The impact of using information technology on the quality of information under the dimensions of COBIT 5: The field of study is Tikrit University

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Abstract: The study aimes at determining the effect of applying the university governance, which means intering information technology in the a chievement of its works depending on the modren computer programes and systems, in the electronic operation under the framework guidlines of COBIT5. The research arrives at a set of results as follows: a) the effective governance in the university sector encourages the efficient use of resources, strengthens the super vision of the allocation of these resources and improves the process of service delivery. b) The dependency COBIT5 framework leads to exceeding and containing the risk of using the information technology on the quality of information. The study recommends that it is necessary to interest in the information technology by the sinior management of the university through developing a special section in the presidency of the university for managing this technology in addition to special units in each college to focus on information technology and to use them in works of the educational institution as all.

Keywords: University Governance, Information Technology, the Quality of Information, COBIT5.

(JEL) Classification : M21, H7 ،J21.

ملخص: استهدف البحث تحديد أثر تطبيق حوكمة الجامعات من خلال ادخال تقنية المعلومات في انجاز أعمالها بالاعتماد على الانظمة والبرامج الحاسوبية الحديثة في التشغيل الالكتروني، في ظل المبادئ التوجيهية لأطار COBIT 5، وتوصل الى مجموعة نتائج منها؛ ان الحوكمة الفاعلة في القطاع الجامعي تشجع على الاستخدام الكفء للموارد وتقوي المساءلة وتشرف على تخصيص هذه الموارد وتحسين عملية تقديم الخدمات. وان الإعتماد على إطار COBIT 5 يؤدي الى تجاوز ولحتواء مخاطر تقنية المعلومات. كما يوجد تأثير معنوي لاستخدام تقنية المعلومات على جميع أبعاد جودة المعلومات كلاً على حده. وأوصت الدراسة ضرورة الاهتمام بتقنية المعلومات من قبل الادارة العليا في الجامعة من خلال استحداث قسم خاص في رئاسة الجامعة بإدارة هذه التقنية اضافة الى وحدات خاصة في كل كلية تكون مهمتها التركيز على تقنية المعلومات وكيفية استخدامها في اعمال المؤسسة التعليمية ككل.

الكلمات المفتاحية: حوكمة الجامعات، تقنية المعلومات، جودة المعلومات، COBIT5.

رموز jel: J21 ،H7 ,M21.

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1. Introduction:

The sector of information technology has recently become a basic element in the working of institutions especially the institutions of higher education, which makes it eligible to contribute in the economic and social developments. Many studies refer to the role of this sector in providing more information and facilitating the accessing to these information as well as supporting the infrastructure services. These studies also refer to the role of information technology in making business and service operations easier, which leads to improving the quality of products and services (*Al Maha, 2014, p2*).

The process of promoting the higher education requires on integrated system of governance that includes all parties of decision-making at the level of the whole university. Governance is the key to access to higher education and to ensure the transparency in work and the accountability for performance and the institutional involvement of all sides according to legislative references that organizing the work. This leads to ensuring the arrival to academic decisions starting from the department of a college and ending with the university. (*Nasser Aldeen, 2012, p4*).

With the appearance of the concept governance also appeared a set of principles and attractive bases which assist in the management of institutions and bodies and monitor neutrally and integrity With the appearance of governance also found standers of transparent, disclosure, justice and displine and also activated the mechanism of internal audit which of its goal is to limit the stumble cases in the works of institutions (*Al Sabaaki: 2011, p265*).

Governance also considered a system of supervision and guidance at the institutional level, which determines the responsibilities, rights, and relationships with the all concerned categories and clarifies the procedures and rules necessary to make decisions concerning the work of the institution. The governance also considered a system that supports justice, transparency and accountability and enhances confidence and credibility in the work environment. (*Ibrahim, 2010, p2477*).

The good practice of governance depends on the existence of a set of flexible organizational structures which arrange the functional status in the administrative units within the institution and determine the degrees in the career hierarchy and explain the relationship between its operators vertically and horizontally so as to ensure the complementarity in roles among them and non-overlapping roles or duplication of efforts in order to plan, organize, coordinate, monitor operations and manages risk. In addition to monetarily and evaluating performance on both

individual and institutional levels (The manual of practicing governance in public sector, 2014:7).

From above it can be said that this study seeks to make the university of Tikrit reach the level that reached by the other Iraqi universities in their adoption and application of information technology in the dimensions of COBIT5 because it represents a technique that help the auditor, management and users to identify the problem above and helps its users to gain confidence in the work.

1.1 The Problem of the study

Today it becomes necessary for the universities to apply the information technology as they are expected to enhance the quality of business within the institution starting from simple business to strategic business but the use of this technique is not easy and it can be faced by a lot of obstacles the most important of which is determining the problem of controlling them, this is what calls for the use of COBIT5. Therefor the problem can be formed by the following questions:

Is there a follow-up to the use and application of information technology as an input to the development of institutional educational work within the dimensions of COBIT5.

