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**KNOWLEDGE SHARING AND INDIVIDUAL
PERFORMANCE:
THE MEDIATION ROLE OF ORGANIZATIONAL
MEMORY**

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بِسْمِ اللّٰهِ الرَّحْمٰنِ الرَّحِیْمِ

" وما اوتیتم من العلم الا قليلا "

"And you have not been given of knowledge except a little" .

الاسراء: 85

" قل هل يستوي الذين يعلمون والذين لا يعلمون انما يتذكر اولو الالباب "

"Are those who know equal to those who do not know? Only they will remember people of understanding".

الزمر: 9

" يرفع الله الذين امنوا منكم والذين اوتوا العلم درجات "

"Allāh will raise those who have believed among you and those who were given knowledge, by degrees. And Allāh is Aware of what you do. "

المجادلة: 11

" وقل رب زدني علما "

and say, "My Lord, increase me in knowledge. "

طه: 114

صدق الله العظيم

الى صاحب الفضل الكبير بعد الله عز وجل أبي حفظك الله

الى من خصها الله بالجنة تحت قدميها أمي رعاك الله

الى من شد الله به أزمي ... الكتف الذي استند عليه أخي

الى قطعة من روعي عزيزتي أختي

الى كل من علمني و أنار دربي أساتذتي

الى العائلة الكريمة

الى الاحباب

بعد الله عز وجل؛

أتقدم بجزيل الشكر والعرفان لكل من قدم يد العون لإتمام هذا العمل، لمن أشرف عليّ ووجهني،
الأستاذ تابتي الحبيب، والأستاذ كرماس مختار، ممن لكما على توجيهكما وحرصكما وصبركما علي، ومن
خلالكما أشكر كل الطاقم العلمي والإداري لجامعة مصطفى اسطمبولي، ومخبر تحليل، استشراف وتطوير
الوظائف و الكفاءات.

ممن جدا للأستاذ فروي رمزي، رافقتني منذ أول خطوة... نعم الصديق ونعم الأستاذ؛

وللأستاذة قصاص زكية على المساعدة والتشجيع ، ولكل من وجهني وكان سنداً لي، ولم يسع المجال لذكره.

شاكرٌ لمن شهدوا معي المتاعب وسهروا الليالي بسببي، عائلي الكريمة، أختي العزيزة لو تعلمين قدر ما أزحت
عن كاهلي... أدام الله عافيتكم جميعاً.

الشكر الجزيل للأستاذة أعضاء لجنة المناقشة على تخصيص الوقت الثمين والجهد الحثيث لتقويم هذا العمل
وتصويبه:

❖ الدكتور كرماس مختار

❖ البروفيسور تابتي حبيب

❖ البروفيسور بن عبو جيلالي

❖ البروفيسور مختاري فيصل

❖ البروفيسور حسيني اسحاق

❖ الدكتور فروي رمزي

❖ البروفيسور شنيبي موسى

بارك الله فيكم جميعاً، وأبشركم بقوله صلى الله عليه وسلم: " إِنَّ اللَّهَ عَزَّ وَجَلَّ وَمَلَائِكَتُهُ، وَأَهْلَ

السمواتِ والأرضِ، حتى النملةُ في جُحرِها، وحتى الحوتِ، لِيُصَلُّوا عَلَيَّ مَعْلَمِ النَّاسِ الْخَيْرِ".

**“If Only Hp Knew What Hp Knows, We
Would Be Three Times More Productive”**

Lew Platt, CEO, Hewlett-Pack

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Introduction

INTRODUCTION

In the context of improving the employee performance of Algerian organizations in a way that contributes to developing their systems and productivity and enhancing their position in Algerian society, it has become necessary to adopt modern administrative concepts and principles in their management.

At the forefront of these concepts is knowledge management through its dissemination, as human resources is the basis for the success of organizations, and Algerian organizations are the backbone of the national economy.

This proposition applies what was stated in the International Conference on Administrative Development held in Riyadh, Saudi Arabia for the year 2009, which was titled “Towards a Distinguished Performance of the Governmental Sector”, which stressed the need to transform organizations into knowledge-based organizations in light of the lack of a clear methodology and the lack of sufficient attention to knowledge management.

Proceeding from the need to keep pace with the accumulation of knowledge and the spread of modern means of communication, the Algerian organizations found themselves in a situation that required them to have a group of employees characterized by creative thinking and adapting to modern technology; This type of employee needs to provide a mechanism to help him perform the roles expected of him and contribute to the development of his performance continuously.

The main meaning of knowledge sharing is to coordinate efforts, organize and unify their orientation to achieve individual, strategic, and operational goals in the organization because it is considered a knowledge management practice that emphasizes the level of organizational knowledge repository -which is called “organizational memory”- is the tool by which the organization can empower its workers easily access the stored useful and valuable knowledge.

This motivated the researcher to address this problem and research the role of knowledge sharing as a contemporary administrative concept in building organizational memory, and the role of both in improving individual performance.

Within this context, and given the importance of research and identifying the goals that we seek to reach, and based on our conviction of the most important justifications

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and motives that were behind our enduring the hardships of scientific research, we can reach to highlight the features of the problems of our research that we are trying to address by answering the following question:

- Is there an effect of sharing knowledge on individual performance in the organizations under study, and does organizational memory play a mediating role in this relationship?

Based on this main problem, we formulated a set of sub-questions - some of them related to the theoretical side and some of them to the practical side - as follows:

For the theoretical side, we summarize the following questions:

- What are the views and opinions of researchers on the following concepts:
Knowledge - knowledge management - knowledge sharing - organizational memory - individual performance
- What are the most important knowledge management processes and their most important models?
- What do we mean by organizational memory, and what are its most important classifications and models?
- What is the relationship between knowledge sharing and organizational memory?
- How does knowledge sharing contribute to supporting organizational memory to enhance individual performance?

As for the practical side, the sub-questions were as follows:

- Does knowledge sharing - as a new scientific practice in management - have an impact or resonance with Algerian organizations?
- Is there a statistically significant effect of knowledge sharing on individual performance?
- Is there a statistically significant effect of knowledge sharing on organizational memory?
- Is there a statistically significant effect of organizational memory on individual performance?
- Is there a mediation effect of organizational memory in the relationship between knowledge sharing and individual performance?

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To answer these questions, the researcher developed a set of main and sub-hypotheses, as follows:

The main hypothesis: There is a statistically significant effect of knowledge sharing on individual performance, with organizational memory mediating the relationship for employees of economic organizations in Algeria.

The first sub-hypothesis relates to the relationship between knowledge sharing and organizational memory dimensions and can be detailed as follows

H1_a: There is a statistically significant effect of knowledge sharing on Job Knowledge

H1_b: There is a statistically significant effect of knowledge sharing on Social Knowledge

H1_c: There is a statistically significant effect of knowledge sharing on industry knowledge

The second sub-hypothesis is related to the nature of the relationship between the dimensions of organizational memory and the dimensions of individual performance, and it can be detailed as follows

H2_a: There is a statistically significant effect of Job Knowledge on Task performance

H2_b: There is a statistically significant effect of Social Knowledge on Task performance

H2_c: There is a statistically significant effect of Industry knowledge on Task performance

H2_d: There is a statistically significant effect of Job Knowledge on Contextual performance

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H2_c: There is a statistically significant effect of Social Knowledge on Contextual performance

H2_f: There is a statistically significant effect of Industry knowledge on Contextual performance

The third sub-hypothesis is related to the nature of the relationship between the dimensions of knowledge sharing and the dimensions of individual performance, and it can be detailed as follows

H3_a: There is a statistically significant effect of knowledge sharing on contextual performance

H3_b: There is a statistically significant effect of knowledge sharing on task performance

The fourth sub-hypothesis is related to the nature of the mediating relationship of organizational memory between knowledge sharing and individual performance.

H4: Organizational memory mediates the relationship between knowledge sharing and individual performance

1- The importance of this study:

The importance of the study stems from the novelty of the two topics of knowledge management and organizational memory, and their relationship to the performance of human resources, which is considered the most important resource in the organization and the source of its superiority and competitiveness; The importance of our study can be summarized in two aspects: scientific - theoretical - and practical - applied.

