of research**

The following factors make the study important:

1-The cooperation between developers and technical communities is facilitated through information technology and creativity, and this helps the faculty of the study sample to develop quickly and sustainably.

2-putting new concepts into practice for internal and external creativity to enhance the IT systems and technologies of the College covered in the study sample.

3-facilitating communication between different systems and devices and providing a creative, adaptable and mobile business environment for the faculty of the sample study in the field of Information Technology.

4 By adopting new creative concepts and successfully implementing them, the College of Information Technology makes the study sample a crucial role in transforming the future of business.

### Third: objectives of the study

The following points can be used to indicate the objectives of the study:

1. Studying the reality of the existing work of the research faculty to infer the strategies and policies followed by the working personnel and the extent of the support of the research faculty for information technology.
2. Explain the dimensions of information technology consisting of computer programs, information systems, communication networks, databases, software, and training.
3. Measuring the extent of the relationship of influence and correlation with the dimensions of Information Technology and creativity in the College of the study sample.
4. Providing a theoretical and conceptual framework for modern trends in this concept.
5. Provide a clear view of how the staff at the faculty used the study sample to improve the relationship between the dimensions of the study Information and creativity.

### Fourth: The virtual study scheme

As shown in Fig. (1), this diagram shows the possible relationship between the study variables represented by the dimensions of Information Technology and creativity.

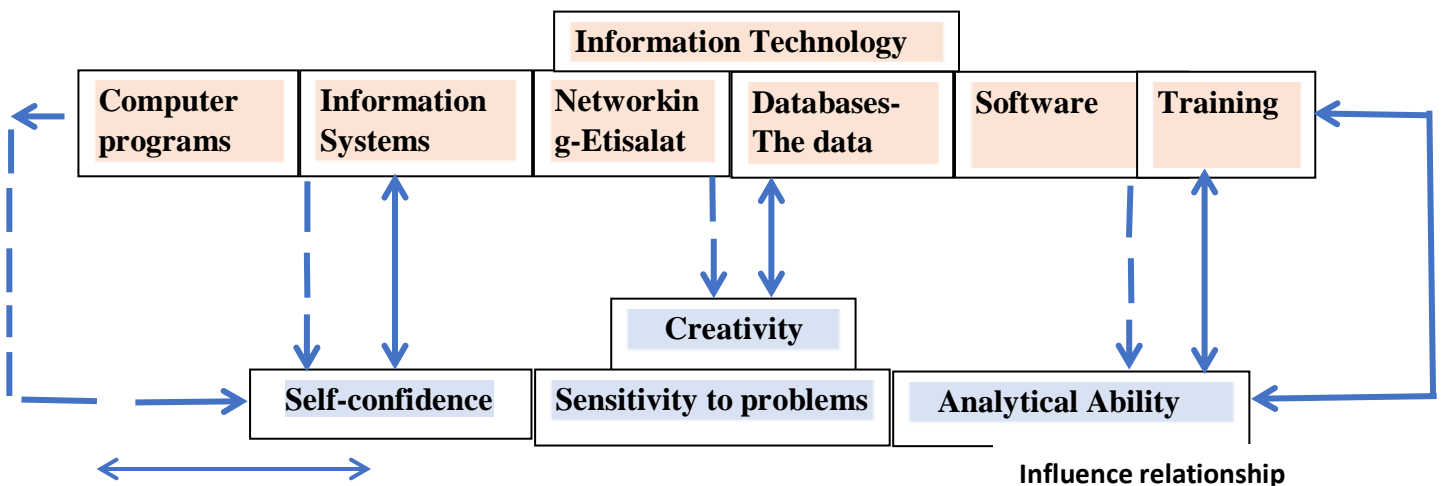


Fig. (1) of The virtual study scheme

**Fifth: Study hypotheses**

The Study Problem, its objectives and the default study Scheme branch out from a set of sub-hypotheses such as the following:

1-There is a positive Significant relationship between Information Technology and creativity.

The following hypotheses branch from them:

- \* There is a positive Significant relationship between computer programs and self-confidence.
- \* There is a positive Significant relationship between information systems and self-confidence
- \* There is a positive semantic relationship between network communication and sensitivity to problems.
- \* There is a positive semantic relationship between databases and sensitivity to problems.
- \* There is a positive Significant relationship between software and Analytical Ability.
- \* There is a significant relationship between training and Analytical Ability.

2-there is a direct Significant impact of Information Technology on creativity and the following sub-hypotheses branch from it:

- \* There is a Significant influence between computer programs and self-confidence.
- \* There is a Significant influence between information systems and self-confidence.
- \* There is a Significant influence between networks – communication and sensitivity to problems.
- \* There is a semantic effect between databases and sensitivity to problems.
- \* There is a Significant effect between software and Analytical Ability.
- \* There is a Significant effect between training and Analytical Ability.

**Sixth: The study curriculum**

One of the best ways to describe and clarify the Study Problem and understand the study by presenting its variables is the study method that provides a clear and correct picture (abayna et al., 2018, P. 430). Because the survey method is one of the most common scientific research methods in the social sciences, it was chosen for this study, and many benefits make the survey method valuable in the field of Social Sciences.

**Seventh: Study limits**

1-objective boundaries: the objective boundaries of the study were represented by information technology, its dimensions and its impact on creativity

2-temporal boundaries: extended for the period from the theoretical and field side from 20/08/2024 to 20/01/2024.

3-spatial boundaries: our current study dealt with the Faculty of Information Technology – at Nineveh University as a sample through which the relationship between Information Technology and creativity is monitored to achieve the goals of the study.

**Eighth: Methods of data collection**

To collect the information required to finish the current study, the researchers used two different but equally important sources, the following are such sources:

Primary source: data and information from previous research and studies, including books, theses, dissertations, journals, Scientific Conferences and other references, including the first type.

