

## The Impact of Intellectual Capital Management on Organizational Creativity

د. شريفة بنت عوض الكسر

أستاذ مشارك - قسم الإدارة التربوية - كلية التربية - جامعة شقراء

**Dr. Sharifah Awadh Al-Kaser**

Associate Professor at Shaqra University

### Abstract:

The purpose of this study is to discover the impact of intellectual capital management on organizational creativity and to find out the relationship between the components of intellectual capital and organizational creativity. The descriptive analytical method was used to analyze the data. The study population consisted of department managers, department heads and administrative staff, and the study sample amounted to (300) employees.

The study concluded that there is a positive significant correlation between the components of intellectual capital and organizational creativity. Moreover, the results showed that intellectual capital played a role in continuous improvement of performance, and that intellectual capital played a role in the renewal and the development of the organization.

The study ended with a number of recommendations, the most important one was the necessity of providing an opportunity to employees to express and discuss their proposals to develop work and open the way for an open dialogue between the organization's employees and its departments to be able to benefit from the intellectual capital represented in the human element.

**Keywords:** intellectual capital, management, organizational creativity, human intelligent.

## Introduction:

The interest in intellectual capital is one of the topics that have emerged in the management since the beginning of the nineties of the last century, when Ralph Steer, director of Johnson Philly Foods Company, launched the term “intellectual capital,” where he said, “In the past, natural resources were the most important components of national wealth and the most important assets of companies. Capital represented in cash and fixed assets has become the most important components of companies and society.” Now, natural resources, cash and fixed assets have been replaced by intellectual capital, which is the most important component of national wealth and the most valuable corporate asset. (Al-Mafraji and Ali, 2013).

Because of technological developments and its quick changes, competition has become a decisive and ruling element in the movement of the new world order, and this is what prompted business organizations of all kinds, sizes and fields of activity to search for various ways and mechanisms to develop their competitive capabilities and continuous work to strengthen their competitive position to occupy the leadership position in the market, and in the face of these new situations a fundamental fact became the utmost importance to the supplier human beings as the effective means and the only real source of any development or innovation in working methods, which has led these organizations to develop their competitiveness by relying on the so-called intellectual capital, which is the most important intangible asset and the source of creativity, innovation and competitive advantage, and is therefore the weapon adopted by the organizations, to meet the current global challenges (Raziq and Ben Amour, 2010).

Moreover, since the higher education sectors are an integral part of the world system, they must take care of their human resource and develop intellectual capital, and this is what we are trying to discover through this study.

## Statement of the Problem:

The problem of the study lies in the management of intellectual capital in university colleges to achieve organizational creativity, in order to achieve competitive advantage and to promote university education. Many recent studies on intellectual capital management, both Arab and foreign, have confirmed that the problem of intellectual capital management is one of the most prominent challenges facing human resources management in universities in general and Saudi universities in particular, due to the urgent need to regulate both innovation, creativity and knowledge of work. Systematically, intellectual capital focuses on the innovative and creative energies of the organization's employees and how to discover, invest and maintain them,

considering that contemporary organizations view their human resources as the most expensive and valuable assets (Al-Farji and Ali, 2013).

Rohm's study (2012) also showed that the intellectual capital of universities should be measured for a lot of reasons such as; increase transparency in public institutions in a knowledge-based society and require citizens to have continuous and comprehensive access to information to find out where and how public funds are allocated, universities should be compared and classified with another reference aimed at "measuring" instead of "arranging" educational institutions, leaving the final decision to the beneficiary of university services, and universities should acquire and apply new methods of learning. This will only happen by further transferring of good practices through the management of intellectual capital in universities, strengthening links between universities and industry is impossible without the introduction of a common ground. This "common ground" will enable academics and practicing businessmen to develop mutually beneficial relationships, including community service, and turn words into action on the ground in societies.

However, the management of intellectual capital is rarely done in organizations, as Hack (2013), explains that there are a number of cultural barriers to measuring and managing intellectual capital in universities, such as; reward and salaries in universities are unable to compete with other sectors. This creates incentives for university employees to look for additional opportunities such as consulting and training activities outside the university, the weak administrative leadership is due to the short term of administrative work where the rector is elected for four years from within the university community. This reduces the likelihood of radical decisions, the high community status of the university professor as it is customary that the university professor does not have the incentive to work harder in order to ensure his work and the absence of a threat to him in the case of lack of diligence in the work as in the private sectors, culture-self-regulatory repetition. Older generations of researchers tend to hire 'people like them'. Thus, individuals who do not fit into the old culture are likely not to be contracted.

*The problem of study is therefore determined in answering the following main question,*

### **Research Question/ Hypothesis:**

1. What is the impact of intellectual capital management on organizational creativity?

From which the following sub-questions are derived:

- How intellectual capital management can help in achieving continuous performance improvement?
- How intellectual capital management can help the organization in gaining continuous innovation and development?

The following main hypothesis was also formulated based on the study problem:

There is no positive and statistically significant relationship between the components of intellectual capital (human capital, structural capital, relationship capital) and organizational creativity.

The following sub-hypotheses are derived from them:

The first sub-hypothesis:

- There is no positive and statistically significant relationship between human capital and organized creativity.

The second sub-hypothesis:

- There is no positive and statistically significant relationship between structural capital and organizational creativity.

The third sub-hypothesis:

- There is no positive and statistically significant relationship between relationship capital and structured creativity.

### **Study Purpose:**

This study aims to:

1. Discover the impact of intellectual capital management on organizational creativity.
2. Find out the relationship between the components of intellectual capital (human capital, structural capital, relationship capital) and organizational creativity.

### **The Importance of Study:**

The importance of the study stems from the fact that it deals with a very important topic of managing intellectual capital in emerging colleges and the need to maintain it and ways to invest it in a way that achieves regulatory creativity, which in turn achieves competitive advantages.