1-1 The theoretical aspect:

- Providing more understanding and clarification of the two topics of knowledge sharing and organizational memory, and their different dimensions, which contributes to enriching academic studies in this field.

Introduction

- An attempt to reduce the gap in the research literature, as a result of the scarcity of studies dealing with the variables of this research, especially in the Algerian library.
- The growing trend towards knowledge management and organizational memory to develop individual and organizational performance through the increasing global interest in these two concepts in the context of attempts to benefit from them in a practical way, which is reflected in knowledge libraries, knowledge management conferences, knowledge management journals, periodic reports of international and regional organizations on knowledge.
- This study is an extension of previous studies that dealt with one of the variables of our research and were confined in their entirety to a theoretical treatment only without addressing the applied aspect.
- This study may raise the interest of researchers to carry out other similar or related studies to the topic of the current research and deal with it from other aspects.

1-2 The practical aspect:

- By focusing on the sharing of knowledge, organizations can raise the level of their worker performance, because the employee's performance under the management of knowledge goes beyond the muscular effort to the intellectual and mental effort.
- The interdependence of the concept of knowledge with the modern aspects of each of the economy, society, and workers, is reflected in the emergence of new terms such as the knowledge economy - knowledge societies - and knowledge workers, which highlights the importance of our research at the individual, organizational, community, national level.
- The modern administration is no longer concerned with merely carrying out simple tasks, but other complex processes have appeared, which raises the need to address them with a new type of knowledge-based activities.
- The diversity of the targeted sectors and their impact on economic, social, and cultural life, as well as the need to constantly develop their work in line with the renewable environmental changes.

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- The growing awareness of organizations of the need to rely on their intangible assets, especially their knowledge resources, as they are important in achieving a high individual level of performance that allows for improving the level of organizational performance.
- The recent directives of the Algerian state towards restricting and limiting imports, open greater areas for Algerian organizations and pose challenges to them by the necessity of developing their management methods and the performance of their members.
- The necessity of owning knowledge management systems in organizations, in a way that encourages knowledge sharing to build their organizational memory.
- The role of organizational memory is to enhance and facilitate the management of smart resources owned by the organization and avoid organizational forgetfulness.
- The results of this research are expected to help decision-makers related to human resource management, thus contributing to the development of staff efficiency and the strength of the organization's memory and its ability to provide information related to human resource management activities such as training, development, and performance evaluation. . .
- The tremendous technological progress that led to an increase in the volume of information and knowledge, made it necessary for organizations to rely on knowledge management as a strategic option in the field of management if they wanted to improve the performance of their members, preserve their organizational memory and enhance their competitive capabilities.

2- Reasons and motives for choosing the subject of the study:

The topic has been chosen "Share knowledge and organizational memory" based on a set of reasons, which can be summarized in the following points:

- The researcher's conviction of the distinguished value and the importance of the strategy that the human resource acquires, as it is the source of distinguished performance and the competitiveness of the organization that he belongs to, through his skills, capabilities, knowledge, and experiences that are difficult to imitate.

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- The existence of the employee's efficiency and knowledge of the employee in his mind raises a challenge to preserve this knowledge even after the employee leaves the organization.
- The researcher desires to discover some of the deficiencies that Algerian organizations suffer in general, as they are the backbone of the Algerian economy.
- The researcher's conviction is that the crisis known to the Algerian organizations does not lie in the scarcity of concrete resources, but rather in the weakness of the cognitive aspect, and the absence of practices that share knowledge.
- The nature of the academic training of the researcher in the field of human resources management, where the topics of knowledge management, organizational memory, and individual and organizational performance within the research interests of this specialization.
- The lack of studies that combine the variables of this research: Knowledge-organizational memory- performance, given its events, especially with the difficulty of this type of studies related to the human element, and thus we wanted to encourage this type of research and the availability of theoretical approaches that enable other researchers to test its accuracy.
- The topic still shares knowledge of the field of scientific research, very recently in Algerian organizations; The dependence on it in improving the individual collective performance is still out of reach, given the absence of a culture of building organizational memory through a rational management of knowledge.
- The researcher desires to contribute to the promotion of the concepts of managing knowledge and organizational memory at the level of Algerian organizations, which can allow a culture of exchanging knowledge in a manner that ensures it's harnessing to raise the level of employee performance, especially with the poor interest in managing the organization's knowledge in the economic organizations of developing countries -and Algeria including -and providing priority Providing concrete resources on the investment account in human and intellectual capital, which led to the failure of these organizations to

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keep pace with the development of the global economy based on competencies and knowledge.

- Previous reasons and others, prompted us to choose this topic, trying to do a serious study that would present a scientific point of view, conclusions, and recommendations, through which Algerian organizations can be stimulated to adopt a thought that shares knowledge, to confront contemporary challenges with high efficiency.

3- Objectives of the study:

This study discussed a modern administrative issue related to the core business of organizations that operate in an environment characterized by the need for development, change, and modernization. Knowledge sharing is one of the means that enables the employees of these organizations to reach the stage of excellence and high performance; In this context, these studies seek to contribute to the development of mechanisms conducive to creating an atmosphere that encourages knowledge sharing and creating an organizational memory. In addition to what was mentioned, the study aims to achieve the following objectives:

- Shedding light on two modern concepts in the field of management, namely knowledge sharing and organizational memory, by presenting a conceptual framework for them, while highlighting their models and processes.
- Arousing interest in the subject of knowledge management and organizational memory and its relationship to improving the performance of individuals, as it is an important theoretical contribution supported by field analyzes in the field of research variables.
- Clarifying the role of knowledge sharing in achieving a common understanding of the organization's mission and current and future directions, and the role of individuals in these directions, given that the success of any organization depends on the participation of all its parties.
- This study also aims to know the extent to which Algerian organizations employ knowledge management in their work, as well as to know the areas in which knowledge management must be employed, to improve performance,

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and to determine the extent of the human element's willingness to accept and apply knowledge management.

- Verify whether the successive management stages of the Algerian organizations have taken into account the knowledge aspect and focused on it.
- Finding solutions to the problems and obstacles faced by the Algerian organizations, and presenting them as recommendations and suggestions that would highlight the advantages of sharing knowledge and building an effective organizational memory in the Algerian organizations, thus allowing them to improve the performance of their employees.

4- Study difficulties:

Like all research, we faced during the conduct of this study several difficulties, the most important of which are the following:

- Lack of resources and studies in the Arabic language related to the topics of knowledge sharing and organizational memory, and the difficulty of finding appropriate references.
- The alack of Arab and foreign references on the subject of individual performance, as most studies are concerned with organizational performance more than the individual performance variables - which we dealt with in our study -.
- The language of the research, as we decided that our study should be in English (the second foreign language in Algeria).
- The research coincided with the emergence and spread of the Covid-19 virus and the resulting instability in social, health, economic, and psychological conditions.
- The absence of the culture of the questionnaire in Algerian society in general and the sample of studies in particular.
- The delay in receiving the questionnaires forced the researcher to make repeated visits to some organizations.
- The difficulty of joining some organizations to distribute the questionnaire forced the researcher to change the organizations.

5- Previous studies

(Caris& cipres 2008): Strategic knowledge transfer and its implications for competitive advantage: an integrative conceptual framework.

This study aimed to analyze the effects of strategic knowledge transfer in achieving competitive advantage by focusing on knowledge management processes (knowledge acquisition - knowledge transfer - knowledge generation); Where the researcher in this study presented the characteristics of knowledge that constitute one of the determinants of knowledge transfer, and reached several results that are summarized in the fact that the characteristics of the knowledge presented in the study, which according to the researcher are (the implicit nature of knowledge - the ability to transform knowledge from its implicit form to its explicit form), which is the important matter that allows knowledge transfer; In addition, the ability to learn represents a characteristic of the future of knowledge, so the researcher suggested developing and encouraging these mechanisms and accurately defining the knowledge to be shared, which contributes to achieving a competitive advantage for the organization.

(Chun& tseng 2011): Knowledge transfer and innovation performance of competitive knowledge communities: Case of a high-tech firm in Taiwan.