The questionnaire was divided into three sections: the first section consists of information related to the respondent, namely gender, certificate and specialization, the second section consists of questions related to the independent variable, namely the dimensions of

Information Technology, and the third section consists of the dependent variable, creativity and accompanying questions, as shown in Table No. (2). (Al-hawajrah, 2009, p.15).

Table No. (2) Regarding The study variables

Variables	Dimensions
Information Technology	Computer programs (1 - 5) Information systems (6 - 9) Networking - communications (10-16) Databases-data (17 - 19) Software (20-23) Training (26- 24)
Creativity	Self-confidence (27-28) Sensitivity to problems (29-30) Analytical Ability (31-32)

Source: prepared by researchers

### IX: Description of The Study Sample Community

The current research targeted the staff of the Faculty of Information Technology, as 53 forms were distributed to the individuals of the research sample, of which 49 forms were retrieved as valid for analysis by 92.45%, and 3 forms were neglected for not being valid, the characteristics of the individuals of the research sample were distinguished by the following:

Distribution of the research sample by gender variable: it can be seen from Table (3) that the percentage of males in the research sample in the institution under study was 73.47%, while the percentage of females was 26.53%. As for the distribution of the individuals of the research sample based on the certificate, it is noted that the highest percentage of the individuals surveyed were master's degree holders at 61.22%, followed by doctoral degree holders at 26.53% and finally bachelor degree holders at 12.24%. As for the distribution of the sample based on specialization, the computer science and mathematics major had the highest participation rate estimated at 71.43%, followed by 22.45% for Computer Engineering, and finally the Management Information Systems major with 6.12%.

Table (3). Distribution of the research sample by gender, degree and college variables.

Variables	Category	Number	%
Sex	Females	13	26.53
	Males	36	73.47
	Total	49	100.0
Certification	Bachelor	6	12.24
	Masters	30	61.22
	Doctoral	13	26.53
	Total	49	100.0
College	Management Information Systems	3	6.12
	Computer science and mathematics	35	71.43

	Computer engineering	11	22.45
	Total	49	100.0

Source: prepared by researchers based on the outputs of the SPSS program

### The Third Axis: The Theoretical Framework of Research

This study touches on two main variables, information technology and creativity, and these concepts related to variables will be clarified as :

#### First: Information Technology

In this paragraph, the concepts and definitions of Information Technology and its dimensions will be presented

##### 1-The Concept And Definition Of Information Technology

The term Information Technology took on great importance in the last years until 1976, as technology represented the materials, tools, methods and procedures of that time, Bugliarello & Doner, 1981:374)). The Greeks also referred to technology as "a discourse related to the arts, pure and applied," because it meant art or craft. (Nuttgens,1978: 9) technological progress facilitates access to communication information and focuses mostly on communication technology, however it is comparable to Information Technology. (Ratheeswari,2018:45)According to the concept of UNESCO ICT is used as a scientific, technological, engineering and management approach to dealing with information and its applications to socio-economic issues (UNESCO, 2002). It is also defined as the technological aspect of an information system, as it consists of hardware, software, databases, networks and other media that are used to achieve the company's goals et al., 1998)) Sherif and Odeh, 2016:179) define information technology " as the set of technologies represented by the physical entity, software components and human resources, as well as the procedures used in the framework of organizing the work of these parts together to manage data and information efficiently. Based on the foregoing, it can be said that information technology is all the technologies used by contemporary organizations to collect information that they use in the implementation of their various activities with the maximum degree of efficiency and effectiveness in a way that leads to their excellence and success".

##### 2-Dimensions of Information Technology: Consisting of The Following:

1-computer programs: various components are used in data entry processes as well as in the processing and extraction of information necessary for making decisions and completing tasks as needed (Gharbi, 2000).

2-Information Systems: Information Systems play an important role in the business environment across a wide range of disciplines and fields, especially in light of the great challenges imposed by the COVID-19 pandemic and the trends and challenges of digital transformation on organizations. These challenges require reliance on technology transfer and its application based on the capabilities of the institution, as countries and institutions are looking for technology transfers to enhance development and competitiveness and improve the performance and outputs of the institution (Maryam, 2023 P.54). Thus, the idea of technology transfer can take various forms, such as the form of a phased or finished product containing recorded information, knowledge, designs and real-life experiences, or it can take the form of tacit knowledge transferred by experts to the state where the technology is located.



**3-Networking-communication:** it is a grouping of computers connected by communication lines and arranged in a group so that users can transfer and exchange information among themselves as well as share resources. There are different types of networks, such as:

As local area networks: using a device known as a server, this type of network connects computers and their accessories within a single structure or office. Server –Client

Large urban area network: consists of several local area networks, used to cover an entire city or a group of buildings. The hubs in this network are often connected via fibre-optic cables.

Wide area network capability: users can communicate and exchange information across national borders as well as continents.

About the Internet: the Internet accounts for the majority of computer networks in the world.

This network is the largest information and communication technology tool available.

Information about all or most of the various activities is available on this network (Amro Ibrahim, 2009:32).

**4-Database:** it is a set of data that can be stored, retrieved, modified or added easily so that people can access it when they need it. Data are connected by logical relationships. Among the benefits of using databases are avoiding data duplication, increasing opportunities for data sharing, enhancing control, maintaining data stability and consistency, and standardizing data standards, data can take many forms, and the following forms are the most important (Yusuf, 2010: 12):

\* Alphanumeric digital data: such as business transactions, which consist of letters and numbers.

\* Textual data: used in written correspondence.

\* Visual data: such as images, graphs and the like.

\* Audio information: such as spoken words.

**5-Software:** it is a set of instructions used to perform a certain task. Examples of software include operating systems, word processing programs, budget programs, communication programs, and computer programs. These programs are protected, and developers are encouraged to create more of them to enhance protection and reduce theft of computer programs, as there are two categories of software: (Sahel and Mohammed, 2022: 175).