This study also draws the attention of leaders and employees alike to the fact that no organization can achieve its objectives efficiently without an in-depth understanding of its intellectual capital and how it is managed, and the need to preserve intellectual capital and ways to invest it in a way that achieves innovative and creative activities that achieve and support competitive advantages.

The study is also an academic attempt to shed light on intellectual capital and its increasing importance in educational organizations and in the economy in general, and

how it can be developed and maintained to achieve competitive advantages and support through it, and to develop the performance of Arab and Saudi universities in general and emerging colleges in particular by achieving a return on intellectual capital investment taking into account the social return of university education, and benefiting universities in preparing for restructuring and expanding their intellectual capital.

### **The limits of the study:**

Spatial limit: Faculties of Sciences and Humanities in Thadiq and Dharma.

Human limit: directors of departments, heads of departments, and administrative staff in the faculties of science and human studies in Thadiq and Dharma.

### **Study terms:**

Intellectual Capital: Saleh (2010) defined intellectual capital as representing intangible assets that enable the organization to function.

Intellectual capital is procedurally defined as knowledge and is intended (skills, experiences, and accumulated education in the human component of the organization) that can be converted into a value that achieves a competitive advantage for the organization.

Organizational creativity: Daft (2021) defined organizational creativity as building a new idea or behavior for the organization's industry, market or public environment. A. Ani (2012) believes that creativity is to find multiple solutions to the same problem or to look at the same situation in different ways.

Organizational creativity is procedurally defined as: the process by which things that did not exist before are created, such as a commodity, service, or idea, so that they are rare and bring economic or social benefit.

### **Literary Review:**

#### **First: Intellectual capital:**

The concept of intellectual capital:

Salam (2019) defines intellectual capital as the resulting activity, and the work of the human mind including facts and descriptions, techniques, theories, concepts, laws and models.

Al-Atari (2012), also, defined intellectual capital as a mental capacity capable of generating new and practical ideas that are feasible, have a high level of quality and have the ability to integrate different components to reach the desired goals.

Hennie (2002) stated that intellectual capital is the difference between market value and the book value and the net value of the organization.

OCDE (2000) defined intellectual capital as: The economic value of two categories of non-tangible assets is the opinion of regulatory (structural) capital and the opinion of human capital.

Al-Nouri (2015), also, explained that intellectual capital is an important success factor in building knowledge of organizations based on intangible assets that include the knowledge, experience and information of workers as part of building bright human minds and bright stars to benefit from them in achieving competitive advantage and achieving the continued successes of these organizations.

Procedurally, organizational creativity is defined as: the process through which things that did not exist previously, such as a good, service, or idea, are created and found, so that they are characterized by scarcity and achieve an economic or social benefit.

### **The importance of intellectual capital:**

The intellectual capital of the institution such as the knowledge of employees, mental capacity and creativity, in addition to their invested ability to develop these processes are considered as source of competitive value, and there is now clear evidence that the intangible element of the value of advanced technology exceeds the real values of its sensory assets such as buildings and equipment, Microsoft's sensory assets are a small part of its market financing and the difference is its intellectual capital. All the capital owned by business organizations is intellectual capital and its market value is based on this resource (Ibn Hra and Bookred, 2017).

The importance of intellectual capital also stems from the importance of the status of the owners of minds and pulp of the Holy Quran, as these two words are mentioned in (61) verses i.e. distributed over (43) Sura Karima and 38% of the total Pillars of the Holy Qur'an. One of these holy verses is 190. (Verily! in the creation of the heavens, and the earth, and the alternation of night and day, there are indeed signs for men of understanding.), for verses of the first of the pillars (Surat Al-Amran verse 190) (Ahmed, 2017). Moreover, Shira (2008) stated that if the economy is the ruling element of our time, the knowledge of economy is the fuel for economic development because information has become more important than weapons.

In addition, Siban and Wilmonen (2007) illustrated the importance of intellectual capital today as the most valuable asset that exists for many companies and economies of countries and will form the impetus for future economic growth, consisting of technical and administrative inventions (Know How), trade secrets, business relations, designs, technical and literary innovations and several other forms of intellectual property and non-material assets from the product of invention and innovation of the human mind.

The knowledge economic industries depend more on the efficiency of the human element and the use of the mind in invention and development than on raw materials, as well as, Bawazir (2018), explained that these industries enter many sectors such as the telecommunications industry, information technologies, electronics engineering, software industry and others.

According to Al-Anzi and Saleh (2009) the importance of intellectual capital is as follows:

1. The strongest and most basic weapon of the institution because its intellectual assets represent a hidden force to ensure its survival and continue.
2. It is a competitive advantage for the organizations.
3. It is considered a treasure buried within the institution needs someone to look for and extract for existence and practice in order to invest successful and high returns for the institution.
4. It is an important resource for the institution as it helps to generate wealth for it and for the thousands of responses and development.
5. Contributes to the establishment of smart organizations that require the availability of a mind and a distinct ability.

Thus, the following can be summarized; intellectual capital is of special importance, just like other material and financial resources in any institution, if it is not more important. Accordingly, institutions should be interested in developing their human resource to explore what they have of intellectual capabilities, creativity and innovation, which gives the institution a competitive advantage over other organizations.

### **Components of intellectual capital:**

Stewart (2000) and Saeed (2010) stated that intellectual capital has the following components:

1. Structural capital: is the capabilities of the regulatory organization that regulates and meets the requirements of customers and contributes to the transfer and promotion of knowledge through the structural intellectual assets of information systems, patents, copy rights and authorship, and the extent to which the brand that represents the personality, value and identity of the organization, which benefits the customer and increases his/her satisfaction, as well as the benefit of the organization to increase its efficiency and effectiveness.
2. Human capital: Is the main source of formation and diagnosis of individuals who have the mental capacity, skills and expertise to find appropriate scientific solutions to the requirements and desires of customers because they are the source of innovation and creativity in the organization
3. Relationship capital: Refers to the relationships that the organization has with its customers, suppliers and strategic alliances.