1.2 The previous studies

A. The study of (*Abu Hejer and Abideen, 2014*)

This study aims at explaining the theoretical framework of using the mechanisms of information technology governance in reducing the risk that face the information safety in the government institutions through reducing the electronic financial manipulation in the dimension of the electronic governance. The study concludes that the information technology governance is a vital strategic requirement in the sectors of society and in all fields and that, the application of its mechanisms contributes to the development of information systems in enterprises.

B. The study of (*Waddih and Ayshoosh , 2012*)

This study aims at discovering the concep of information technology governance and clarifying its importance and its different application modals and its role in enhancing the performance of the orgnizations. The study shows that the excis tence of dimension for the information technology governance can present an

explination for the paradox between the growing investment in information technology with out a consequent growing in production and performance. This governance also strenghens the contribution of information technology in creating the value and in ensuring the outstanding performance of the orgnizations and giving the indicators and standars required to measure that. Since serves the interest of all sides associated with the institution.

C.   The study of (*Zayood and others, 2014*).

This study aims at determing the level of using the information technologygovernance in the commercial bank in Al Laathikiya, Syria using the model of COBIT5 with its four dimensions: a) planning and mananging, b) the acquistion and implementation, c) supporting and delivering, and d) following-up, evaluation and monitoring. The study concludes that the level of the application of information technology governance in the syrian commercial bank according to the framework of COBIT5 is at the average.

The study recomends the necissity of applying a model for measuring the information technology governance according to the framework of COBIT5 inorder to become a standard measurment of the level of information technology governance.

D.   The study of (*Al Skafy, 2014*).

This study aims basically at trying to determine the level of information technology in the Jordanian companies especially the cola com company through defining the concept of information technique and the

E.   The study of (*Zhang, 2013*).

The main objective of this study is to explore the application of the COBIT5 framework and its actual use in the IT environment.

The study is carried out through the implementation of a COBIT pilot program within the IT department as a case study for the collection of preliminary data. After analyzing the actual use of COBIT tools and comparing them with their theoretical design, scientific problems are identified and resolved to adopt the framework the results of the study show some scientific ideas for the framework of COBIT, that help different companies.

And institutions to get benefit form COBIT, in addition to the other controling frameworks in the information technology.

F. The study of (*Abdelbasset, 2014*)

This study aims at studying and valuating how to link between the information technology governance and the COBIT5 in the company of the study and determining the level of applying this governance in the company using the COBIT5.

The study also aims at defining the mechanisms of this kind of governance and the concepts that are concerned.

The study Concludes that the use of this technique in the company is in a good level. Moreover, the results of the practical analysis shows that COBIT5 has a big role in managing risks and hence in activating the information technology governance.

The study recommends that for a successful applying of the information technology governance that depend on COBIT5, it is important to integrate it with the governance of the company. This is becausethis governance includes achieving the aims of information technology and reducing the consequent risks of applying it and hence this technology will a achieve value of the institution and help in keeping it critics on the previous studies

The analysis of the previous studies shows that some studies deal with the government governance and confirm its big role in assuring the performance with in the institution through adopting the information technology. Other studies deal with the information technology and the theoretical framework of using it and confirm that it is in demand in different fields. Some other studies combine of both the information technology and COBIT5 and focus on the level of applying this technology with in the dimensions of COBIT5 in the field of finance and management.

This study is different from the previous ones in that it will combine between the information technology and COBIT5 within the institutions of the university as it focuses on the private sector.

1.3 The importance of the study

The concept of information technology becomes one of the most important interest of the different institutions in both the private and the puplic sectors.Most of these institutions considerthe information technology as apart of its systematic structure which cotributes in the encoraging, sustainability and the groth of their

work and services.This is because thetechnology ingeneral has a strong effect on the strategicactivity, and that the active governance of the information technology affects immediately on the reputation of the institution through its contripution in establishing the value and insuring the outstanding performance of the institution and providing indicators and standars required to mesure that.

For a succcesful application of governance and information technology, it is important to relay on guidlines that help to assist properly,and this is what can be obtained through the adoption of COBIT5 framework.

The study aims at studying the effect of applying the university governance throuhg entering the information technology in the completion of its works basedon systems and modren software in the operating mail according to the guidlines of COBIT5 framewerk.

1.4 The Approach of the study

The researchers depend on two opproaches:

A. First: The inductive appraoch: through which the researchers deal with the aspects of the problems and review the previous studies depending on some searches and studies related with the main variables of the study in both English and Arabic languages.

B. Second: The deductive approach: Through which the researchers test the hypotheses of the study statistically inorder to determine the validity of the hypotheses. This is done by preparing survey lists and distributing them to a sample of teacher, technicals and administratives in four colleges of the university of Tikrit

1.5 The Hypotheses of the study.

A. There is no significant difference between the aspects of the study sample about the variables of the study that are presented in (the information technology and the electronic programs and systems) and the quality of information and its dimensions: (the efficiency, effectiveness, beneficial timely and the reliability) given to the different employing areas of the colleges where they work.