\* System programs: increase the efficiency and usefulness of the computer by providing the necessary services regardless of the task it performs, which are divided into two groups (operating systems and software).

\* Application software: used for tasks such as inventory management and payroll preparation. The majority of the software used in commercial companies is a type of application software that is currently widely used to do the majority of tasks in the industry.

**6-Training:** technology plays an important role in training by saving a lot of time and effort for the learner, due to computer-written education, as well as the acquisition of similar knowledge and skills is part of education, as technology has contributed to the emergence of new educational models, such as open education, which is based on exams only and uses computers, CDs and other media for teaching (Ben Kah& Nisreen, 2021:43).

### **3-The Importance of Information And Communication Technology :**

Its importance is embodied in two aspects, the first is at the level of the organization, through the introduction of Information Technology and achieving efficiency and effectiveness in terms of cost reduction and speed in decision-making, the second aspect is at the level of human resources and the role that information plays in relieving working personnel of the burden of routine tasks (Yusuf, 2005: 10). The importance of information technology lies in

the fact that it helps organizations to obtain the information they need to perform their work in a distinguished manner, so the organization is successful when it can balance between the abundance of information and the scarcity of access to it .information technology facilitates the creation of new job opportunities for organizations and increases its importance by providing broad and accurate information to managers and this helps them control the implementation of decisions of their subordinates, which may return them to centralization through the control that will be provided to them by IT tools.

Based on the above, the importance of information technology is highlighted through the contributions it provides to employees and managers by informing them of information, as organizations must have the elements and components of the future competitive advantage to be in the field of competition, of which information technology is a part (Alfegeh.2017:38-39).

### **Second: Creativity**

In this paragraph, concepts, definitions, dimensions and characteristics will be presented.

#### **First: The Concept And Definition of Creativity**

What distinguishes us as human beings is that our civilizations are rooted in creativity and despite its prominence at the pinnacle of human mental abilities, we know very little about the neural and cognitive processes that lead to creative ideas (Dietrich, 2015: 897-915). The process of bringing new and innovative concepts to life is called creativity. A feature of creativity is the ability to observe the world in different ways, identify hidden patterns, draw connections between seemingly unrelated events, and come up with solutions. When it comes to creativity, it can be said that this type of creativity serves to increase the intentions of knowledge workers to use modern Information Technology, acquire and integrate digital resources, and then finish various tasks in their work using the innovative technologies that they adopted within the framework of Information Technology (Naiman, 2022:334). Information technology innovation through the use of the internet stimulates the process of digital transformation in modern workplaces and as a result, the control of creative processes and their application to the technological sphere is necessary to promote creativity in the workplace and in the digital corporate environment (Wu & Yu, 2020:35).The creative person works through his experience to help the members of the organization to accomplish their various organizational tasks and make wise decisions in a volatile competitive environment. This leads to increased organizational creativity (Lee,2022,182-203). (One of the signs of creativity is excellence and originality, often denoting talent. To be creative, a person must try to satisfy the demands of the patrons, arouse their desire to produce something new

(Hwang & Kim, ,2019 :94-103). In addition, creativity stimulates collaborative and innovative work environments that facilitate the exchange of ideas between team members or other stakeholders within the organization. It is a key criterion for evaluating the competence of technology users based on the exceptional performance they have demonstrated through the use of this technology (Yang, 2014:14). Individual creativity plays an important role in achieving organizational goals and enhancing the abilities of organization members - such as self - confidence, communication and interaction-creativity is also associated with solving problems, developing alternative perspectives, learning new technologies and anticipating the possibility of their application to be innovative (Morrison & Johnston, 2003:145-158).

#### **Second: The Dimensions of Creativity**

He pointed out (Al-Qahtani, 2011:69-71 ) that there are several writers and researchers in the field of creativity that there are basic factors independent of creative ability and without them,

there is no such thing as creativity, one of the most prominent researchers in Guilford, who identified eight basic factors in this field, the most important of which is self-confidence, problem-solving and the Analytical Ability, we will identify each of them:

1-self-confidence: if you are tired of the positive qualities that have an important role in building a creative personality, then it is characterized by self-courage to express an opinion, defend thoughts and not succumb to failure situations.

2-Sensitivity to problems: Guilford defines it as " a person's ability to see problems in things, tools, or social systems that others may not see in them, or to think about improvements that can be made to these systems or these things, assuming that making a certain improvement implies a sense of a problem. From this it becomes clear that a creative person sees things that other ordinary people do not feel" (Guilford& AL,1986:367-397).

3-The Analytical Ability: any creative production is meant to include the process of selecting and breaking up any new work into simple units to be reorganized, the creative person is characterized by having a small amount of information when any new work is because he can simplify and organize his ideas and work on thoughtful bases (Haza et al., 2018:12).

### **Third: The Characteristics of Creativity**

Creative individuals have abilities and qualities that distinguish them from other members working in the organization, which attracts the attention of managers to them, as perseverance in putting forward ideas, confronting ignorance, searching for answers and solutions leads to the development and development of the capabilities and skills of employees in the organization (Matraeva et al., 2020:8-16), and among the most important aspects of creativity are motivation, personal qualities, outstanding cognitive performance in the creative field such as multiplicity of ideals, creative thinking, thinking outside the box, flexibility and independence in thought, strong problem-solving skills, high tolerance and the ability to explain (Gralewski, 2019:138-155). According to Karwowski, et al., 2019: 36)) there are other traits such as intelligence, ability to perform and self-confidence, that make the creator able to face change, make a more consistent effort and make an effective contribution to organizational learning Carroll & Fox, 2008: 21)) the creative person possesses a lot of admirable and positive traits and qualities that serve as an example of a desirable trait that can be imitated and is believed to be a prerequisite for achieving the best results (Almelhi, 2021:20-36) and that there are other aspects of individual creativity, such as distinctive qualities that raise the necessary ability and competencies, including:

**Communication skills:** ICT-related skills develop personal awareness by increasing confidence, conciseness and adaptability (Yan& Zhan, 2018:1-19).