### **Explanation of these components is as follows:**

#### **First: Human Capital:**

1. The concept of human capital:

Abuhara and Boucrede (2015) stated that the human capital is expressed by the knowledge of the organization's employees and workers.

Philip (2014) also defines human capital as the sum of the news, knowledge, energies, enthusiasm, creativity and qualities that the company's employees have and invest in the business. In addition, it is a creative worker who can perform good services, produce a good product, attract customers, and create value for the product and the company (Jad Al-Lord, 2006).

Al-Shammari (2018) also stated that the human capital is supplier strategic in the production process, a resource that is difficult to copy or imitate by any other institution. Moreover, Al-Ali et al. (2019) also defined human capital as a destiny and a different human experience in performance and working in the organization.



The innate part expresses the innate physical and mental preparations that are generated with the individual, and the acquired part is the most important part of human capital, as it reflects the overall skill, competencies, qualifications, physical ability and experience. (Al-Mufraji and Ali, 2016)

## 2. The importance of human capital

Zobar and Jadie (2011) explained that human capital is of great importance in the institution, so that it is considered the most important component of intellectual capital and this importance is due to:

- A- Setting the learning capacity of the institution, which is the cornerstone of increasing the skills and the abilities.
- B- Accomplish internal processes efficiently and effectively, and achieve the proposed value of customers.
- C. Achieving the financial objectives of value added and the rate of return on investment.

## 3. Indicators measuring human capital:

Edvinson (2001) explained that human capital has a number of indicators, the most important ones are:

- A- Staff capabilities: The leadership includes the management of the institution, the level of quality of the employees, the learning capacity of the employees, the efficiency of the training of the workers, the ability of the workers to participate in decision-making.
- B- The creativity of workers: includes the amount of creativity and innovation among workers and income generated from workers original ideas.
- C-Workers' trends include matching employee trends with the values of the organization, the degree of satisfaction of the employees, the average role rate of the employees, the average length of service of the employees of the organization.

## Second: structural capital

### 1- The concept of structural capital:

Structural capital is all that supports human capital, where structural capital is knowledge acquired and retained in structures, systems and procedures (Najm, 2009).

In addition to, Flake and Buqjani (2011) stated that it is the system and structure of the organization, the organization's possession of this type of intellectual capital enables it to provide an appropriate business environment capable of using human capital and making the most of its potential.

## 2- The importance of structural capital:

Zobar and Jadie (2011) stated that the importance of structural capital is reflected in the following:

- A- Achieving operational excellence by improving operational processes aimed at achieving high quality at low cost.
- B- Reducing the time of the role of internal operations and making the most of the capacity of the physical and administrative assets.
- C- Improve production flow quickly without any failures or a rack in the use of the resource.
- D- Raising the feasibility of production level and reducing the rate of damage.

## 3- Indicators for measuring structural capital:

There is a set of indicators in which structural capital can be measured as mentioned by Yassin (2007):

- A- General culture: The nature of building the culture of the institution includes, matching the employees with the perspective and vision of the institution.
- B- Organizational structure: the validity of the organization's control system includes the clarity of the relationship between the authority, and responsibility.
- C- Organizational learning: The construction and use of an internal information network includes building and using an educational inventory for the organization.
- D-Operations: Includes duration of activities and business operations, product quality level and operational efficiency.
- E-Information system: Mutual support and coordination between employees, provides data and information related to the activities and work of the institution and participation in knowledge.

### Third: Capital Relations:

#### 1- The concept of capital relationships:

According to Yousf (2005), the value of the level of satisfaction generated by customers, their loyalty, suppliers and other external entities and the company's ability to build it with these frameworks. Perhaps the most important form of relationships with customers, also, Zoubi (2020) knew it as the relationship with customers, suppliers, industrial and commercial organizations and market channels.

#### 2- The importance of capital relationships:

As Zobar and Jadie (2011) mentioned:

- A- Creating excellence and excellence through creativity and development such as the creation of new products.
- B- Gain new customers.
- C- Increase customer value through customer management processes, and deepen the relationship with existing customers.
- D- Reducing delivery times or responding quickly to customer requests.
- E. Working to make the institution a new member or partner in society by establishing real and influential relationships with external stakeholders.

#### 3- Indicators for measuring relationship capital:

Yasin (2007) stated that there are three indicators in which the institution's relationships are measured:

##### A-Destiny is a basic marketing:

They include building and using a customer database, providing the necessary amount of customer services, the ability to identify customer needs.

##### B- Market density:

Market share, potential market, units sold to customer number, brand reputation commercial and brand name of the enterprise, building channels for sale and distribution.

##### C-Customer loyalty index:

Such as customer satisfaction, customer complaints, investment volume in building customer relationships, level of gain for new customers, level of loss of current customers.

### **The importance and aspects of investing in intellectual capital:**

First: the importance of investing in intellectual capital:

Ajlan (2008) explained that the importance of investing in intellectual capital is reflected in the following aspects:

- 1- Enhances the performance of organizations, especially those with a strong strategic position.
- 2- Increasing investment in intellectual capital is an important indicator for measuring the profitability of the organization and actively contributes to the high returns of the organization.
- 3- Investing in the field of intellectual capital requires business organizations to know the levels of investment appropriate to them by setting the minimum and maximum amounts allocated for the purpose of investing.
- 4- Helps encourage creativity and innovation.
- 5- Contributes to enhancing the competitive position of the institution: by investing in intellectual capital and other intangible knowledge assets (information technology, internet, computer uses and advanced knowledge).
- 6- Investing in the intellectual capital of the high-end news and skillful work contributes to enhancing the ability to manage distribution channels, as is the case with processing networks.