B. There is no significant difference between the aspects of the study sample about the valuables of the study presented in (the information technology and electronic systems and programs) and the quality of information and its

dimensions (the efficiency, effectiveness, beneficial, timely and the reliability) given to the different scientific qualification

C. There is no significant effect of using information technology on the quality of the information.

This third hypothesis can be divided into the following sub – assumptions:

- There is no significant effect of the information technology on the quality of the information.
- There is on significant effect of the information technology on the information utility.
- There is no significant effect of the information technology on providing timely information
- There is no significant effect of information technology on the reliability of infomation.

1.6 The limits of the study

The study is restricted to Tikrit universityspecifically to four colleges in the university (The administrative and economic college, the education college for humman scienes, the engenerring college, and the dentistry college) These colleges represent social, humanity, enginerring and medical specializations

1.7 The Axes of the study

The study will deal with the following points:

- The government governance in the educational institutions of the university.
- The concept and importance of information technology under the governance of educational institutions of the university.
- The relationship between COBIT5 and information technology.
- The practical study

2. First: The government governance in the educational institutions of the university

The concept of university governance has recently appeared to express areal crisis faces the university institutions and also suggested solutions for this crisis. The concept of governance, that can be defined as "the relationship between a number of participating parties that lead to the direction and improvement of the organizations performance" represents solutions to that crisis, which is the

weakness of the university's development as an academic institution, which is supposed to re-formulate the cultural cognitive and scientific directives of society. (*Al Shamari, 2014, p57*) so it can be said that the university governance is based on three principles: (*Al Heela and Nassir Addeen, 2015, p 67*)

- Transparency: which is represented in designing implementation of mechanisms, policies and legislation. It is one of the important criteria that is depended on in the classification and ranking of universities.
- Participation: by providing governance councils of the academic and administrative bodies, the student, and the society a chance to participate in drawing up policies and setting rules of work in different areas of university life.
- Accountability, which means empowering individuals within and outside the university to monitor work without disrupting work or harming others.

Universities in most countries contribute to the development of the social, economic, administrative, political, health and other aspects. In addition, it is an important and vital part of the society and it has reciprocal relations with the society, as the universities aim at: (*Kurdi, 2010, p1*)

- Good education presented in pushing a number of qualified graduates to fill reconciles in various institutions of the state commensurate with its needs, that is, there is a consensus between the requirements of the community and the quality of graduates.
- Community service through the interaction between the university and society and the contribution of the university in solving various types of issues through researches and the industrial, social, agricultural and educational workshops and others.

The application of the principles of governance requires a pluralism and a clear inclusiveness in the patterns and aspects of governance, which arepresented in the accounting, administrative, economic and legislative aspects that are integrated with each other to form the general framework of corporate governance.(*Al Fawaaz, 2015, p1*) and study of (*Al Shamari, 2014, p58*) shows that the active governance in the university sector encourages the efficient use of resource, strengthening the allocation of these resources and improving the delivery of services and management, and thus contributing in the improving the lives of both the students and the teachers

2.1 The aims and distructions of applying The government governance in the universities

The university institution is well-governed if it has legislative, regulatory and procedural framework represented in (legislation, organizational structures, processes and systems). And this enables it to (*Addaleel, 2014, p2*).

- Good performance: through the management of programms and efficient and effective delivery of services

- Matching: through decision making and administrative procedures in accordance with applicable legislation to meet the expectations of relevant parties of transparency, integrity and accountability. It canbe illustrated in the following figure:

Governance

Matching

Good performance

Accountability
Transparency and integrity

The provision of services
Efficiency and effectiveness

Form No (1)
Governance fromework

The obstacles of applying the governance of universities can be divided into two sections: **external constraints**which are the prevailing culture in society and the general political climate, investment within the country and the availability of laws and instructions that regulatethe economic activity and that ensure the application of governance. **Internel constractions** presented in the university legislation, the way of running the university, and the absence of teaching members from the university life. (**Nathba, 2015, p18**). Since many studies like the study of (Wadih and Ayshoosh) have confirmed that information technology governance isnot independent in itself but is a part of the governance within the institution and its extension. Therefore researchers have resorted to method of goverment governance without adressing the governance of information technology and they see the later in the governance of government universities, which will be reviewed in the next axis:

2.2 The theoretical framework of information technology under the governmental governance of universities.

Many government institutions have recently used IT to process data electronically, as they usethis technology to run their business and provide their services as well as sharing knowledge (**Hamdone and Hamdan،2008, p 914**). This has made IT an important tool in modern business,and this requires organizations of all kinds and sizes to keep abreast of this tremendous technical progress to stay in a competitive environment (**Jawad,2013, p19**).