**The cause of innovation:** The growth of creativity is closely related to innovation. Actions often require repairs, such as the creation and planning of a variety of new products. Divergent thinking is characteristic of knowledge and creative abilities.

Develop critical thinking abilities: reporting is a realistic task that requires reasonable reflective thinking. Along with these creative processes, such thinking also includes the development of hypotheses, asking queries and identifying possible solutions (Sălceanu & Sorici, 2021:1-21). Social skills matter: another general term for the trait or behaviour required for productive personal engagement is "social skills". Accordingly, the lack of social skills may cause problems in interpersonal interactions and relationships, as well as interfere with the individual's ability to perform at their best in social or professional contexts Saline.

**Leadership capabilities:** a creative person contributes significantly to the growth of individuals and organizations by creating an evolving and transformative environment that

contributes to the growth of individuals and organizations, helps them adapt, develop, thrive and expand inside and outside the organization (Strielkowski & Chigisheva, 2018:3).

### The Third Axis: The Applied Framework Of Research

#### The first axis: The use of Information Technology

**1-Computer programs:** such a factor in paragraphs (X1-X5) and the results in Table (4) showed that the overall rate of this factor was estimated at 4.15 and a standard deviation of 0.72, and the percentage of agreement of sample individuals in the paragraphs of this factor was 83.04%, and the largest contribution to the overall average of this factor was for paragraphs (X1, X2, X4), each of which averaged 4.20.

**2-Information systems:** paragraphs (X6-X9) represented this factor and the results showed that the overall rate of agreement of the study sample members on the paragraphs of this factor reached 79.90% with a general average of 4.00 and a standard deviation of 0.75, and from the same table shows that paragraphs X6-X8 have contributed close averages estimated at (4.00, 4.02 and 4.04) respectively.

**3-Networks-communications:** the paragraphs of this factor are represented by (X10-X16) the individuals of the research sample showed agreement on the content of these paragraphs by 82.86% with a general average of 4.14 and a standard deviation of 0.70, and the largest contribution to this average was for paragraph X12, which had an average of 4.33 and a standard deviation of 0.71.

**4-Databases:** this factor was represented by paragraphs (X17-X19), where the overall average was 3.91 its standard deviation was 0.70 and the percentage of general agreement on the paragraphs of this factor by the individuals of the research sample was 78.27, paragraph X19 had the largest contribution to the overall average of paragraphs of this factor with an average of 3.93 and a standard deviation of 0.63.

**5-Software:** the paragraphs (X20-X23) represented the paragraphs of this factor, which had an overall average of 4.11 and a standard deviation of 0.73 and the percentage of general agreement by the individuals of the research sample on the concept of these paragraphs 82.20%, and the paragraphs (X21-X23), each of which averaged 4.14 contributed to the overall average.

**6-Training:** paragraphs (X24-X26) represented this factor with an average of 4.19 and a standard deviation of 0.70, and the percentage of agreement of the individuals surveyed was 83.80% on the paragraphs of the factor, and paragraph X26 had the largest contribution to the average of this factor, as the average paragraph was 4.27 and a standard deviation of 0.70. It is noted from the same table that the overall rate of this axis was estimated at 4.08 and a standard deviation of 0.72 and the percentage of agreement of the individuals surveyed about the paragraphs of this axis was 81.67, which indicates that the paragraphs of this axis have achieved the purpose for which it was developed and that the institution studied achieved the paragraphs of this axis.

Table (4). It shows the repetitions, percentage, average, standard deviation and percentage of agreement of the answers of the sample individuals searching for the factors of the axis of the use of Information Technology.

	Strongly agree	%	agree	%	Neutral	%	disagree	%	Strongly disagree	%	Arithmetic mean	Standard deviation	%
X1	18	36.73	23	46.94	8	16.33	0	0	0	0	4.2	0.71	84.00
X2	18	36.73	23	46.94	8	16.33	0	0	0	0	4.2	0.71	84.00
X3	15	30.61	24	48.98	10	20.41	0	0	0	0	4.1	0.71	82.00
X4	18	36.73	23	46.94	8	16.33	0	0	0	0	4.2	0.71	84.00
X5	16	32.65	20	40.82	13	26.53	0	0	0	0	4.06	0.77	81.20
<b>Average</b>		<b>34.69</b>		<b>46.12</b>		<b>19.19</b>		<b>0</b>		<b>0</b>	<b>4.15</b>	<b>0.72</b>	<b>83.04</b>
X6	13	26.53	23	46.94	13	26.53	0	0	0	0	4.00	0.74	80.00
X7	15	30.61	20	40.82	14	28.57	0	0	0	0	4.02	0.78	80.40
X8	16	32.65	19	38.78	14	28.57	0	0	0	0	4.04	0.79	80.80
X9	10	20.41	25	51.02	14	28.57	0	0	0	0	3.92	0.7	78.40
<b>Average</b>		<b>27.55</b>		<b>44.39</b>		<b>28.06</b>		<b>0</b>		<b>0</b>	<b>4.00</b>	<b>0.75</b>	<b>79.90</b>
X10	22	44.90	20	40.82	7	14.29	0	0	0	0	4.31	0.71	86.20
X11	7	14.29	33	67.35	9	18.37	0	0	0	0	3.96	0.58	79.20
X12	21	42.86	23	46.94	5	10.20	0	0	0	0	4.33	0.66	86.60
X13	16	32.65	23	46.94	10	20.41	0	0	0	0	4.12	0.73	82.40
X14	14	28.57	26	53.06	9	18.37	0	0	0	0	4.1	0.68	82.00
X15	18	36.73	16	32.65	15	30.61	0	0	0	0	4.06	0.83	81.20
X16	16	32.65	23	46.94	10	20.41	0	0	0	0	4.12	0.73	82.40
<b>Average</b>		<b>33.24</b>		<b>47.81</b>		<b>18.95</b>		<b>0.00</b>		<b>0.00</b>	<b>4.14</b>	<b>0.70</b>	<b>82.86</b>
X17	11	22.45	24	48.98	14	28.57	0	0	0	0	3.94	0.72	78.80
X18	8	16.33	25	51.02	16	32.65	0	0	0	0	3.84	0.69	76.80
X19	10	20.41	27	55.10	12	24.49	0	0	0	0	3.96	0.68	79.20
<b>Average</b>		<b>19.73</b>		<b>51.70</b>		<b>28.57</b>		<b>0.00</b>		<b>0.00</b>	<b>3.91</b>	<b>0.70</b>	<b>78.27</b>
X20	12	24.49	26	53.06	11	22.45	0	0	0	0	4.02	0.69	80.40
X21	17	34.69	22	44.90	10	20.41	0	0	0	0	4.14	0.74	82.80
X22	16	32.65	24	48.98	9	18.37	0	0	0	0	4.14	0.71	82.80
X23	19	38.78	18	36.73	12	24.49	0	0	0	0	4.14	0.79	82.80
<b>Average</b>		<b>32.65</b>		<b>45.92</b>		<b>21.43</b>		<b>0.00</b>		<b>0.00</b>	<b>4.11</b>	<b>0.73</b>	<b>82.20</b>
X24	15	30.61	24	48.98	10	20.41	0	0	0	0	4.1	0.71	82.00
X25	17	34.69	25	51.02	7	14.29	0	0	0	0	4.2	0.68	84.00
X26	20	40.82	22	44.90	7	14.29	0	0	0	0	4.27	0.7	85.40
<b>Average</b>		<b>35.37</b>		<b>48.30</b>		<b>16.33</b>		<b>0.00</b>		<b>0.00</b>	<b>4.19</b>	<b>0.70</b>	<b>83.80</b>
<b>Overall average</b>		<b>30.54</b>		<b>47.37</b>		<b>22.09</b>		<b>0.00</b>		<b>0.00</b>	<b>4.08</b>	<b>0.72</b>	<b>81.67</b>