Second: Aspects of investment development in intellectual capital:

Shaaban (2011) outlined the aspects that the company should be interested in to develop intellectual capital through:

- 1- Attracting the best human talent: the institution should have an effective system in the selection process, the use of new workers, the provision of learning capital and the transfer of experience between successive generations of workers.
- 2- Enrich in human capital by encouraging and motivating employees to join the training pool and share and distribute knowledge within the institution.
- 3- Maintaining outstanding employees: This is done by providing systems and methods of trust-based management and encouraging creativity and new ideas.

In addition, knowledge of institutions are characterized by the fact that their capital is in the minds of workers who leave the institution at the end of the day and who

are attracted by other competing institutions, so it is necessary to find foundations to strengthen and consolidate the rules of institutional loyalty.

### Third: Structured creativity:

Creativity is an old phenomenon, since the beginning of creation and man innovates and invents as well as the community, organization and society, and this topic has entered erasing the scientific approach, but the organized scientific interest did not begin until the early 1950s (Fadel, 2007).

Business literature has been celebrated with many jurisprudence, although the term creativity is among the most common terms of the time in administrative thought, but it carries with it the contents and interpretation of multiple (Mullah, 2009).

Kotler (2020) defined organized creativity as any commodity or idea that is taught and understood by anyone as useful and new. Hill & Jones (2010) sees regulatory creativity as anything new or strange about the way organizations or products produce, including any progress on the types of products, production processes, management systems, regulatory structures and management structures adopted by the organization, is the way in which one employer can take, either to create new resources of wealth or to strengthen existing resources with the potential to create wealth in the future.

Daft (2021) defined organized creativity as adopting a new idea or behavior for the organization's industry, market or public environment. Structured creativity is defined as seeing ideas and things, through different content, either by identifying the hidden potential inherent, or that can be used differently or by linking non-duck preconceived ideas with each other, to create brand new idea or perspective (Creative Thinking, 2015). According to Ameri and Ghaly (2017), that efforts are to develop, improve or develop new uses for its products in the form of goods and services.

### Types of structured creativity:

The classifications of researchers in the field of organizational behavior and the science of the organization for the types of organizational creativity starting from different perspectives.

According to the using of structured creativity, there are two types of it: -

1. Product Innovation, which is a change in physical or performance characteristics, for the current commodity or service or the production of completely new products (Ameri and Ghaly., 2017).

2. Process Innovation, a change in the ways in which goods are manufactured or services are provided in production and distribution (Ameri, Ghaly.,2017). The boundary between product creativity and process creativity is often unclear because of the overlap between the relationship between the two (Husseini, 2019). (Al-Kubaisi, 2012).

Others classified structured creativity according to its areas which include two types: -

1. Managerial Innovation is a change in the processes by which it can accomplish, and deliver service or goods to consumers (Ameri and Ghaly, 2017) and administrative innovations include a change in the structure of the organization and human resources systems and functions and administrative methods (Al-Kubaisi, 2012)
2. Technological Innovation, which means a change in the physical or performance aspects of the commodity or service or a change in production processes (Ameri and Ghaly, 2017). Daft (2021) noted that technological creativity is different from administrative creativity by being administrative and occurs less frequently than technological creativity.

Structured creativity has been divided by the nature of its impact into two types: -

1. Radical Innovation is the production of products in the form of new goods or services or technology developed by the organization to replace goods, services and technology located in the sector in which the organization operates (Ameri and Ghaly, 2017)
2. And this type of creativity offers fundamental leaps, which work to bring about changes or innovations in large industries (Jouida, and Al-Israwi, 2012).

There are those who are classified as organized creativity according to their source to:

1. Internal Innovation expresses the organization's innovations and is the source of ideas from within the organization such as senior management, staff and departments such as research and development and others (Mullah, 2009).
2. External Innovation was the organization's access to ideas from external sources such as other organizations with similar activity or research centers and others (Husseini, 2019).

Structured creativity was classified into two types on the basis of the decision taken:

The creation of individual decision issued by the senior management, and collective creations issued with the participation of the members of the organization working there (Mullah, 2009).

As can be seen from the above explanation that intellectual capital and taking care of it by organizations through training, maintaining distinguished employees and encouraging them to be creative and innovative, contribute to giving the organization a competitive advantage and contribute to its investment in all knowledge assets such as information technology, the Internet and advanced knowledge skills of the human resource.

### **Factors influencing regulatory creativity: -**

There are two sets of factors that can affect creativity:

- First groups are factors that help or enhance creativity
- Second group is a factor that hinders creativity.

#### **I. Creative factors:**

Al-Mamouri (2014) noted that most researchers have shown that the factors that promote creativity in the climate prevailing in creative organizations in general are:

1. The creative organization must strengthen the link with social organizations.
2. There is a need to resort to the adoption of alliances and joint agreements with other organizations such as entering into investment projects for creativity as well as the adoption of the task forces a major in the frame work of the innovation, as well as granting creativity the first priority in the interests of the organization.
3. Attention to delivering the news to community organizations through continuous training.
4. Formulating systems and instructions in a flexible way that helps creativity, as well as formulating internal competition systems between the organization's formations, to take advantage of the broad range of ideas that are presented.
5. Increase effective communication between workers within the organization.
6. To raise the level of exciting abundance that helps generate new creative ideas, encourage all management practices, and develop creativity.
7. Encourage the organization and staff to attend seminars related to the development of creative ideas and reduce environmental uncertainties, by adopting many mechanisms, especially what has been called "radical creativity" in order to be a store of information on the circuit of creativity.
8. Granting powers and delegated them to the departments associated with the organization, which encourages them to innovate.
9. The organization's active contribution to solving the new problems facing workers.