This study aimed to test the existence of a relationship between knowledge transfer and creative performance, by highlighting the innovations that can be achieved through knowledge transfer in knowledge societies, and its impact on project performance by integrating societal knowledge associated with business activities through e-commerce, and studying How to convey beneficial societal behavior, which may affect the creative performance of organizations.

In this study, the researcher reached the following results:

- The behavior of knowledge transfer in the knowledge society is positively affected by personal standards for knowledge transfer, behavioral control of the knowledge transfer process, and attitudes towards knowledge transfer.
- Transfer of knowledge is important and necessary for the creativity of the members of the organization.

-Leaders should explain the benefits and importance of transferring knowledge to the rest of the team.

- The knowledge society plays an important role in sharing and transferring knowledge among employees.

(Kelley, 2004): Institutional Research as the Catalyst for the Extent and Effectiveness of Knowledge Management Practices in Improving Planning and Decision Making in Higher Education Organizations.

This study aimed to try to measure the effectiveness of knowledge management practices in developing planning and decision-making in many types of higher education organizations in the United States of America, by adopting the descriptive analytical approach in selecting a sample of officials in university research, consisting of 450 Organizations chosen randomly, and using their answers to the questions designated for the study. Through his analysis of the answers, the researcher reached a set of results, the most important of which are the following:

- There is a strong relationship between effective organizational education and the existence of an effective formal program for knowledge management.

- Higher education organizations practice knowledge management through the Scientific Research Authority.

- The success of higher education organizations that depend on a strong infrastructure of devices, systems, and multiple means that support knowledge, and their ability to multiply the opportunities for individuals to participate in knowledge by adopting modern technological and electronic means, which resulted in success in developing planning and decision-making.

(Zaied et al 2012): The role of knowledge management in enhancing organizational performance.

This study aimed to highlight the relationship between knowledge management and organizational performance, by understanding the factors that participate in implementing the concept of knowledge management to improve organizational performance.

The researcher tested the validity of the existence of this relationship through the descriptive analytical method, by distributing a questionnaire to a sample of 302 employees working in organizations affiliated with the Egyptian Chamber of Commerce in Cairo; The correlation analysis showed a statistically significant relationship between the elements of knowledge management and measures related to improving performance.

(Minbaeva 2005): HRM practices and MNC knowledge transfer

This study aimed to highlight the relationship between strategies and practices of human resource management and knowledge transfer, by distributing a questionnaire to 92 branches of multinational companies, located in 11 countries and headquartered in Denmark.

This study concluded several results, the most important of which is the existence of a relationship between strategies (employment - training - improving the performance of workers - promotion - compensation) and transfer of knowledge in the branches under study, while it indicated that there is no relationship between socialization and flexibility at work with the transfer of knowledge in these same branches.

(Meihami&Meihami 2014): Knowledge management a way to gain a competitive advantage in firms (evidence of manufacturing companies).

This study aimed to test the extent to which knowledge management is related to achieving competitive advantages, and to reach the objectives of this study, a questionnaire was designed for managers of industrial establishments and companies; This study concluded with several results, most notably the existence of a strong statistical relationship between the dimensions of knowledge management and the achievement of competitive advantages for these companies.

(Conklin 2001): Designing organizational memory: preserving intellectual assets in a knowledge economy.

This study aimed to identify the technological and cultural barriers that prevent the acquisition of knowledge and make it clear knowledge, using group software, e-mail, and others. However, building an easy-to-access organizational memory

requires more than just software, but also requires high-accuracy documentation efforts, to deliver the intended knowledge in its correct organizational context. .

This study concluded the design of a knowledge management system that allows to overcome the obstacles to obtaining and disseminating knowledge during meetings, by focusing on providing an atmosphere that improves the quality of organizational communication.

(King&Marks 2008): Motivating knowledge sharing through a knowledge management system.

This study aimed to clarify the relationship between some organizational activities (such as supervisory control and organizational support) and the knowledge-sharing process in the knowledge management system. Where the researcher concluded in this study that knowledge-sharing behavior has a strong relationship with supervisory control when it is measured by the frequency of effective knowledge contribution, while it is related to the organizational support activity.

Whereas, measuring knowledge sharing if it is done by focusing on the effort to contribute effective knowledge shows us a strong relationship with organizational support versus a weaker relationship with supervisory control.

The study also concluded that there is an effect of both benefit and ease of use on repetition and effort, as benefit has a positive relationship to repetition, while ease of use is positively related to effort.

(James 2007): Knowledge Sharing in a Human Resource Community of Practice.

This study aimed to explain the factors that affect the process of sharing and transfer of knowledge between individuals, through an analytical study that tested the extent of knowledge sharing in the human resource management unit; The study reached the following results:

-Knowledge is personal and is influenced by the person's mentality, beliefs, values, and surrounding environment.

-Knowledge exchange is an oral tradition through telling stories, anecdotes, and side conversations related to work affairs.

-Technology plays a very important role in helping to build intellectual beliefs, as well as to disseminate and circulate knowledge and information.

-Knowledge sharing depends largely and directly on providing an atmosphere of trust between the holder of knowledge and those who receive it, and this environment is created by encouraging honesty, reliability, and social communication between individuals.

(Kasim 2010): The Relationship of Knowledge Management practices, Competencies, and the Organizational Performance of Government Departments in Malaysia

This study aimed to show the important role of knowledge management practices in improving the performance and efficiency of public sector organizations, through the use of the descriptive analytical method to conduct this study.

In his study, the researcher relied on a questionnaire distributed to all managers in the 28 Malaysian ministries, where the number of respondents in the study sample was 500 managers.

Among the most important findings of the researcher in this study, there is a positive relationship between the practice of knowledge management and the efficiency of job performance in Malaysian public sector organizations. The study urged the need to pay attention to the factors contributing to raising the effectiveness of performance, including the resources needed to improve knowledge management practices in organizations.

(Parvaneh 2016): Impact of organizational memory on knowledge sharing- case study: medical sciences and health services university in Bushehr.

This study aimed to investigate the effect of knowledge sharing at the University of Medical Sciences and Health Services in Bushehr; To carry out this investigation, the researcher relied on the descriptive approach in his study of a statistical community consisting of 301 people, working as educational and cultural representatives and teachers in the field of research and technology, and 170 individuals were selected as a random sample to conduct the study.

The information was collected by distributing questionnaires, and it was checked and hypotheses were tested by the structural equation modeling method.

The results of this study showed that organizational memory and its components (such as personal memory - cultural memory - administrative memory - development and research memory) affect the process of sharing knowledge at the University of Medical Sciences and Health Services in Bushehr.

(Wening et al 2016): Relationship Between Knowledge Sharing To Individual Performance: The Role Of Organizational Culture And Relationship Quality As Moderator In Family Business

The researcher aimed in this study to investigate the relationship between knowledge sharing and individual performance with the organization's culture and the quality of relationships as moderators of the relationship between these two variables.

The researcher conducted his study on a group of family businesses in Jakarta, Indonesia, and the results of the study were as follows:

The sharing of tacit knowledge has a direct impact on the individual performance of employees without the presence of a moderation role for the culture of the organization in this effect. Explicit knowledge sharing has an impact on the individual performance of employees with the role of the organization's culture as a modifier in the relationship between them.

(Saretsalo 2015): Factors Influencing Organizational Knowledge Management-Knowledge Transfer In Two Local Finance Companies

The researcher aimed in this study to know the factors affecting organizational knowledge management, by highlighting the basic factors affecting each of the knowledge management processes in the organization, by conducting interviews with a sample of 100 managers of finance companies; He concluded that the factors that affect the success of the process of transferring knowledge from one employee to another, whether they are personal or technological, and the factors that affect the individual's desire to acquire new knowledge related to his job, and are all considered factors affecting the organizational knowledge management process.

(Dunham& Burt 2011) : Organizational memory and empowerment

The researcher aimed in this study to test the model of the relationship between organizational memory and empowerment, which assumed that organizational memory is related to the request for knowledge to share and apply it in the scientific field.