Source: prepared by researchers based on the outputs of the SPSS program

### The second axis: Creativity

**1-Sensitivity To Problems:** such a factor in two paragraphs (X27-X28) and the results in Table (5) showed that the overall rate of this factor was estimated at 4.19 and a standard deviation of 0.74, and the percentage of agreement of sample individuals on the paragraphs of this factor was 83.70%, and the largest contribution to the overall average of this factor was for paragraph X28, which averaged 4.27 and a standard deviation of 0.73.

**2-Self-Confidence:** the two paragraphs (X29-X30) represented this factor and had an overall average of 4.14 and a standard deviation of 0.72 and the percentage of general agreement by the individuals of the research sample on the concept of these paragraphs 82.70%, paragraph X30, which had an average of 4.27 and a standard deviation of 0.73 contributed to the overall average of the factor.

**3-Analytical Ability:** such a factor in two paragraphs (X31-X32) and the results in Table (5) showed that the overall rate of this factor was estimated at 4.05 and a standard deviation of 0.68, and the percentage of agreement of sample individuals on the paragraphs of this factor was 81.00%, and the largest contribution to the overall average of this factor was for paragraph X31, which averaged 4.10 and a standard deviation of 0.68.

Table (5). It shows the repetitions, percentage, average, standard deviation, and percentage of agreement of individuals ' answers.

	Strongly agree	%	agree	%	Neutral	%	disagree	%	Strongly disagree	%	Arithmetic mean	Standard deviation	%
X27	16	32.65	22	44.90	11	22.45	0	0	0	0	4.10	0.74	82.04
X28	21	42.86	20	40.82	8	16.33	0	0	0	0	4.27	0.73	85.31
<b>Average</b>		<b>37.76</b>		<b>42.86</b>		<b>19.39</b>		<b>0.00</b>		<b>0.00</b>	<b>4.19</b>	<b>0.74</b>	<b>83.70</b>
X29	12	24.49	25	51.02	12	24.49	0	0	0	0	4.00	0.71	80.00
X30	21	42.86	20	40.82	8	16.33	0	0	0	0	4.27	0.73	85.31
<b>Average</b>		<b>33.68</b>		<b>45.92</b>		<b>20.41</b>		<b>0.00</b>		<b>0.00</b>	<b>4.14</b>	<b>0.72</b>	<b>82.70</b>
X31	14	28.57	26	53.06	9	18.37	0	0	0	0	4.10	0.68	82.04
X32	11	22.45	27	55.10	11	22.45	0	0	0	0	4.00	0.68	80.00
<b>Average</b>		<b>25.51</b>		<b>54.08</b>		<b>20.41</b>		<b>0.00</b>		<b>0.00</b>	<b>4.05</b>	<b>0.68</b>	<b>81.00</b>
<b>Overall average</b>		<b>32.32</b>		<b>47.62</b>		<b>20.07</b>		<b>0.00</b>		<b>0.00</b>	<b>4.13</b>	<b>0.71</b>	<b>82.53</b>

Source: prepared by researchers based on the outputs of the SPSS program

It is noted from Table (5) that the overall rate of this axis was 4.13 and a standard deviation of 0.71, and the percentage of agreement of the individuals surveyed about the paragraphs of this axis was 82.53%, which indicates that the paragraphs of this axis have achieved the purpose for which they were developed and that the surveyed college achieved the paragraphs of this axis.

### Hypothesis Testing of Search Variables

**First: The first main hypothesis, which states (there is a positive Significant relationship between Information Technology and creativity)**

To answer this hypothesis, the data were analyzed and the correlation coefficient was found, the results of which are shown in Table (6), which shows that there is a significant correlation between the information technology axis and the innovation axis of 0.735. He has to accept this hypothesis.