10. Dealing with all the ideas that are contained, particularly the root ones, as well as the organization's quest to promote new values and accept and encourage change.

Ii. Factors that hinder creativity:

Moussa (2010) explained that there were many researchers in their classifications of the obstacles to creativity. These include the multiple constraints that prevent creativity from flourishing and reaping the expected benefits:

1. Social resistance to new ideas due to the return of society to thinking in a particular framework (resistance to change).
2. Fear and anxiety about the failure of new ideas and methods and this is called the fear of thinking.
3. The organization's creativity is at the lowest level and may be non-existent if the experience and culture of administrative leadership is limited and if it tends to be a fold in dealing with the new ideas that the workers are advancing.
4. Failure to provide material and moral incentives to creators.
5. Failure to provide the necessary material supplies and facilities for creativity.
6. Some societies reject creators and may be punished them.

As for (Ameri and Ghaly, 2017), they identified the most important obstacles to creativity as follows:

1. Lack of resources dedicated to the creative process, the process of creativity is costly in terms of financial resources, time and energy.
2. Failure to generate promising opportunities or generate new ideas that can develop into products.
3. Resisting change, as new ideas usually find a lot of opposition and disapproval.

Therefore, the process of creativity may die and disappear early.

**Previous Studies:**

- Sherifi's study (2014) entitled "Intellectual Capital to Support Creativity: Field Study:", aimed at the importance of intellectual capital in supporting creativity at the level of mobile phone companies and the problem is to ask the following question: How can intellectual capital support the creative processes of decision makers at the level of mobile phone companies in Algeria?

The study found a number of results, the most important one was that the level of evaluation of the sample of the dimensions of intellectual capital was high;



The study concluded with a number of recommendations, the most important ones are: mobile phone companies should work to evaluate their intellectual assets and develop a strategic plan that includes identifying the current and future needs of intellectual capital of highly qualified, experienced and skilled employees and working to attract them.

-Awadi's study (2014) aimed at managing change based on intellectual capital, to highlight the concept of intellectual capital and its most important points of difference with traditional capital and its most important elements, and to define organizational change and its most important internal and external causes and the most important types of it and how to manage it in a way that ensures the organization to stay and continue and achieve value, and focus on change based on intellectual capital within the organization and how individuals deal with it. The problem was raised with a major question: What is change based on intellectual capital? How do individuals deal with this change within business organizations?

The study concluded that intellectual capital-based change is the most important, although most organizations do not tend to it, but this is only a matter of time, and this importance is reflected in the fact that it is deeper and more rooted in order to change everything that is traditional in achieving competitive advantages.

- In the study Rifai and Khairallah (2015), the impact of the application was that of the intellectual capital strategy on improving the efficiency of human resources. The problem of research is to try to answer the following questions: first, what is the role of intellectual capital in improving the performance of human resources at Ain Shams University in particular and in public universities in general? Secondly, is there a relationship between each component of intellectual capital and improving the performance of human resources in order to satisfy the client about the educational service performed? The result showed that there is a strong positive relationship between independent sub-variables that represent the dimensions of intellectual capital, the variable of the level of human resources performance at Ain Shams University, although the impact resulted from only two variables: human capital and relationship capital, which reflects the need to pay attention to them to develop in situation performance. The research recommends maintaining the intellectual capital in the structural and relationship sectors by taking care of the knowledge stored in the minds of employees and faculty and making them transfer it to the new employees and faculty, through scientific communication by making conferences and the annual scientific departments, which is a living opportunity to present the latest scientific developments in the field and try to put them into practice by inviting businessmen and politicians to attend these meetings.

- In Mazlan (2005) 'The Influence of Intellectual Capital on the Performance of Telecom Malaysia', which aimed to assess the intellectual capital on performance of Malaysia Telecom. It also aimed to identify "the level of intellectual capital of the company, the strength and impact of intellectual capital, the importance of knowledge management and intellectual capital management as independent variables and its role in enhancing the performance of Malaysia Telecom as a dependent variable, the study used the analytical descriptive approach based on a series of strategies in collecting quantitative and qualitative data for the purpose of the study, and the results of statistical analysis confirmed the existence of a positive relationship between independent variables and the dependent variable. The study recommended that improving the performance of the company needs to strengthen strong management leadership, especially at the higher management levels, in addition to the individual competencies and skills of employees working in technical management positions.

Mitchell's study (2010) entitled "A model for managing Intellectual capital to generate wealth" also aimed to develop and test a model of intellectual capital management derived from the organization's vision and strategy, and previous relevant studies formed the basis for the development of that model, which summarizes all the different aspects that the organization must take into account when managing its intellectual capital. The study reached a number of results, the most important of which was that although most of the specific aspects of the study model are present in the company, there was no awareness among the management of the company to manage intellectual capital, and therefore recommended that more attention should be shown to bring about behavioral changes in addition to the importance of socializing the employees of the company.

Villasalero's study (2014) was aimed at examining the relationship between research at the university and technical capital developed through science complex companies in order to clarify whether the causal relationship is due to the direct effects of financial research or is due to financial activities for technology transfer. These projects are negatively related to technology transfer activities carried out by universities.

Khalique et al., (2015) study aimed at assessing the relationships between the sub-components of intellectual capital and regulatory performance in small and medium-sized companies in Pakistan's electrical and electronic industries. The results showed the appropriateness of the elements and components of intellectual capital in the degree to which they were affected by regulatory performance and the results were moral, while

the only component and human capital has not been proven to have an impact and has not been morally affected in influencing organizational performance.