The study of (**Ratih& other, 2014: 2016**) suggests that IT governance combines best practices in planning and monitoring IT performance to ensure that IT supports the organization in its attempt to achieve its strategic objectives.

Therefore, enterning the information in various sectors has a clear impact on labor productivity, especially in the field of management and supervision. And that the correct use of this technology in commercial or service activities can contribute to the competitive advantage of the enterprise. (**Al Skafy, 2012, p1**).

This technology contributes to emproving the strategic performance of the educational institutions of the university by improving the relationship between the institution and the external environment, as well as helping to improve the university's operations in a way that increases the effeciency of the operational,administrative and marketing operations inorder to reflect on the

quality and development of the services provided by the university and on the top of it is the educational services (*Abdul Ghanni, 2016, p 4*)

The main factor to success by mature organization in a dynamic business environment is an efficient information technology that can support the business strategy and this what makes the aligment between the orgnization andthe information technology sector is a prominent area of interest (*Zhang, 2014, p11*).

Inorder to achieve the purpose of useing the information technology there must be a consensus between itself and the university institution and this consensus is presented in the following (*Alhasnawi & Al Musawi, 2017, p 5*)

• The university administration understands what potential information technology determinats are?

• The IT function understands the objectives and needs of the university associated with those goals.

• This mutual understanding is manitored by the university through account tability and on appropriate governance structure.

In order to achieve the compatibility between the university and information technology, there must be an understanding of the value and costs of this technology and there must be a correspond between the objectives of the university and its needs of information systems.

Here, researchers see the need to determine the dimensions of information technology because these dimensions focusemainly on the administrative and functional aspects, which are the main component.

2.3 Dimensions of information technology

(*Hasoon, 2017, p154*) shows that the IT has four dimensions, in both the technological and the functional dimensions. These dimension include the following:

A. Equipment and tools: parts and components of input and output, data processing and dissemination of information such as computer, fax and telephone of all kinds

B. Software: consists of the parts and intangible components that enables the use of hardware and equipment and engines it.

C. Communications and networks: namely, the use of technical means to transmit and exchange information quickly and accurately with the beneficiary to support decision-making.

D. Applications: the practical side ofthis technology is computers, networks, and technology that collect, process, store, publish and deliver information and present solutions.

E. Human resources: which is represented in the forces that are responsible for the application of information technology in a way that enables technology to achieve its objectives.

(*Arostegui & other, 2014, p5*) explain that in order for IT to achieve the required efficiency, itmust have a range of dimensions which are presented in the following (IT knowledge management, IT infrastructure, IT integration in the organization's strategy and IT processes), which are presented in the specialized shared resources that reflect the organization's ability to understand and use IT tools and processes for information and data management.

Another study is of (*Al attaiby,2014, p95*) which says that the components of IT are represented in the folowing :

A. Infrastructure, which can be divided into

- Infrastructure equipment for IT services such as power supply, connectors and HVAC systems.

- IT infrastructure such as internal networks and input and output equipment.

B. Software and applications: operating systems and programs such as the accounting system and control systems

C. Internet: it is easy to collect data and move it form one place to another quickly and accurately

2.4 IT risk

IT risk can be identified as follows (*Al Juboori, 2017, p10*)

- Failure to provide services and information in a timely manner.
- Lack of optimal value of IT usage.
- Lack of compliance with information technology regulations and laws.
- Incompatibility between the technical devices and the work of the institution.
- Lack of IT infrastructure development.

In order to avoid the above risks, it is important to rely on the COBIT5 framework to overcome and contain these risks. This framework provides a set of guidelines that can help the organization to reduce the risks of using IT. This is what researchers will try to clarify in the next axis by defining this framework and its relationship to information technology

3. What is COBIT5 and its relationship to information technology?

One of the most important criteria is the IT governance. IT governance was established in 1995 by the institute for information technology governance (IT). It is "a control framework that links IT to business requirements and organizes IT activities in the accepted process model, moreover, it identifies key resources of information technology and the objectives of management oversight to be considered". IT is a series of standards, the latest of which was the COBIT5 framework (Abdulnoor and Nassaar2014:18). The COBIT5 framework can be defined as "a framework that includes a set of guidelines about the enabling or assisting factors for the IT management in an enterprise". This represents a set of practices that focus on managing this technology. IT points out that governance processes will provide the necessary guidance to the management processes that base on the needs of the institution and that gets feedback from these processes in order to assess the guidance and actions that are being implemented and provide the necessary modifications.

These processes are carried out through the IT lifecycle of four areas represented by the main dimensions of the COBIT5 framework. They include different governance processes that encompass various IT governance activities (*Catarino, 2012, p10*).

There are many institutions that adopt IT management to ensure their efficiency, reduce their costs and to increase control over their investments in this field. A number of IT governance frameworks have been developed to provide tools and guidance that improve IT governance; the most notably is the COBIT5 framework as is considered the most comprehensive IT governance framework. IT gives an overview of a full cycle of managing this technology (*Zhang, 2013, p 2*).