Table (6). The correlation coefficient of the first main hypothesis

	Creativity	Significant level	Significant
Information Technology	0.735	0.000	Significant high

Several sub-hypotheses have emerged from this main hypothesis, as follows:

**1-The first sub-hypothesis emanating from the first main hypothesis: which states (that there is a positive Significant relationship between computer programs and self-confidence)**

From the results of the statistical analysis shown in Table (7), it appears that there is a significant correlation between the computer software factor and the self-confidence factor of 0.558 with a high Significant significance, so accept this hypothesis.

**2-The first sub-hypothesis emanating from the first main hypothesis: which states (that there is a positive Significant relationship between information systems and self-confidence).**

Table (7) shows that there is a positive and significant correlation between the information systems worker and the self-confidence factor amounting to 0.343, so accept this hypothesis.

Table (7) shows the output of the statistical analysis of the answer to the first and second sub-hypotheses emanating from the first main hypothesis.

	Self-confidence	Significant level	Significant
Computer programs	0.558	0.000	Significant high
Information systems	0.343	0.016	Significant

**3-The third sub-hypothesis emanating from the first main hypothesis: which states (There is a positive semantic relationship between networks-communication and sensitivity to problems)**

To answer this hypothesis, a statistical analysis was conducted on the answers of the individuals of the research sample and the results in Table (8), which showed a positive and significant correlation between the networking – -communication factor and sensitivity to problems amounting to 0.520, he should accept this hypothesis.

Table (8) shows the output of the statistical analysis of the answer to the third and fourth sub-hypotheses emanating from the first main hypothesis.

	Sensitivity to problems	Significant level	Significant
Networks-communications	0.520	0.000	Significant high
Databases	0.494	0.000	Significant high

**4-The fourth sub-hypothesis arising from the first main hypothesis: which states (that there is a positive semantic relationship between databases and sensitivity to problems)**

Table (8) shows that there is a positive and significant correlation between the database - worker and the worker and the sensitivity to problems reached 0.494, and therefore accept this hypothesis.

**5-The fourth sub-hypothesis emanating from the first main hypothesis: which states (There is a positive significant relationship between software and Analytical Ability)**

From Table (9), it appears that there is a positive and significant correlation between the software factor and the analysis ability factor of 0.480, so accept this hypothesis.

Table (9) shows the output of the statistical analysis of the answer to the fifth and sixth sub-hypotheses emanating from the first main hypothesis.

	Analytical Ability	Significant level	Significant
software	0.480	0.000	Significant high
Training	0.490	0.001	Significant high

**6-The fourth sub-hypothesis emanating from the first main hypothesis: which states (that there is a significant relationship between training and Analytical Ability)**

From Table (9) above, it is clear that there is a positive and significant correlation between the training factor and the analytical ability factor of 0.490, so accept this hypothesis.

Second: the second main hypothesis, which states (there is a direct significant impact of Information Technology on creativity)

To answer this hypothesis, a simple regression analysis was adopted, and the results in Table (10) show that there is a significant impact of the information technology axis on creativity, as the calculated F was 55.375, which is a highly significant value of 0.000, which is smaller than the value of 0.05, and R<sup>2</sup> interpreted the coefficient of determination of 0.541, which means that 54% of the variation in creativity is caused by Information Technology, and the remaining approximately 46% is due to other factors that do not exist in the current model. Also, the B values reached 0.735, which indicates that a change in information technology by one unit leads to a change in creativity by 0.735, this is supported by the T value (7.441), which is significant at 0.05. The C value also indicates that the value of creativity is estimated at 3.116 when the values of Information Technology are (zero), so accept this hypothesis.

Table (10). The impact of Information Technology on creativity

	Creativity			
	Constant	B	F	R <sup>2</sup>
Information Technology	3.116 t(1.067) <sup>NS</sup>	0.735 t(7.441)**	55.375 (0.000)**	0.541

Symbols \* \* indicate a high significance level smaller than 0.05. NS indicates designificantization

**Several sub-hypotheses have emerged from this main hypothesis, as follows:**

**1- The first sub-hypothesis emanating from the second main hypothesis: which states (that there is a significant effect of computer programs on self-confidence)**

From the results of the statistical analysis shown in Table (11), it appears that there is a significant effect of computer programs on self-confidence, supported by the value of F, which amounted to 21.293, which is a significant value of 0.05. Also, the value of R<sup>2</sup> was 0.312, which means that 31% of the discrepancy in self-confidence is responsible for computer programs, and the remaining 69% is due to other factors not included in the current



model. Also, the value of B, amounted to 0.558, which means that a change in computer programs by one unit leads to a change in creativity by 0.558, and this effect is significant in terms of a t value of 4.614, which is significant at 0.05. Finally, it is noted from the table that the value of C reached 3.168 even if the influence of computer programs was zero, which is significant at 0.05 and the value of T is 2.842. From the above, it is inferred that there is a significant effect of computer programs on self-confidence, and therefore accept this hypothesis.

Table (11). The influence of computer programs on self-confidence

	Self-confidence			
	Constant	B	F	R <sup>2</sup>
<b>Computer programs</b>	3.168 t(2.842)**	0.558 t(4.614)**	21.293 (0.000)**	0.312

Symbols \* \* indicate a high significance level smaller than 0.05. NS indicates designificantization

### 2-The second sub-hypothesis emanating from the second main hypothesis: states (that there is a significant influence of Information Systems on self-confidence)

The results shown in Table (12) show the influence of information systems on self-confidence, as the value of F reached 6.279 at a significance level of 0.05, and the value of R2 reached 0.118, which means that the variation in the self-confidence factor, 11.8% of which is responsible for the information systems factor and the remaining 89.2% for other factors not studied. Also, the value of B was 0.343, which means that a change in the information perception factor by one unit leads to a change in the self-confidence factor by 0.343 and indicates its significance through the value of t, which amounted to 2.506 at a significance level smaller than 0.05, while the value of C, amounting to (5.288) at t (4.409) at a significance level smaller than 0.05, indicates that self-confidence is 5.288 when information systems are zero, and from the above, it is clear that there is a relationship that is why this hypothesis is accepted.