### **Comment on previous studies:**

By discussing previous studies, which reached the following conclusions: the similarities between the current study and previous studies all focus on intellectual capital and work to achieve a competitive advantage of the organization among its counterparts, while the difference between the current study and previous studies that the current study focuses its efforts on managing intellectual capital in university colleges to achieve regulatory creativity. Organized creativity based on the management of intellectual capital has become one of the most important means adopted globally to improve the level of organizations and enable them to keep up with successive developments in various fields and thus strengthen capabilities in order to apply modern and sustainable management concepts at the lowest costs and high quality in order to achieve the satisfaction of customers and develop human resources and encourage creativity and launch innovations and capabilities. However, the current study benefited from the previous studies and the theoretical aspect in creating the study questionnaire and determining the method of the study.

### **Methods and Procedures:**

#### **Research Design:**

Since the study is interested in studying one of the humanitarian problems, which is the management and development of intellectual capital in university colleges, it is a descriptive study, the researcher relied on the survey curriculum based on the fact that this curriculum is one of the approaches that is interested in studying scientific problems by surveying the opinions of those concerned (AbuSa'i, 2014).

#### **Populations and Sample Size:**

The study community consists of department managers, department heads and administrative staff at the Faculty of Shaqra University who are 350 employees according to SU statistics data in 2018. However, the researcher used the nonprobability sampling technique. Also, with a non-probability sampling population, participants were selected on the basis of their availability because they volunteered. More specifically, the type of non-probability sampling the researcher used was a convenience sample because the researcher used whichever individuals were available, rather than selecting from the entire population, so there 350 questionnaires were distributed on all the populations, and 300 questionnaires were returned and are considered.

### **The instrumentation of the study:**

The provisions of intellectual capital management and development were drawn in order to achieve organizational creativity through the theoretical framework and previous studies, and then the arbitration questionnaire was built, and the questionnaire included an introduction showing the purpose of the questionnaire, the way to answer its phrases, and the basic data, and adopted the method of analysis according to the five-list Likert, and included the tool (questionnaire). The first is the role of intellectual capital management in continuously improving performance, the second is the role of intellectual capital management in innovation and development according to the external environment data and the internal capabilities and resources of the organization, the third axis: measuring human capital, the fourth axis: measuring structural capital, and the fifth axis: measuring relationship capital.

### **Issues of Reliability:**

The validity of the tool was ascertained through the apparent honesty, as the questionnaire was presented in its initial form to a number of specialists and educational experts, and their number was (9) arbitrators. For this purpose, a form was prepared to survey the opinions of the arbitrators about the clarity of the wording of each paragraph and its suitability to the axis to which it belongs with the addition or expression of opinion in terms of deletion, addition or modification, and all their observations and suggestions were taken and the tool was modified and put into its final form.

### **The validity of the internal consistency of the instrument:**

After confirming the apparent validity of the research tool, the researcher applied it in the field on a random exploratory sample consisting of (10) employees from the study community in order to identify the extent of the internal consistency of the research tool, and on the data of the exploratory sample, the researcher calculated the Pearson correlation coefficient to find out the internal validity of the questionnaire, where it was calculated The correlation coefficient between the degree of each of the questionnaire's expressions with the total degree of the axis to which the statement belongs, as shown in the following tables (1-5).

Table (1): Pearson correlation coefficients for the expressions of the first axis with the total degree of the axis

Sentence number	Axis Correlation Coefficient
1	** ,٦٧٦
2	** ,٨٠٨
3	** ,٧٣٨
4	** ,٨١٦
5	** ,٥٧٣
6	** ,٨٠٨
7	** ,٦٤٧
8	** ,٦٩٨

\*\* Significance is observed at significance level 0.01 or less.

Table (2): Pearson correlation coefficients for the expressions of the Second axis with the total degree of the axis

Sentence number	Axis Correlation Coefficient
1	** ,٥٨٥
2	** ,٧٣٢
3	** ,٧٦٨
4	** ,٦٥٦
5	** ,٦٩٢
6	** ,٧٣٥
7	** ,٥٥٨
8	** ,٥٨٩

\*\* Significance is observed at significance level 0.01 or less.

Table (4): Pearson correlation coefficients for the expressions of the third axis with the total degree of the axis

Sentence number	Axis Correlation Coefficient
1	** ,٤٦٥
2	** ,٤٤٢
3	** ,٥٠٣
4	** ,٣٥٣
5	** ,٤٠٨
6	** ,٥٦٣
7	** ,٣٨٥

\*\* Significance is observed at significance level 0.01 or less.

Table (4): Pearson correlation coefficients for the expressions of the fourth axis with the total degree of the axis

sentence number	Axis Correlation Coefficient
1	** ,٥٠٤
2	** ,٦٨٧
3	** ,٥٠٠
4	** ,٥٦٧
5	** ,٥٣٣
6	** ,٦٨٩
7	** ,٥٠١

\*\* Significance is observed at significance level 0.01 or less

Table (5): Pearson correlation coefficients for the expressions of the fifth axis with the total degree of the axis

sentence number	Axis Correlation Coefficient
1	** ,٦٣٢
2	** ,٤٥٥
3	** ,٣٥٧
4	** ,٥٢٥
5	** ,٣٦٢
6	** ,٦٠٣
7	** ,٦٣١

\*\* Significance is observed at significance level 0.01 or less

From Tables No. (1-5) that the values of the correlation coefficient of each of the phrases with its axes are positive and statistically significant at the significance level (0.01) or less, which indicates the sincerity of its consistency with its axes.

#### Issues of Reliability:

Resolution stability was calculated using the Cronbach Alpha coefficient as shown in table1.