The model was tested on a sample of 134 employees belonging to six New Zealand companies; This study concluded that there is an important relationship between organizational memory and the demand for sharing, employing, and relying on information to increase self-confidence; The results also indicated a positive pattern between the seniority of workers and the rate of knowledge sharing request; In addition, she indicated that there are positive results and outputs for employees who have more knowledge, and are often old employees.

(Harvey 2012): Managing organizational memory with intergenerational knowledge transfer.

This study aimed to provide a systematic analysis of the intergenerational knowledge transfer strategy in a knowledge-intensive organization; To carry out this research task, the researcher relied on a case study method based on a triangular approach to collecting data through: focus groups, document analysis, and interviews. Among the results presented by the researcher in this study are two models for knowledge transfer:

The source, récipient, and mutualéxchange model, also explain how a context has been developed that allows for the transfer of both explicit and tacit knowledge.

(Odeh et al 2021): The mediation role of organizational memory in the relationship between knowledge capturing and learning organization.

This study aimed to explore the effect of capturing knowledge on the learning organization process, and whether organizational memory has a mediating role in this relationship.

To reach this goal, the researcher targeted a study community consisting of all employees at the various administrative levels of private Jordanian universities, where a total of 750 questionnaires were randomly distributed to ten universities.

To analyze the retrieved data, the researcher relied on the smart PLS structural equation modeling method, and the results showed the following:

- There is a noticeable positive effect of capturing knowledge on organizational memory and the organization of learning.
- There is a significant positive effect of organizational memory on the organization of learning.
- There is an effect of organizational memory in the relationship between knowledge capture and learning organization.
- The results also showed that the universities under study pay little attention to exploiting the knowledge of employees and experts, and external information, in establishing a common knowledge base.

This study recommended the need to intensify the efforts of the process of obtaining knowledge from several sources and to establish a strong organizational memory on which the organizational learning process is based.

(Feiz 2017): The effect of knowledge sharing on the psychological empowerment in higher education mediated by organizational memory.

This research aimed to study the effect of knowledge sharing on the psychological empowerment of faculty members, taking into consideration the mediating role played by organizational memory at Semnan University in Iran.

To achieve this goal, the researchers distributed questionnaires to a sample of 334 faculty members, using the smart pls structural equation modeling method.

- The results of this study revealed the following:
- There is an effect of knowledge sharing on psychological empowerment. Sharing knowledge has a beneficial positive effect on organizational memory.
- The presence of an organizational memory positively affects the psychological empowerment of faculty members.
- There is a mediating role for organizational memory in the relationship between knowledge sharing and faculty empowerment.

(Son et al 2020): Transformational Leadership and Knowledge Sharing.

This study aimed to explore the impact of transformational leadership and knowledge-sharing processes on the operational and financial performance of organizations.

In this study, the researchers used the smart pls structural equations method to process data collected from 263 respondents in 112 manufacturing and service companies in China; The results of this study showed:

- There is a relationship between transformational leadership and organizational performance.
- Knowledge gathering mediates the relationship between transformational leadership and organizational performance.
- Donating knowledge mediates the relationship between transformational leadership and organizational performance.

(Obeso et al 2020): Knowledge management processes and organizational performance: the mediating role of organizational learning.

The researchers aimed in this study to achieve two goals: The first is an analysis of the individual impact of knowledge management practices on organizational performance.

The second is to analyze the mediating role of organizational learning in the relationship between knowledge management practices and organizational performance.

To achieve the objectives of this study, the researchers conducted a telephone survey (interrogation) on the managers of 400 Spanish companies, and the retrieved data were analyzed using multiple regression analysis.

This study reached several results, the most important of which are:

- Knowledge generation and knowledge flow lead to enhancing organizational performance.
- There is no direct correlation between knowledge storage and organizational performance.
- Organizational learning mediates the relationship between knowledge generation and organizational performance.

- Organizational learning mediates the relationship between knowledge flow and organizational performance.

Based on the results of his study, the researcher suggested the following:

- Managers should focus their efforts on practices related to knowledge generation and application.
- Managers must maintain a managerial commitment to promoting a shared culture, openness to new ideas, and facilitating dialogue.

(Antunes & pinheiro 2019): linking knowledge management, organizational learning and memory.

The study aimed to understand the correlation and relationship between knowledge management, organizational learning, and organizational memory, to give a better explanation of these concepts, and to understand their development over the past decades; To do this, a systematic review of previous studies was developed, during which the researcher analyzed a total of 2511 scientific articles between 1960 and 2017.

Among the most important results that the researcher concluded in this study:

- The human resource department plays a key role in achieving the desired organizational results, through its impact on employee behavior and skills, through effective knowledge management and the generation of new knowledge, to create creative groups.
- Despite the lack of individual organizational learning, organizations learn from the experiences and actions of individuals.
- Organizational knowledge has gained a strategic advantage, making it the most important intangible resource for the organization.
- Technology supports information sharing and knowledge flow and provides real support for organizational strategies.
- The structure of organizational memory is linked to the processes of (acquiring knowledge - keeping it - sharing it - retrieval) as the organizational memory stores knowledge for future use.
- Organizational memory is the result of organizational learning.

The most important thing recommended by the study is to encourage internal cooperation to integrate the knowledge of many individuals, and to transform their knowledge into collective knowledge.

(Amit 2017): Is Organizational Memory a Useful Capability? An Analysis of Its Effects on Productivity, Absorptive Capacity, and Adaptation.

The researcher aimed in this study, by reviewing several previous studies, to verify whether organizational memory is a useful addition to the organization, by analyzing its effects on productivity, absorptive capacity, and adaptability.

The researcher put forward the idea that organizational memory (acquired directly through the practice of operations, or indirectly through the narration of facts) has a role in improving performance at present, by adapting the productivity of the organization in operations, and suggested that enhancing aspects of organizational memory are very important for the sustainability of individual and organizational performance.

(Inkeep & Tsang 2005): Social capital, networks, and knowledge transfer.

This study aimed to highlight the requirements for facilitating and enhancing the transfer of knowledge between network members, by proposing a thought model that illustrates the social capital of the network of links that affect the transfer of knowledge between network members at the level of multinational organizations.

In his study, the researcher explained how the three dimensions of social, structural, relational, and cognitive capital affect the types of networks and the storage and transfer of knowledge among them.

(Singh, Al 2019): Top management knowledge value, knowledge sharing practices, open innovation and organizational performance.

In this study, the researchers aimed to clarify the value of top management knowledge and knowledge-sharing practices in influencing open innovation, which in turn affects organizational performance.

To reach this goal, the researchers collected multi-source data from 404 small and medium companies; And to analyze this data, used the Smart PLS structural equations method.

Among the most important findings of the researchers in this study are the following:

- This study confirmed that organizations that have strong knowledge-sharing practices are more efficient in achieving open innovation.
- The study concluded that there is a strong impact of the cognitive value of senior management on knowledge-sharing practices.
- The study concluded that there is a strong impact of knowledge-sharing practices on open innovation.
- This study confirmed the results of previous studies that indicate that open innovation benefits organizations in terms of high-quality organizational performance.

(Mardni et al2018) : The relationship between knowledge management and innovation performance.

This study examined the quantitative relationship between knowledge management, innovation, and performance, by shedding light on the advantages of knowledge management activities on the company's innovation and performance, based on the researchers' assumption that organizations are still unaware of the real effects of knowledge management.

The researchers developed a model that shows the existence of a relationship between knowledge management and performance, and also between knowledge and innovation, which in turn contributes to improving performance.

To test this model experimentally, the data of 120 Iranian energy companies were analyzed, and the results showed the following:

- Knowledge management activities affect innovation and performance directly and indirectly by improving innovation capabilities.
- Knowledge creation, knowledge integration, and knowledge application are all dimensions that facilitate innovation and improve performance.
- Knowledge creation has a very important impact more than other dimensions on the speed of innovation, the quality of innovation, and the quantity of innovation, while the quality of innovation, knowledge creation, and knowledge integration have more important effects on performance.

(Donate& al 2015): The role of knowledge-oriented leadership in knowledge management practices and innovation.

This study aimed to test the role of a specific type of cognitive leadership for directed organizational leadership in **Knowledge Management (KM)** practices that pursue innovation.