The COBIT5 framework consists of five dimensions: (*Ratih& other 2014, p17*).

• Planning and regulation: this scope relates to the planning and organization of IT operations and the project strategies.

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- Acquisition and execution:this scope links between the activities on the one hand and the information technology used on the other.
- Provision of services and support: this range relates to information technology, service operations and technical support.
- Monitoring and evaluation: this scope relates to the organization's IT security process.
- Monitoring and evaluation.

3.2 The positives of COBIT5 application (*AlJuboori,2017, p26*) explains that there are several benefits that a COBIT5 framework can provide:

- The best use of information technology can maximize the value of the organization.
- The use of information technology to accomplish the work of the institution increases user satisfaction.
- The use of IT within the organization increases compliance with laws, regulations and policies.
- Coordinatingand organizing the relationship and between the needs and requirements of the work on the one hand and the objectives to be achieved by the application of information technology on the other hand.
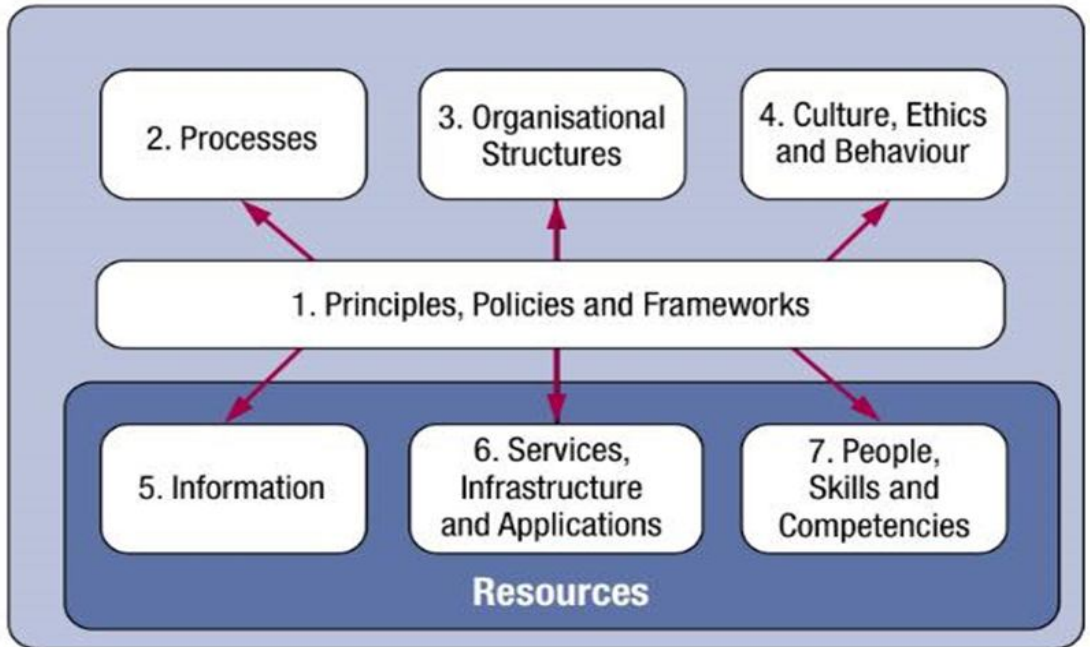
The COBIT5 framework can also provide significant support for IT governance as this support is ensured by the following: (*Abdulbasset, 2014, p 1*)

- IT is aligned with the organization's business (strategic alignment)
- Information technology contributes to the development of business and maximizes benefits (maximizing value).
- The use of IT resources in a responsible and structured maner (resource management).
- Ability to manage IT risk appropriately (risk management).
- Measurement of IT services (performance measurement).

3.3 The enabling or assistance factors to governance

Effective management and IT management require a comprehensive and integrated approach that takes into account many of the interactive components, COBIT5 identifies a set of supporting factors that support the implementation of a comprehensive corporate governance and IT management system. Auxiliary

factors are factors that affect individually and collectively and support successive goals. The higher IT goals determine what these elements should achieve. The framework identifies seven types of assistive factors (***Sutikno, 2013, p22***).

Form No (2)
Cofactors

Each one of these elements or factors are concerned with a specific aspect (Catarino, 2012:22):

- Principles, policies and frameworks are a set of communication mechanisms for the transfer of the instructions and directives of governing bodies and governance and it includes the framework of principles and policies (principles and policies of information security and the information security procedures and requirements)

- The organizational structure: through this factor, the overall responsibility for the institution's information security determined.

- The information and reports required. The decision-making is related to the assessment, controlling, optimization, financing and risk identification from all sources in order to increase the value of the institution in the field in which it operates.

• The human resources component that is supported by knowledge, skills and competencies, indicates that IT professionals need a range of skills to perform their tasks properly.