Table (6): Cronbach Alpha Transactions

Axis	The sentence	constancy	Honesty*
The role of intellectual capital management in continuously improving performance.	8	0.899	0.948
The role of intellectual capital management in innovation and development.	8	0.908	0.952
Measuring human capital	7	0.835	0.913
Measuring structural capital	7	0.843	0.918
Measuring relationship capital	7	0.821	0.910
Total	37	0.963	0.981

\* The test was calculated by calculating the root of the stability factor.

- The previous table shows the stability coefficients of the alder's axes between 21.8 and 0,908 by 96%, which is high, which reflects the stability of the poverty of the questionnaire, as well as the honesty factors indicate the consistency of the phrases from the target for which they were set and came high by 0.981.

### **Statistical treatment methods:**

Data processing is based on the Statistical Program of Social Sciences (SPSS) to analyze the study data through the following statistical ratios: repetitions and percentages.

### **Data Processing:**

The data are encoded to determine the length of the cells of the pentagram of the alder axes, so that the length of the cells becomes as follows:

From 1 to 1.79 represents a very high score, From 1.80 to 2.59 represents a high score, From 2.60 to 3.39 represents an average score, From 3.40 to 4.19 represents a low score, From 4.20 to 5 represents a very low score.

The tricrea.t. and percentages were calculated to determine the responses of the study sample to its vocabulary.

### **Analyses of the Data Research Question and Hypothesis:**

#### **First: Discuss the answer to the following main question:**

What is The Impact of Intellectual Capital Management on Organizational Creativity?

#### **By discussing the following sub-questions:**

First: discuss the results of the answer to the first sub-question, which states:

How can continuous performance improvement be achieved through intellectual capital management?

To answer this question, the calculation averages and standard deviations of the role of intellectual capital management in continuous performance improvement have been calculated, as shown in the following table:

Table (7)

Arithmetic averages and standard deviations of the role of intellectual capital management in continuous performance improvement from the point of view of the study sample members

	The Sentence	Arithmetic medium	Standard deviation
1	The organization adopts maintenance programs Accurate and periodic devices such as printers and laboratories to avoid Possible malfunctions at work.	2.0870	.73318
2	The organization is keen to develop And improve its current services to keep pace with the changes of the times.	1.6957	.70290
3	The organization relies on its staff Qualified in job.	1.6522	.83168
4	The organization is interested in involving staff In training courses to develop their acquaintances.	2.7826	1.20441
5	The organization seeks to develop Its administrative processes in a way It's going on.	2.3043	1.01957
6	The organization is working to change Its organizational structure to suit its competitive environment.	2.3043	1.01957
7	Characterized by relationships between different Sections of the organization in cooperation and exchange Experiences.	2.4348	1.19947
8	The organization is keen to improve Its outputs through best quality.	1.5217	.66535
<b>Total average</b>		<b>2.0978</b>	<b>.72296</b>

Table 7 shows the mathematical average of the axis of the role of the management of intellectual capital in the continuous improvement of performance came high, with a total average (2.0978) and a standard (0.72296).

- Through the results of Table 2, it is clear that the majority of the responses of the study sample to the questions of the focus of the role of the management of intellectual capital in continuous performance improvement were responses between a very high degree and a high degree, which shows that intellectual capital management has an important role to play in the continuous improvement of performance.

- The phrase "a" which shows the organization's interest in deploying employees in training roles to develop their knowledge came first, with an average account of (2.7826).

- The seventh phrase came in second place with an average account of (2.4348) which reflects the excellence of relations between the various sections of the organization in cooperation and exchange of news.

- The fifth and sixth terms, in third place, also came with an average account (2.3043).



It is concluded from these findings that continuous improvement of performance through intellectual capital management can be achieved through:

- Attention to training courses to develop employee knowledge.
- Interest in developing relations between the different sections of the organization and their cooperation and exchange of experiences.
- The organization's development of its administrative processes on an ongoing basis.
- Changing the organization's organizational structure to suit its competitive environment.

**Second: discuss the results of the answer to the second sub-question, which states:**

How can the organization's continued renewal and development be achieved through intellectual capital management?

To answer this question, the calculation averages and standard deviations of the role of intellectual capital management in innovation and development have been calculated in accordance with external environment data and the organization's internal capabilities and resources, as shown in the following table:

Table (8)

Calculation averages and standard deviations of the role of intellectual capital management in innovation and development according to external environment data and the internal capabilities and resources of the organization from the point of view of the study sample members

	The Sentence	Arithmetic medium	Standard deviation
1	The organization encourages suggestions and the innovations provided by The staff.	2.0000	1.04447
2	The organization adopts strategies Creative and innovative	1.9130	.94931
3	The organization has special mechanisms Let it knows up In the outer periphery compared with competitors	2.0000	.90453
4	The organization has ways to do it. of predicting what's going on in labor market development.	1.7391	.68870
5	The organization seeks to implement International Quality Standards	2.2609	.75181
6	The organization supports the participation of Staff in decision-making Strategy	1.4348	.79082
7	The organization has a special section. With research and development.	2.5217	1.16266
8	The organization allocates a budget For scientific research.	2.8261	1.26678
<b>Overall average</b>		<b>2.2120</b>	<b>.77920</b>

Table (8) shows that the management of intellectual capital has an important role in innovation and development according to the point of view of the study sample members, where the overall average of the axis (2.2120) is high.

- It is also clear that the majority of the responses of the sample over the questions of the role of the management of intellectual capital in renewal and development between a very high degree and a high degree.

- The eighth phrase, which reflects the organization's allocation of an intention for scientific research, came first, with an average calculation of (2.8261).
- The seventh phrase came in second place with an average calculation of (2.5217), which reflects the existence of a special department for research and development in the organization.
- The rest of the phrases came in an average, with average calculations between (1.7391-2.2609).