In analyzing the data of this study, the researchers relied on **Structural Equation Modeling (SEM)** through **Partial Least Squares (PLS)**.

The results of this study stated that there is a congruence between them and the results of previous studies, which showed a mediating effect of knowledge management practices in the relationship between knowledge leadership and innovation performance; She also indicated that despite the importance of knowledge management practices in themselves to carry out innovation, the existence of this type of leadership (knowledge-oriented leadership) encourages the development of knowledge (i. e. its creation) and the exploitation of knowledge (ie its use, storage, transfer and sharing and its application).

(Fong& Choi 2009): The processes of knowledge management in professional services firms in the construction industry: a critical assessment of both theory and practice.

This study aimed to focus on the tacit knowledge management processes carried out by economic companies in Hong Kong.

In this study, the researchers used quantitative research methods by distributing 260 questionnaires to several experts in the field about the details of tacit knowledge management processes.

The results of analyzing the retrieved questionnaires, which represented 42. 6% of the total questionnaires, showed that the six tacit knowledge management processes used are acquisition - creativity - storage - distribution - use - maintenance.

This study also showed a shortage in the number of employees involved in seeking knowledge from external sources, which means a relatively low dependence on external knowledge by these companies.

(Van den Hooff & De Ridder 2004): Knowledge sharing in context: The Influence of organizational commitment, communication climate, and CMC use on knowledge sharing.

This study focused on identifying the factors that enhance or hinder the process of sharing knowledge within organizations and groups.

The researcher pointed to three of these factors, which are: organizational commitment, organizational communication, and the use of the computer as a communication tool (CMC), he also referred to two dimensions of the knowledge-sharing process: donating knowledge and collecting knowledge.

The results of this study indicated that:

- Organizational commitment directly and positively affects the dimension of donating knowledge, and in turn, it is positively affected by the use of the computer as a means of communication.

A good communication climate affects knowledge donation, knowledge gathering, and emotional commitment.

- It should be noted that this study concluded a relationship that has not been assumed, which is the effect of knowledge gathering on knowledge donation in a positive way, the more knowledge a person collects, the more willingness and desire to donate it to others.

(Dunham & Burt 2014): Understanding employee knowledge: the development of an organizational memory scale.

This study aimed to develop and design a correct measure of organizational memory to be used in the future in research that tests the relationship between employees' knowledge and their attitudes toward sharing their knowledge.

To achieve this goal, a total of 72 items of the organizational memory scale were developed, and researchers divided them into six dimensions and tested them on 134 participants using exploratory factor analysis.

The results of the first study, which led to five dimensions more credible, were used in a second study on another sample of 288 employees using structural equation modeling and checking the reliability of retesting.

This study led to the identification of five factors to measure organizational memory (political knowledge, functional knowledge, knowledge of history, and industrial knowledge) and it achieved very reliable results.

(Koopmans et al 2014): Measuring individual work performance: identifying and selecting indicators.

This study aims to formulate a questionnaire for individual work performance, based on improving previous measures by removing additional elements that showed incompatibility and enhancing the remaining elements to reach a more appropriate and reliable model.

This study resulted in a model that can measure employee performance more reliably at all levels of ability among workers.

(Koopmans et al 2016): Cross-cultural adaptation of the individual work performance questionnaire.

In this study, the researchers aimed to develop an individual performance questionnaire completed in the release of Koopmans 2014, which measures the following dimensions of individual performance: task performance - contextual performance - and unproductive work behavior.

This study also aimed to adapt the scale across cultures from Dutch to English to make it credible in as many other cultures as possible, in addition to evaluating its internal consistency and the validity of its content.

To reach these goals, the researchers used five stages of conditioning: translation, conditioning, reverse translation, review by a panel of experts, and finally, it was empirically tested on 40 American workers to examine its comprehensiveness and applicability.

This study concluded the success of adapting this questionnaire to different cultures in addition to its ability to understand and apply it.

(Passos et al 2021): Knowledge management and individual job performance in higher education: proposal of a conceptual model.

This study aimed to propose a conceptual model capable of linking the impact of knowledge management processes on individual job performance, by studying this effect on the performance of higher education sector employees (professors, employees, administrators).

This study concluded that knowledge management processes enhance the flow of information in the workplace and that this has a direct impact on individual job performance. This study also pointed to the importance of knowledge management practices in a rapidly evolving world of technology and humanity.

This study suggested that the incentive system should be linked to the knowledge management process to enhance it in higher education sector organizations.

(Krijgsheld et al2022): Job performance in healthcare: a systematic review.

The objectives of this study were the following:

- Determining the main dimensions of job performance.
- Determining the factors that organizations can use to influence the dimensions of job performance.

To reach the objectives of this study, the researchers conducted a systematic review of more than 90 studies, published in more than 70 journals.

This study concluded that job performance can be visualized through four dimensions: contextual performance, task performance, and counterproductive work behavior.

Among the results of this study is also that organizations can influence job performance by targeting its total (macro), intermediate, and micro levels.

6- Aspects of benefit from previous studies:

The researcher benefited from the previous studies from several aspects, the most important of which are the following:

- Determining the main variables and sub-variables of the study, and the possibility of a relationship between them.
- Formulating the general framework for the theoretical basis of this study.
- Help in defining the problem of the study and stating its importance.
- Identifying the most appropriate methods for diagnosing the study population.

- Determine the appropriate statistical means for processing the data and information of this study.
- Relying on previous studies in designing the appropriate questionnaire to conduct this study.

7- The contribution our study adds:

We can summarize what distinguishes the current study from previous studies as follows:

- Study environment: Previous studies related to the concept of management and sharing of knowledge and organizational memory were conducted in Western environments, often in which there is a developed case of administrative concepts and performance measurement tools, while this study was carried out in an Arab environment in general) specifically in Algeria (as it is characterized by a novelty that introduces it to the variables of this study.

The nature and dimensions of the study: Most of the previous studies dealt with one or two variables at most, while the researcher in this study tried to shed light on the relationship between the aforementioned three dimensions, and whether they have a statistically significant relationship.

It should be noted that most of the previous studies dealt with performance in its organizational and Organizational aspects, while our study focused on the individual aspect of performance to study the extent to which it is affected by knowledge sharing and the availability of organizational memory.

8- Study Approach:

In this study, the researcher relied on a set of methods and approaches to address the topic of research scientifically and methodologically, and these approaches and methods are as follows:

8-1 Case study method:

It is a method that allows knowing the suitability of the theoretical interpretation and analyzing the facts and data available on the subject of the study, by projecting the

data to the selected case in a scientific methodological manner that proves the validity of the subtraction.

All of this helped us to get closer to the phenomenon by adopting an applied case about the contribution of knowledge sharing to building a strong organizational memory and the contribution of both improving employee performance and studying the extent to which the theoretical data of the subject match with the reality of the situation in the Organizations constituting the study sample.

8-2 Social Survey Method:

The social survey method is defined as a general study that exists among a particular group in a particular place at present without delving into the influence of the past and without the influence of the researcher on the course of phenomena; This method is considered the most popular and most widely used research method in descriptive statistical studies, due to the abundant data it provides on the subject of the study. There are two main types of social survey approaches: comprehensive survey and sample survey.

In the current study, the researcher used the sample survey method due to its low cost and the possibility of generalizing its results to all units of the study.

The researcher also relied in his study on a set of approaches that are compatible with the nature of the study, namely:

8-3 The systems approach:

It is considered one of the most common approaches in the field of social sciences, and this systematic approach is an open system that interacts with the internal and external environmental conditions, and the Algerian organization as a field for our study is considered an open system that affects and is affected by its environment, and the knowledge sharing and organizational memory is one of the most important inputs that will develop Algerian organizations by providing the necessary information and knowledge that the employee uses to reach higher levels of his performance.

9- Study tools:

In our study, we relied on a set of tools necessary for data collection, so that these tools are considered an appropriate means through which to know the reality of the phenomenon. These tools are:

9-1 Theoretical tools:

It is represented in everything that the researcher used to collect data on the subject, to find out the most important available books, articles, and interventions on knowledge management, knowledge sharing, organizational memory, and individual performance, to understand the theoretical aspects of the research topic and strengthen them with field study.