• Culture, ethics and behavior; employee behavior determines the success of the institution and the culture of the institution is closely linked to the collective conduct of its employees.

These elements can be applied in practical situations and they can be used to implement the efficient information management in the institution as it contains a set of common dimensions of (stakeholders, goals, life cycle and good practices).

3.4 Aspects of the COBIT5 framework.

The COBIT5 framework consists of set practices that focus on the IT management and that include extensive guidance about the assisting factors in the IT management of institutions. This framework focuses on three main aspects (Catarino, 2012: 10).

- Information security: the protection of information inside the institution means disclosure to unauthorized users (confidentiality), improper modification (integrity) and lack of access when needed (accessibility).They are practices used to preserve information from unauthorized access.

- Risk management: risk management identifies, evaluates and prioritizes risks to monitor, control and minimize the likelihood of certain events through managing and coordinating information risks in accordance with the directives risk management in the institution.

- Organizational culture: in the sense that the institution has the responsibility to influence and improve the organizational culture of employees, as it is necessary to use communication in more than one direction with employees in order to reduce the distance between them and improve their activities to improve their behavior.

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4. Field study

The researchers conducted the field study at the university of Tikrit and use a suitable and appropriate sample related with the subject which is dealt with. The researchers designa questionnaire as a main tool for collecting information and distribute them to a group of teachers, technicians and administrators in four faclties of the university's colleges. The four faculties of dentistry, engineerning, adminstration, economics and education of the humanities are selected as they representing the four disciplines (medical, social, human engineering). After reviewing the questionnaire, the researchers use (Spss ver.22). the statistical package for social sciences to perform a descriptive analysis of the data in order to identify the arithmetical averages and standard deviations.

4.1 Distribute polling lists and receive responses.

This is done through designing questionnaire forms according to the *fiveLikert scale* prepared for this purpose as described:

Table (1)

Number of survey forms distributed and not received, retrieved or excluded, and the numberof forms that are valid for analysis and response rate at the sample level:

Sample response rate for valid forms of analysis	Number of valid forms	Number of recovered forms	Number of applications not received	Number of distributed forms	statement
80%	16	16	4	20	Faculty of administration and economics
80%	16	16	4	20	College of engineering
60%	12	12	8	20	Faculty of dentistry
82%	17	17	3	20	Faculty of Education for Human sciences
	61	61	19	80	Total

Form the previous table, it is clear that the rate of lists suitable for statistical analysis for each category of study is appropriate, and can be relied upon in the statistical analysis to reach the desired results of the study.

4.2 Results of field study

A. First: Testing the stability and credibility of the field study tools:

As shown in table (2), the value of *AlphaKronbach* was between (0.929-0.605) and it is statistically known that the test statistic shoud not be accepted if it is less than 0.6. Therefore these values are acceptable in a way that reflects the availbility of reliability and confidence in the research variables and confirms its validity for the following analysis steps.

Table (2)

The value of the Kronbach Alpha coefficient and the coefficient of honesty for the variables of the study:

Honesty coefficient	Stability coefficient Alpha kronbach	The variables	
0.964	0.929	Use of information technology (softWare and electronic systems)	
828	0.686	Efficiency and effectiveness	Dimensions of information quality
0.922	0.851	Benefit	
0.778	0.605	Timing	
0.899	0.809	Reliability	
0.917	0.840	Quality of information	

Source: prepared by researchers based on the results of statistical analysis

B. Second: Testing hypotheses and analyzing results:

First Hypothesis: There is no significant differnce between the sample of the study about the variables of the study represented in (information technology:the electronic programs and systems, and the quality and distance of information: efficiency, utility, timeliness andreliability) Due to The difference of the work/college they work in. The statistical analysis in table (2) show the results of the first hypothesis test. Theyare as follows:

a. The value of the ka^2 (19,128) for information technology (software and electronic systems used) isat the level (0,000) which is less than (0,01), which means there is difference in the opinions of the sample of the study about information technology (the electronic programs and systems)due to the difference in the work, which is the order in terms of level of perception of the sample according to the average grades in: the faculty of dentistry followed by the faculty of engineering may be because they are scientific colleges that rely on constant updated technologies followed by the faculty of education for human sciences and finally the faculty of management and economics.