These findings conclude that innovation and development in the organization can be achieved in accordance with external environment data and the organization's capabilities to manage intellectual capital through:

- Allocation of a budget for scientific research in the organization.
- Creating a special section for development research in the organization.
- Support staff to participate in strategic decision-making.

By answering the two sub-questions of the study, the main question on ways to manage intellectual capital in organizations can be answered to achieve organizational creativity, through continuous performance improvement, innovation and continuous performance development by following:

- Attention to training courses to develop employee knowledge.
- Interest in developing relations between the different sections of the organization and their cooperation and exchange of experiences.
- The organization's development of its administrative processes on an ongoing basis.
- Changing the organization's organizational structure to suit its competitive environment.
- Allocation of a budget for scientific research in the organization.
- Creating a special section for development research in the organization.
- Support staff to participate in strategic decision-making.

**To test the hypothesis of the main study, which states:**

There is no statistically significant relationship between intellectual capital management and organizational creativity.

Table (9)

Relationships between intellectual capital and structured creativity

	Organizing creativity				
	r	t Calculated	t Scheduling	Morale level	Degree of confidence
Human component	.903	3.640	2.353	5%	95%
Structural component	.961	6.019	4.541	1%	99%
Intercreative component	.984	9.566	4.541	1%	99%
<b>Total index</b>	<b>.955</b>	<b>6.467</b>	<b>4.604</b>	<b>1%</b>	<b>99%</b>

### Test the first hypothesis:

The first hypothesis stated that "there is no statistically significant relationship between human capital and organized creativity".

Table (9) indicates that there is a moral correlation between the human component of intellectual capital and organizational creativity, with the value of the coefficient between them (0.903), a value that reflects a positive relationship with a statistically significant level of confidence (95%), which attributes the importance of the human component in organizational creativity in Researched colleges, a relationship of moral significance, confirms that the calculated t value was (3.640) which is greater than the value of t scheduling (2.353) at a moral level (5%), and therefore rejects the first sub-hypothesis.

### Test the second hypo-thesis:

The second hypothesis states that "there is no statistically significant relationship between the structural component and organizational creativity".

Table 4 shows that there is a moral correlation between the structural component of intellectual capital and organizational creativity, with the value of the coefficient between them (0.961), a high value that means a positive relationship with a statistically significant level of confidence (99%), and this relationship indicates that the more interested the colleges in management of the organizational structure has led to an increase in the level of organizational creativity, a relationship of moral significance, with the value of t calculated (6.019) which is greater than t scheduling (4.541) at a moral level (1%), and therefore rejects the second hypothesis.

### Test the third hypothesis:

The third hypothesis states: There is no statistically significant relationship between human capital and organized creativity.

Table (9) indicates that there is a moral correlation between the relationship component of intellectual capital and structured creativity, with the value of the coefficient of the association between them (0.984), a value that reflects the existence of a positive relationship with a statistically significant level of confidence (99%), and this relationship explains that the more active the management of relations in colleges, the more it increases its ability to achieve organized creativity, a relationship of moral significance, as the value of t calculated amounted to (9.566) which is greater than the value of t table (4.541) at a moral level (1%), and therefore rejects the third sub-hypothesis.

Since the three sub-hypotheses arising from the main hypothesis have been rejected, the main hypothesis is rejected (there is no statistically significant relationship between intellectual capital management and structured creativity).

### Summary of the results of the study:

Through the citation that dealt with the data and the discussion of hypotheses, the study reached a number of results that could be summarized as follows:

1. The study revealed a high positive moral correlation between the human component of intellectual capital and organizational creativity, and the researcher explains this as the results showed that the organization is interested in involving employees in training courses to develop their knowledge, as the results showed that this is done to a moderate degree in the organization, and that Intellectual capital has a role in the renewal and development of the organization, as the results showed that it has a high impact on it.
2. The study also revealed a high positive moral correlation between the structural component of intellectual capital and organizational creativity, and this is due to the fact that the organization has the ability to design, produce and market distinguished services through its intellectual capital, and the intellectual capital in the organization has a role in continuous improvement performance, as the results showed that this is achieved in the organization to a high degree, and the relations between the various departments of the organization are characterized by cooperation and exchange of experiences to a high degree, according to the results of the study, and this is due to the fact that the organization allocates a reasonable budget for scientific research and supports the participation of employees in making strategic decisions, as the sample members answers showed that this is done in the organization to a moderate degree.
3. The results of the study also showed that there is a high positive significant correlation between the relational component of intellectual capital and organizational creativity; This is due to what the results of the study showed that the organization is committed to providing services on time to a very high degree, and it seeks to solve the problems of its employees in a quick time, as the results showed that this is done to a high degree, and that the organization provides its customers and employees with their diverse needs to a very high degree.

### Study recommendations:

The study concluded through previous results with a number of recommendations:

1. Developing and managing intellectual capital to become a strategic resource for wealth generation due to the rapid changes facing emerging colleges that require high-level cognitive knowledge and an increase in the advanced skills of employee.
2. Increased interest in intellectual capital and its management as managed by the monetary asset, as it is an important source of strategic direction for contemporary organizations and this invites colleges to inspect and move the disabled capacities to be effective and to establish an administration that works hard to ensure the investment of intellectual capital.
3. The need to pay attention to the process of polarization and recruitment from within or outside colleges in order to contribute to the presentation of outstanding creative ideas.
4. Supporting organized creativity by investing in intellectual capital as a source of innovation and creativity with the need to take care of the intellectual capital industry by allowing employees to express their opinions and proposals on the development of work while encouraging direct dialogue between college management and employees for the purpose of clarifying creative ideas and this is done through regular friendly meetings and meetings that enable employees to launch their ideas.

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