9-2 The questionnaire:

It is one of the tools used to collect data necessary for the field study, which enabled us to analyze and study the relationship between knowledge sharing, organizational memory, and individual performance in some Algerian organizations.

We designed the study questionnaire to be directed to a sample of employees of a group of Algerian Organizations. Its formulation was based on the theoretical framework of our study, and on previous studies closely related to the subject of the study.

The statistical analysis method (**partial least squares structural equation modeling through SmartPLS 4**), we relied on to analyze the sample data to determine the extent of differences in the respondents' answers according to their categories included in the questionnaire; Frequency distributions, percentages, and arithmetic averages were also adopted to describe the characteristics of the sample, and to determine the trends of the respondents' answers and their impact on the research variables; A statistical significance level of 0.05 was chosen and a five-degree Likert scale was used.

10- The sample of the study:

As for the sample of the study, given the nature of the theoretical study on the one hand, and the survey on the other hand, we resorted to a case study of a group of

Algerian organizations in terms of the existence of the application of knowledge-sharing practices among their employees, given that the topic deals with the relationship of knowledge sharing and organizational memory to individual performance, and the results of the study concern the Algerian organization directly.

Chapter 01
Theoretical
foundations of
knowledge
sharing

Chapter 01: Theoretical foundations of knowledge sharing

Introduction

The information and communications technology revolution has accelerated the disappearance of eras and with them entire societies, as a result of the extensive uses of technology. Then post-technology societies emerged, which are knowledge and information societies that rely heavily on information in various sectors of society. Information is no longer a characteristic enjoyed by specific organizations, but rather it includes all sectors of society without distinction.

While post-information societies have been described as knowledge societies that are not only satisfied with information but go beyond it, in light of this, knowledge has become, in economic terms, a stand-alone resource that has replaced traditional resources.

Today, knowledge is viewed as the basic foundation for human and civilizational development, and the cornerstone for building a knowledge society. Human capital is not productive if it is not creative and modern, as it is one of the most important knowledge makers as it can create knowledge and distinguish, while there is actual knowledge available that must be captured and shared (son& al, 2020) .

Perhaps we always find ourselves forced when we talk about knowledge to pass through a hierarchy that begins with the data, which is the base of the pyramid through which we reach knowledge. This data constitutes for us the raw material on which knowledge is built, and then we must pass it to the information that constitutes the outcome of the processing to which the data is subjected so that it is thus exploitable. Then comes the turn of the knowledge that is formed from the previous concepts, in addition to the factor of expertise and experience that the individual has accumulated through practice.

Although knowledge management in its content is an ancient concept and a value that civilizations have been keen on throughout different eras of history, knowledge represents the new origin of organizations and is the most modern factor of production, as most of them possess knowledge but do not use it well, and knowledge without good knowledge management is of no use because knowledge needs to be revealed,

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stored, distributed, communicated, and then used and represented logically, as the term knowledge management is considered a modern term.

Therefore, applying knowledge management in contemporary organizations may open wide horizons for them to enhance their positions, capabilities, and competitive capabilities because it is an effective tool that helps them enter the era of knowledge and information.

On the other hand, all sources and assets of organizations are vulnerable to decrease except knowledge, which increases and grows with use and experience, as it has become a central role in economic development over time, and material assets have become of limited value unless people know what to do with them.

Thus, an organization's knowledge of how to accomplish its work is the basis of its success, so most organizations have tended to benefit from all types of knowledge by transferring and possessing new knowledge to achieve their goals and strengthen their competitive positions (Dzenopoljac & al, 2018).

Some experts have questioned the possibility of knowledge management, and how an intangible asset can be managed, but there has always been a set of activities in the organization aimed at acquiring, disseminating, and exploiting knowledge, and in the current knowledge era these activities have become essential for achieving outstanding performance and superiority over competitors. The organization seeks to build a strong knowledge system that enables it to initiate and lead change in the environment and within the organization.

It can be considered that knowledge management is based on two pillars: learning and intelligence. Learning is an activity for acquiring knowledge, and intelligence represents the ability to digest this knowledge generate new knowledge, and apply it, which enables it to be reflected in improving work. These two elements are essentially linked to the human competencies in the organization, as it can perform knowledge management activities very effectively. This places a great responsibility on managers to lead knowledge management initiatives.

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Organizations that are capable of transferring, absorbing, and applying new external knowledge have more possibilities for survival than organizations that are less committed to knowledge transfer processes. Therefore, the process of knowledge accumulation on the one hand, and the process of transferring accumulated knowledge across organizational units within the organization on the other hand, provides many competitive advantages for organizations (Delshab, 2020)

Transferring organizational knowledge is considered a complex task for contemporary organizations that operate today in a more complex and diverse environment with a high degree of uncertainty. Therefore, the organization's ability to transfer knowledge faces unprecedented obstacles.

Management plays an important role in the process of transferring knowledge through its ability to influence others, direct their behavior, and coordinate their efforts to achieve common goals because the organizational knowledge of the organization is formed through human interactions within the organization, which is not easy to transfer. Implemented and emulated by other organizations.

However, many difficulties hinder the process of transferring knowledge, which may be represented by the ability of the recipient to absorb and assimilate the knowledge transferred to him, or the absence of an encouraging motivation to give up knowledge and share it, and several other critical factors whose influence we learn about in this study (Jen& al, 2020) .

1- Knowledge hierarchy

When we talk about knowledge, we always find ourselves forced to pass through a hierarchy that begins with data, which is the base of the pyramid through which we reach knowledge.

This data constitutes the raw material on which knowledge is built, and then we must pass on to the information that constitutes the outcome of the processing to which the data is subjected so that it can be exploited.

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Then comes the turn of the knowledge that is formed from the previous concepts, in addition to the factor of expertise and experience that the individual has accumulated through practice

The levels of this pyramid are: distinguish between, data, information, knowledge, Experience, and Ability

1-1 Data:

Data is defined as the raw material needed to produce information following the concept of the system, where data represents the input and information is the output after processing. (Zack, 1999). Data Is a collection of facts, measurements, and statistics and is of no value in its initial form unless it is processed and transformed into information. It is also known as linguistic, mathematical, and symbolic expressions, or a combination of them, and they are used to represent individuals, things, events, and concepts. That is, data refers to any raw facts or observations that describe a specific phenomenon. (Sabherwal & Bacerra, 2010)

Laudon defines data as numbers, facts, or letters that have no meaning until they are processed and utilized. (Laudon & Laudon, 2002). So, it can be defined as raw materials and abstract facts that are unorganized and independent of each other in the form of numbers and words from which information can be produced.

1-2 Information

Information is defined as data that has been processed so that it has become meaningful and linked to a specific context. (Laudon & Laudon, 2002)

On the other hand, information is data that has been classified and organized in a way that allows it to be used and benefited from. (Chennamaneni, 2006)

Information is the basis of knowledge and its provider of data, symbols, and its stock of documents and archives; (Gilles, 2001)When a person stores information within himself to the extent that he can benefit from it, this information is called knowledge.

1-3 Knowledge

Knowledge is the ability to translate information into performance to achieve a specific task or find a specific thing

INFORMATION = DATA + MEANING

Chapter 01: Theoretical foundations of knowledge sharing

KNOWLEDGE = STORED INFORMATION + THE ABILITY TO USE IT

(Davenport & Prusak, 1998)

1-3-1 The Difference between information and knowledge

Contemporary development literature in the late twentieth century is full of studies and research on the role of knowledge, its elements, and its interactive relationship with other forces influencing the development and prosperity of societies.

We can summarize the opinions of thinkers and researchers about the difference between information and knowledge in the following three points:

Some researchers link information and knowledge and consider that they represent the same thing (knowledge = information), stressing the need to pay attention to explicit knowledge that can be circulated and managed. (Zack&Mckenney, 1995)

Others believe that information is the tangible form of intellectual production, while knowledge is the intangible form found in the vessel of knowledge (the human mind).