Table (12). The influence of information systems on self-confidence

	Self-confidence			
	Constant	B	F	R <sup>2</sup>
<b>Information system</b>	5.288 t(4.409)**	0.343 t(2.506)**	6.279 (0.016)*	0.118

Symbols \* \* indicate a high significance level smaller than 0.05. NS indicates designificantization

### 3-The third sub-hypothesis emanating from the second main one: states (there is a semantic effect of networks - communication in sensitivity to problems).

Table (13) shows the presence of a significant effect of the network–communication factor in the sensitivity to problems, where the value of F (6.279) was estimated at a significance level smaller than 0.05, and the value of the determination coefficient R2 was 0.270, which means that the variation in the sensitivity factor to problems is responsible for the network and

communication factor by 27% and 73% of this variation is responsible for other factors outside the study. Also, the value of B is 0.343, the significance AT t is 2.506 and a significance level smaller than 0.05, which means that a change of one unit in the factor of communication networks leads to a change in sensitivity to problems by 0.343, and the value of C indicates the presence of sensitivity to problems estimated at 2.915, even if the networking – communication factor of zero t is equal to 2.215 and a significance level smaller than 0.05. From the above, we infer that there is a significant effect of the networking–communication factor in the sensitivity to problems, so he should accept this hypothesis.

Table (13). The influence of communication on sensitivity to problems

	Sensitivity to problems			
	Constant	B	F	R <sup>2</sup>
<b>Networks-communication</b>	2.915 t(2.215)*	0.520 t(4.168)**	17.376 (0.000)**	0.270

Symbols \* \* indicate a high significance level smaller than 0.05. NS indicates designificantization

#### **4-The fourth sub-hypothesis emanates from the second main hypothesis: which states (that there is a semantic effect of databases in sensitivity to problems).**

From Table (14), it is clear that there is a significant effect of databases on the sensitivity to problems, as it confirms that the value of F is 15.159, which is significant at a significance level smaller than 0.05, it also appears that the value of R2 was 0.224, which means that 24.4% of the variation in sensitivity to problems is responsible for the change in databases and 36.6% is responsible for other factors not included in the study. The value of B, which is equal to 0.494, indicates that a change in one unit of databases leads to a change in sensitivity to problems by 0.494 at a constant value of 3.893, which is significant at 0.05, and the value of C indicated that the presence of sensitivity to problems is equivalent to 4.405 even when the value of databases is zero at a constant value equal to 4.285 and a level of significance smaller than 0.05, which previously accepted this hypothesis.

Table (14). The impact of databases on sensitivity to problems

	Sensitivity to problems			
	Constant	B	F	R <sup>2</sup>
<b>Databases</b>	4.405 t(4.285)**	0.494 t(3.893)**	15.159 (0.000)**	0.244

Symbols \* \* indicate a high significance level smaller than 0.05. NS indicates designificantization

#### **5-The fifth sub-hypothesis emanates from the second main hypothesis: which states (that there is a significant effect of software in the Analytical Ability).**

Table (15) shows the presence of a significant influence of software on the Analytical Ability, and the value of F confirms this with a value of 14.035 at a significance level smaller than 0.05, and the value of R2 of 0.230 indicates that the software factor affects by about 23% the

variation in the Analytical Ability and that 77% is due to the influence of other factors not included in the study. It can also be noted that the B value of 0.480 is at a yellow significance level of 0.05 and the T value is equal to 3.746, which indicates that the amount of change in the software factor by one unit leads to a change in the Analytical Ability by 0.480. The value of C, which means the existence of the Analytical Ability, is indicated by 4.561, while t is equal to 4.771 and a significance level smaller than 0.05, even if the software values are equal to zero. He has to accept this hypothesis.

Table (15). The influence of software on the Analytical Ability

	Analytical Ability			
	Constant	B	F	R <sup>2</sup>
Software	4.561 t(4.771)**	0.480 t(3.746)**	14.035 (0.000)**	0.230

Symbols \* \* indicate a high significance level smaller than 0.05. NS indicates designificantization

#### 6-The sixth sub-hypothesis emanating from the second main one: states (that there is a significant effect of training in the Analytical Ability).

Table (16) indicated the presence of a significant effect of training in the Analytical Ability, as confirmed by the value of F, amounting to 11.842 at a significance level smaller than 0.05, and the value of R2, amounting to 0.201, which indicates that the experimental factor is responsible for approximately 20% of the variation in the Analytical Ability and that 80% is due to factors not present in the study. Also, the value of B equal to 0.449 AT t is equal to 3.441 and a significant level smaller than 0.05, which indicates the amount of change in the ability to train by 4.441 when there is a change in training by one unit. The value of C, estimated at 4.437 AT t, is equal to 4.128 at a significance level smaller than 0.05, which indicates the value of the Analytical Ability if the training value is equal to zero, so this hypothesis has already been accepted.

Table (16). The influence of training on the Analytical Ability

	Analytical Ability			
	Constant	B	F	R <sup>2</sup>
Training	4.437 t(4.128)**	0.449 t(3.441)**	11.842 (0.001)**	0.201

Symbols \* \* indicate a high significance level smaller than 0.05. NS indicates designificantization

### The Fourth Axis: Conclusions And Proposals

#### First: Conclusions

By presenting the field results of the current research analyzing it, and testing the main hypotheses of the research, I showed a set of conclusions that were consistent with the research directions, as listed below:

Conclusions related to the analysis of the dimensions, impact and relationship of Information Technology and creativity:

The results of the statistical analysis showed the impact of the dimensions of information technology as an independent variable in creativity, which is considered a dependent variable, which reached the following conclusions:

1-The results of the statistical analysis showed that there is a positive correlation between the dimensions of Information Technology and the dimensions of creativity combined at the level of the college under study, where the correlation ratio was (0.735).