Table (3)

The results of analyzing the difference according to the college(employer) where they work:

The Variable	The college (employr)	Repetion	Averagegrade	Ka square	morality
Us of IT	Administ-ration And Economic	16	16.50	19.128	0.000
	Engineer-ing	16	35.22		
	Dentist	12	45.00		
	Education for Human sciences	17	30.79		
Efficiency and effectiveness	Administ-ration And Economic	16	21.66	16.187	0.001
	Engineeri-ng	16	23.88		
	dentist	12	37.25		
	Education for Human sciences	17	42.09		
Benefit	Administration And Economic	16		18.721	0.000
	Engineering	16			
	dentist	12			
	Education for Human sciences	17			
Timing	Administration And Econom-ic	16		3.086	0.379
	Engineering	16			
	Dentist	12			

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	Education for Human sciences	17			
Reliability	Administration And Economic	16		2.966	0.397
	Engineering	16			
	Dentist	12			
	Education for Human sciences	17			
Quality of information	Administration And Economic	16		12.011	0.007
	Engineering	16			
	Dentist	12			
	Education for Human sciences	17			

Source: pepared by researchers based on the vesits of ststistical analysis

b. The value of ka^2 (16.187) for efficiency and effectiveness at a significant level (0.001) is less than (0.01), which means that there is a significant difference between the views of the sample of the study on the efficiency and effectiveness,due to the difference of their work.This is presented in the order of the level of perception of the sample according to the averages of special grades in the faculty of education followed by the faculty of dentistry and then the faculty of engineering and finally the faculty of management and economics.

c. The value of ka^2 (16,187) for the variable of utility is at a significant level (0.000) is less than (0.01), which means that there is a significant difference between the views of of the study sample on the utility variable due to the difference of their work, which is presented in the order in terms of the level of perception of the sample according to   averages rank: in the faculty of education followed by the faculty of dentistery ,then the faculty of management and economics and finally faculty of engineering.

d. The value of ka^2 (12,011) for the quality of information variable is at a significant level (0,007) which is less than (0.01).This means that there is a significant differen between the opinions of the study sample on the information quality variable due to the difference of their work and it is presented in the order in term of the level of perception of the study sample according to the average

grades in: faculty of education followed by the faculty of dentistry and then the faculty of engineering and finally management and economics.

e. IT was also found that there is no significant difference between the views of the sample of the study on the variables of providing information in a timely manner and the reliability in it, due to the difference of their work.This confirms the agreement of the study sample on its importance as basic requirements for work.

The second hypothesis: there is no significantdifference between the vocabulary of the study sample on the variables of the study represented in: information technology (programs and electronic systems used) and the quality and dimensions of the information(efficiency, effectiveness, benefit, timing and reliability) due to different scientific qualification.

The statistical analysis in table (4) show the results of the second hypothesis test : They are as follows:

A. The value of $Ka^2 12$ for the use of information technology (software and electronic systems) at a significant level (0,014), which is less than (0,05) which means that there is a significant difference between the views of the sample of the study on the use of information technology (programs and electronic systems) due to the different scientific qualification which is the order in terms of the level of perception of the sample according to the average grades in: Bachelor and ph.D. followed by the diploma and the master and finally the higher diploma.

B. The value of Ka^2 (11,228) for the variable of provision of information in a timely manner is at a significant level (0.024) which is less than(0.05), which means that there is a significant difference between the view of the sample of the study on the provison of information in a timely manner due to the difference of scientific qualification, which is the order in terms of the level of perception of the sample according to the average gardes in the following: Bachelor and followed by the Master and Diploma and finally the Higher Diploma .

Table (4)

Results of variance analysis according to scientific qualification:

The absentee	Science qualification	Repetition	Average grade	Ka square	morality
Us of IT	Ph.D	4	29.13	12.583	0.014
	Master	21	26.86		
	Higher Diploma	3	6.67		
	Bachelor	22	39.86		
	Diploma	11	28.50		
Efficiency and effectiveness	Ph.D	4	19.00	6.916	0.140
	Master	21	33.64		
	Higher Diploma	3	14.00		
	Bachelor	22	34.75		
	Diploma	11	27.45		
Benefit	Ph.D	4	15.63	4.762	0.313
	Master	21	32.31		
	Higher Diploma	3	25.50		
	Bachelor	22	34.61		
	Diploma	11	28.36		
Timing	Ph.D	4	30.00	11.228	0.024
	Master	21	29.69		
	Higher Diploma	3	3.83		
	Bachelor	22	37.61		
	Diploma	11	28.05		
Reliability	Ph.D	4	31.88	10.509	0.033
	Master	21	26.83		
	Higher Diploma	3	8.83		
	Bachelor	22	38.05		
	Diploma	11	30.59		
Quality of information	Ph.D	4	17.50	11.330	0.023
	Master	21	30.55		
	Higher Diploma	3	8.50		
	Bachelor	22	38.41		
	Diploma	11	28.09		

Source: pepared by researchers based on the vesits of ststistical analysis

C. The value of ka^2 (18,721) for the reliability variable at a significant level (0.033), which is less than (0.05), which means that there is a significant

difference between the views of the sample of the study on the variable of reliability due to the difference inthe scientific qualification, which is the order in terms of the level of recognition of the sample according to the average grades in the Bachelor's and Doctoral followed by the Diploma and the Master and finally the Higher Diploma.