(Zack&Mckenney, 1995)

There is a third group that distinguishes between knowledge and information, as they believe that knowledge is more comprehensive than information, as knowledge is information that has been transformed into scientific or valuable experience. (David &Foray, 2002), These differences can be summarized in the following table:

Table01: Difference Between Data, Information, Knowledge

Author	Data	Information	Knowledge
Wiig	-	Original facts describing a particular situation	Facts, beliefs, concepts, and know-how
Nonaka & takeuchi	-	Flow of meaningful messages	Beliefs stem from messages
Speak & Spijervet	Unexplained symbols	Data that has meaning	Ability to understand meaning
Davenport & Prusak	Description of facts	Message that has meaning	Experience, value, vision, concept,

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			information
Choo & al	Facts and messages	Data that has meaning	Justifications, valid beliefs
Quigley & Debous	Text without an answer to a specific problem	Texts that answer who, when, what, where	How and why

Source: Pooya Rasooli, knowledge management in call centers, master's thesis, department of business administration and social sciences, Lulea University of Technology, 2006 p: 12

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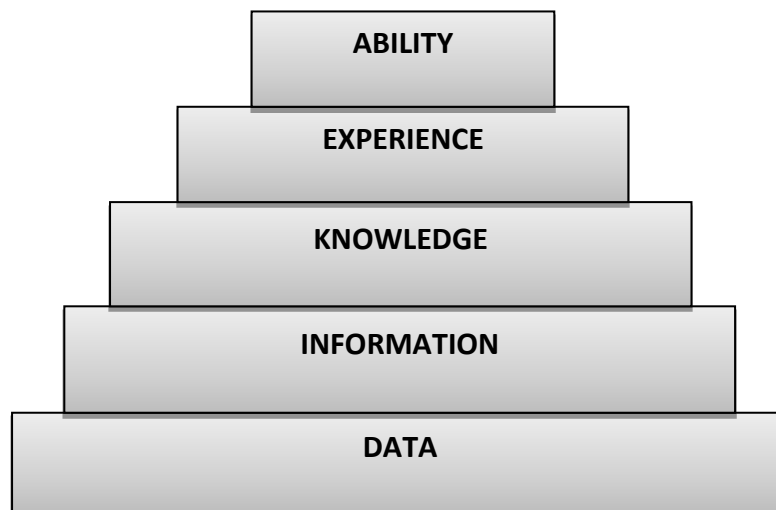
1-4 Experience:

A general term that summarizes the concept of knowledge or skill, but in a deep, spontaneous, innate manner. Usually, a person gains experience by participating in a specific work or event, and repeating this work or event often deepens this experience and gives it greater depth and greater spontaneity. (Marquardt, 2002)

1-5 Ability:

It is the result of good understanding and analysis of data that is translated into information, the latter of which forms knowledge and then leads to achieving and gaining experience. (Marquardt, 2002), the following figure summarizes what was mentioned previously:

Figure 01 : Knowledge pyramid



Source: Source: Marquardt, Michael, J . “ Building the Learning Organization: Mastering the 5 Elements for Corporate Learning”, U . S . A, Davis-Black publishing Company, 2002, p23 .

Other studies mentioned different levels in addition to the above, including the DIKW model for levels of knowledge, which states that: (Rowley, 2007)

- **Information** is the result of data processing,
- **Knowledge** is the result of processing information,
- **Wisdom** is the result of processing knowledge.

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What we notice in this model is that it distinguishes itself from its predecessors in that it mentions wisdom as the highest level of knowledge, and wisdom can be defined as follows:

1-6 wisdom:

Wisdom is defined as “a deep understanding of people, things, events, and situations that gives the ability to choose or act to achieve optimal results with the least amount of time and energy”. (Rowley, 2007)

It is also known as expanding knowledge to include new activities and the ability to make decisions and solve problems (Karadsheh & al, 2009). Thus wisdom is the ability to use knowledge optimally to set and achieve desired goals. These definitions lead us to distinguish between the individual level and the collective level of wisdom.

1-6-1 Individual wisdom (skill):

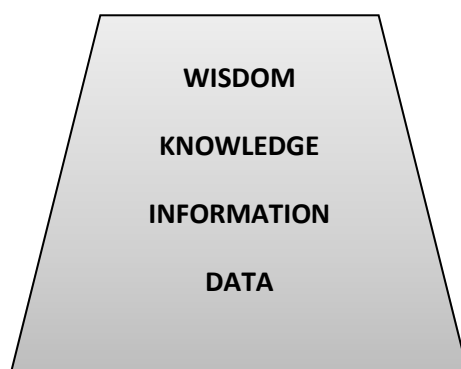
Wisdom for an individual is similar to the common concept of competence or expertise, which is what allows an individual to perform a particular job correctly. This includes a combination of knowledge, skills, and behaviors used to improve performance. Therefore, we can consider competence as “individual wisdom.”

1-6-2 Organizational wisdom:

“Wisdom” at the collective level is the organizational ability to absorb new external knowledge and synthesize existing internal knowledge.

The following figure summarizes what was mentioned (Rowley, 2007):

FIGURE 02 : From Data To Wisdom Through Knowledge (Dikw Model)



Source: Jean-Louis Ermine, Une chaîne de valeur de la connaissance, Management international, HEC Montréal, 2012, p : 08

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Concept of knowledge:

2-1: Definitions

The definitions, and opinions about knowledge differed according to the specialties of writers and those interested in the field. Some care about it from its historical side and others care about its linguistic aspect, while others focus in their treatment of knowledge on the economic and administrative approach.

Knowledge is called unlimited or infinite assets, and this is because it is the only asset that multiplies and grows when it is transferred or shared. From this standpoint, the American Society for Training and Development considered 'knowledge' as one of the most important material assets in organizations; While (Endres, 1997) considered the knowledge inherent in human minds as the knowledge assets of the organization.

Other researchers indicated that knowledge is an intellectual capital and an added value when it is discovered and invested by the organization. (Stewart, 1999)

While (Hsiu-Yueh, 2006) focused on the relationship of working (or knowledge application) with knowledge itself, manifested in a set of comprehensible information.

(Davenport, et al, 1998) defined knowledge as hypothetical beliefs that support the individual's ability to take decisions and actions of quality, conducive to carrying out the work in the best way; He referred to it in another source as an interaction between tacit knowledge, such as experience and ideas, and explicit knowledge.

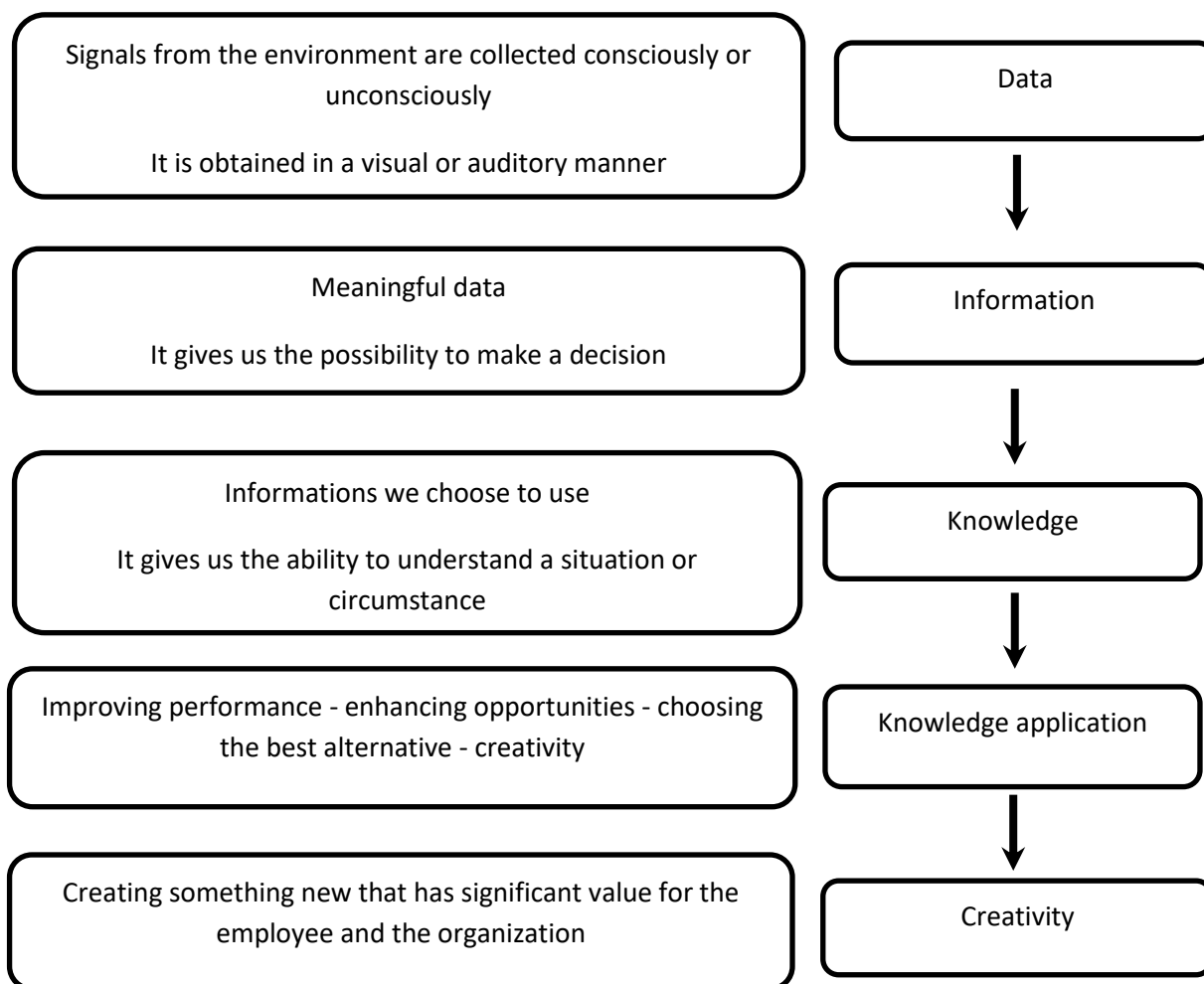
Some modern sources defined knowledge as a set of interrelated structural models that allow the integration of knowledge of individuals in the organization. (Meyer, Sugiyama, 2007)