2. The results show that there is a positive significant correlation between the dimensions of Information Technology individually and the dimensions of creativity if the distance (computer programs and self-confidence) occupies the first place, where the correlation percentage reached (0.558), which means that the college under study provides modern computer programs that will contribute to increasing the ability of individuals working in the college under study to develop new creative ideas.

3-The results of the statistical analysis show that there is a positive statistically significant relationship between the dimensions of Information Technology and the dimensions of creativity combined at the level of the college under study, that is, the college understudy takes into account the dimensions of information technology with high accuracy.

4-The results of the statistical analysis showed that there is a statistically significant positive effect between the dimensions of Information Technology and the dimensions of creativity individually if the dimension ( computer programs and self-confidence) occupies the first place in terms of the power of influence, this means that computer programs will contribute to increasing the chances of the College studied by improving the areas of creativity, solving problems that occur and completing transactions with high accuracy.

#### **Second: proposals:**

Through the conclusions that the current research has worked on, there are several suggestions for the researched faculty, which are as follows:

1. The necessity of Keeping Up with modern technological development in the fields of Information Technology and creativity through reviewing research and studies and communicating with other universities interested in this field.
2. Conducting workshops and seminars to raise the awareness of the employees of the studied Faculty of the advantages achieved and possible to obtain due to the use of Information Technology and creativity.
3. To support the creative workers in the faculty by providing material and significant incentives to encourage them to improve the work environment and develop their own abilities.
4. The need to urge the employees of the faculty to apply modern technologies that contribute to making them more creative in completing the work assigned to them.

#### References

- Ababna , Hayel and Al-Zaabi, Mason (2018) . Integrating organizational culture into a model of technology acceptance in the use of the e-learning system from the point of view of the teaching staff a study at Al Al-Bayt University, Vol. (24), No. (2), pp. 395-432.

- Hazeh Khattab Mohammed, Sami Sabre Abdullah, Gabriel Ahmed Ismail, "Information technology and its role in managerial creativity: an analytical study of the opinions of a sample of managers of private sector banks in the city of Erbil" International Conference, 2018, P.12.
- Al-hawajra, Kamil Muhammad (2009). The readiness of the educated Organization for Organizational Change Conference presented to the Faculty of Economics and Administrative Sciences at Zarqa University, p .15.
- Sharif, Athir Anwar, Odeh, Bilal Kamel, the role of Information Technology in job performance, research published in the Journal of Economic and Administrative Sciences, issue 91 of the year .2016 p.: 174-196.
- Ali Gharbi, yemina Nizar, "Imported technology and the development of World Culture in the industrial enterprise", without edition, Laboratory of communication sociology for research and translation, University of Mentouri, Constantine, Algeria .2002.
- Amer Ibrahim Kandilji, Aladdin Abdulkader al-Janabi, "Management Information Systems", fourth edition, Dar Al-Masirah for publishing, distribution and printing, Amman, Jordan, 2009, p.32.
- Jamal Yousef Badir, " Modern Trends in Knowledge and Information Management", First Edition, Dar kunuz Al-Marfa Al-scientific for publishing and distribution, Amman, Jordan, 2010, P.12.
- Yousef, Bassam Abdul Rahman", 2005the impact of Information Technology and Intellectual Capital in achieving outstanding performance, " a survey study in the faculties of the University of Mosul, PhD philosophy of Business Administration, Faculty of Management and Economics, University of Mosul.
- Amina Sahel, Mohamed Bousta, "The advantages of Information Technology and the importance of investing in it", Journal of Economic Studies, Ahmed Boukra University, boumerdas, Vol.16, No. 01, Algeria, 2022, P. 175.
- Al-Qahtani, Shaa bin Saad Bin Mubarak, & Hamzawi, Muhammad Sayed Musharraf. (2011). Empowerment and its relationship to organizational creativity in security organizations: a comparative study (PhD thesis).
- Alfegeh, Z. M. M. (2017). The Importance of Information Technology in Supporting Organizational Development. Abjadia: International Journal of Education, 2(1), 34-43.
- Ben Kah, Nisreen. (2021). The impact of information and communication technology on human resources training in the organization: A case study of the Ministry of Higher Education and Scientific Research.
- Dietrich, A., & Haider, H. (2015). Human creativity, evolutionary algorithms, and predictive representations: The mechanics of thought trials. Psychonomic Bulletin & Review, 22, 897–915.
- Goodwin, J. (1981). Current Bibliography in the History of Technology (1979). Technology and Culture, 22(2), 374-484.
- Maryam Ghuloum Ashkanani. (2023). The mediating role of management information systems in the relationship between knowledge management and its impact on technology transfer: An applied study on managers and officials of the Information

Systems Department at the Ministry of Education in the State of Kuwait. Journal of Economic, Administrative and Legal Sciences, 7(10), 50-63.

- Nuttgens, P. (1978). Learning to some purpose. Higher Education Review, 10(3), 9.
- Ratheeswari, K. (2018). Information communication technology in education. Journal of Applied and Advanced Research, 3(1), 45-47.
- Slack, Nigel & Chambers, S. & Harland, C. & Harrison, A. & Johanston, R. 1998. Operation Management. London: Prentice Pub.
- UNESCO (2002) Information and Communication Technology in Education: A curriculums for Schools and Programme of Teacher Development. UNESCO, available at: <http://unesdoc.unesco.org>
- What is Creativity? (And why is it a crucial factor for business success?)", creativityatwork., Retrieved 24/8/2022. Edited.
- Wu, T. T., & Wu, Y. T. (2020). Applying project-based learning and SCAMPER teaching strategies in engineering education to explore the influence of creativity on cognition, personal motivation, and personality traits. Thinking Skills and Creativity, 35, 100631.



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