D. The value of Ka^2 (11.330) for the variable of qualitiy of the information was at a siignificant level of (0.023) which is less than (0.05) which means that there is a significant difference between the views of the sample of the study on the varibale of quality of information due to the difference in the scientific qualificantion, which is the order in terms of the level of recognition of the sample according to the average grades in the Bachelor and Master ,PhD and finally Higher Diploma.

E. It is also found that there is no significant difference between the views of the sample of the study on the variables of information utility, efficincy and effectiveness due to different sceintific qualification.

Third hypothesis: there is no significant impact of the use of information technology on the quality of information.

The statistical analysis show the results of the third hypothesis test as in table (5).

Table (5):

Results of analysis of the impact of the use of information technology on the quality of information:

İndependent variable	The dependent Variable	F (sig)	T (sig)	B	Adjusted	R^2
Use of IT	Quality of information	45.823	6.769	0.661	0.428	0.437

Source: pepared by researchers based on the vesits of statistical analysis

This table shows the following:

A. The significance of the regresion model is being determined as the value of (F) was (45.823) which is significant at a level less than (0.01).

B. The value of (T) for the the use of information tecnology was (6.769) at asignificant level of (0.01).

C. The value of (B) was (0.661), which means that there is a positive effect of the use of information technology on the quality of information with regression coefficient of (0.661) at a significant level (0.01).

D. The revised value of $(R)^2$ was (0.428), indicating that the use of informationtechnology accounted for (42.8%)of changes in the quality of information.

The previous hypothesis is divided into the following sub-assumptions:

• There is no significant effect of information technology on the efficiency and effectiveness of information

• There is no significant effect of information teechnology on the benefit of information.

• There is no significant impact of information technology on the provision of information in a timely manner.

• There is no significant impact on information technology on the reliability of information.

The analysis show the results of testing these hypotheses as shown in Table (6)

Table (6) for the results of the regression analysis of the impact of the use of information technology on the dimensions of the quality of each information:

İndependent variable	The dependent variable	F (sig)	T (sig)	B	Adjusted R^2	R^2
Use IT	Efficiency and effectiveness	60.345 (0.000)	7.768 (0.000)	0.711	0.497	0.506
	Benefit	14.439 (0.000)	3.800 (0.000)	0.443	0.183	0.197
	Timing	21.280 (0.000)	4.613 (0.000)	0.515	0.253	0.265
	Reliability	4.383 (0.041)	2.094 (0.041)	0.263	0.053	0.069

Source: pepared by researchers based on the vesits of statistical analysis

The above table shows that there is a significant effect of the use of information technology on all dimensions of the quality of information each as shown below:

- There is a significant positive effect of the use of IT on efficiency and effectiveness, which contributes to the interpretation of (49.7%) of the change in the efficiency and effectiveness of information.
- There is a significant positive impact of the use of IT to provide timely information that contributes to the interpretation of (25.3%) of the change in the provision of information in a timely manner.
- There is a significant positive effect of the use of information technology on information utility, which contribute to the interpretation of (18.3%) of the change in the benefit of information to its user.
- There is a significant positive effect of the use of IT on information reliability, which contributes to the interpretation of only (5.3%) of the change in the reliability of information.

5. Conclusion

- The process of promoting higher education requires an integrated system of governance that includes all decision-making parties at the level of the whole university.
- Information technology inmost institutions is considered as part of their organizational structure that contributes to the support, sustainability and the growth of their business and services.
- Effective governance in the university sector encourages efficient use of resources, strengthens accountability, supervises the allocation of these resources and improves the delivery of services.
- The existence of obstacles to the application of university governance are both : **External constrains,** such as the culture prevailing in society the general political climate, the availability of laws and regulations regulating economic activity, which ensure the application of governance. And **internal constrains,** are represented in the university legislation and the way of the university management and the absence of faculty members from university life.
- The correct use of IT in business or service activities can contribute in achieving the competitive advantage of the institution.
- The key to success by a mature enterprise in a dynamic business environment is an efficient and efficient information technology that can support the business strategy.

- The reliance on the COBIT5 framework leads to the overriding and containment the IT risk because it provides a set of guidelines that can help the organization to reduce the risk of using IT.

- The adoption of IT management by institutions ensures their efficiency; reduce their costs and increases control over their investments in this field.

- There is no significant difference between the views of the sample of the study on variables of providing information in a timely and reliable manner, due to the difference of the work, which confirms the agreement of the study sample on theirexaggerated importanceas prerequisites for the workflow.

- There is no significant difference between the views of the sample of the study on the variables of information utility and efficiency and effectiveness due to the difference of their scientific qualification.

- There is a significant effect of the use of IT on all dimensions of information quality.

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7. Recommendations.

1. It is important for the senior management of the university to take care of information technology by creating a special department in the presidency of the university to manage this technology, in addition to special units in each college whose task is to focus on information technology and how to use it in the work of the educational institution as a whole.

2. Researchers also recommend doing more studies about information technology as well as COBIT5.