All of the above leads us to define knowledge as merging tacit knowledge such as experiences and values with what the individual discloses of apparent operational knowledge, resulting from interaction with the external environment; This mixture of knowledge can be preserved in documents and stores of knowledge, and it can also be manifested in the processes and practices aimed at implementing a work. Therefore, we can conclude that knowledge is in the minds of the individuals who hold it, and it is difficult to define it in words, understand it completely, or summarize it in simple terms. Therefore, the researcher believes that it is not personal property and is not

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fixed either, but rather exists in every employee in organizations. It is also not static, but rather dynamic and changes with the development of organizational processes in organizations, and it is not limited only to documents and knowledge stores in organizations, but rather to work processes, practices, and methods. Therefore, knowledge can be understood as a combination of experience, learning, information, and the ability to evaluate and integrate new experiences and information. On the other hand, the researcher believes that knowledge is the newest factor of production, and is considered an essential resource for creating wealth, and a major source of competitive advantage for the organization. The following figure shows the stages of knowledge production and what each stage represents:

FIGURE 03: STAGES OF KNOWLEDGE PRODUCTION



Source : The Researcher Based On Previous References

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2-2- Kinds of knowledge:

The types of knowledge differ according to their objectives, the purpose of their application, how they are shared, and the sources extracted from them. Below we list one of its classifications: (Marquardt, 2002)

2-2-1 Perceptual knowledge: It is also called “knowing what, ” and it is the initial and primary manifestation of knowledge, and it is in the form of data and information that leads to identifying the subject of the problem to be studied. (Marquardt, 2002)

2-2-2 Procedural knowledge: in other words, "knowing how", which is the knowledge of how to perform actions; In the sense that it is the essence of tacit knowledge and the basis of competitive advantage, and therefore the individuals who carry it are of great importance in the organization. (Marquardt, 2002)

2-2-3 Causal knowledge: It is also called "knowing why", which is an in-depth understanding of causal relationships across fields of knowledge, according to the perspective on which decision-making depends; It relies mainly on the concepts of "understanding and wisdom". (Marquardt, 2002)

Other sources mentioned a different classification of knowledge; It is as follows: (Polanyi, 1966)

2-2-4 Explicit knowledge: It is the knowledge that can be formulated in the form of symbols, stored, transmitted, and learned more easily than implicit knowledge. It is reflected in manuals, documents, reports, databases, and patents. (Afioui, 2007)

2-2-5 Tacit knowledge: It is the knowledge that is rooted in a person's actions, and is manifested in the individual and teams performing their work within the organization. One of its characteristics is that it can be described in an intangible way, that is, it is not easy to code, and therefore difficult to transfer and publish. (Tongo, 2012) (Zamir, 2019)

The following figure illustrates both classifications:

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Table02: Comparison between tacit knowledge and explicit knowledge

Tacit knowledge	Explicit knowledge
Informal	Formal
Difficult to transfer	Transferable
Its sharing and distribution is complex	Easy to distribute and share
Difficult to express and classify	Easy to express in many ways
Exists in people's minds	It exists in people's minds and many other places
Constitutes 80 percent or more of organizational knowledge	Constitutes less than 20 percent of organizational knowledge
Uncoded	Coded
Subjective	Objective
Personal	Impersonal
Specific context	Independent context

Source: The Researcher Based On Previous References

In addition to the previous table and for a greater understanding of the differences, the following table represents some examples of different types of knowledge:

Table. 03: Examples of different types of knowledge

	General	Contextual	Technique
Explicit, declared	A book describing the factors to consider when deciding whether to purchase shares of an organization. This may include price-earnings ratios and dividends	An organization-specific document that specifies the circumstances under which a consulting team manager should consider replacing a team member who is having problems with the project.	A guide describing the factors that must be considered in designing a computer in order to meet performance specifications
Implicit, declared	Know the key factors to consider when deciding	The human resources manager's knowledge of	A technician will know the symptoms that

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	whether to purchase shares of an organization	the factors that must be taken into account in motivating an employee in a particular organization.	should be looked for in order to try to fix a broken TV
Explicit, procedural 1	A book that deals with the steps for determining how to buy shares of an organization.	An organization-specific document that specifies the order of actions that a consulting team manager must take when requested by senior management to replace a team member who is having problems with the project.	Books explaining how to change the operating system mode on a computer to achieve the desired performance changes
Implicit, procedural 1	Basic knowledge of the steps involved in deciding whether to purchase shares of an organization	The human resources manager's knowledge of the steps used to motivate an employee in the organization.	A technician knows the order of steps by which a broken TV is repaired

Source: **Becerra-Fernandez, I., & Sabherwal, R: Knowledge Management: Systems and Processes (2014), p25**

2-3 Knowledge life cycle:

The knowledge life cycle, or as some call it, the knowledge acquisition cycle passes through four steps or stages: (Birkinshaw & Sheehan, 2002)

2-3-1 Access to knowledge resources:

This stage refers to the process of searching for information that constitutes knowledge, retrieving it, and communicating with those who have expertise and research centers. The revolution taking place in the field of communications and the

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spread of the use of the World Wide Web has made it easy to obtain the majority of the information and knowledge that we want with complete ease.

This has become a threat to intellectual property, which has prompted many governments around the world to establish special laws to protect intellectual property rights. (Bhatt, 2000)

2-3-2 knowledge assimilation:

It means understanding knowledge by analyzing information, classifying it, filtering it, indexing it, and extracting as many pivotal concepts and ideas as possible. For this purpose, many modern technical methods have been developed, such as automated systems for indexing and searching for knowledge, and information systems that rely heavily on the computer, which has contributed significantly to Knowledge development. (Birkinshaw&Sheehan, 2002)

2-3-3 Employing knowledge:

It refers to the use and application of knowledge in areas of public life to describe and solve problems. Information systems in general and software in particular represent the most important means of employing knowledge that contribute greatly to increasing productivity and achieving the highest possible returns. (Bhatt, 2000)

2-3-4 Knowledge generation:

It means exploiting existing knowledge to generate new, unprecedented knowledge or copying old knowledge to replace it with new, alternative knowledge using deductive and inductive means. This task is carried out by research and development departments, which have become somewhat expensive as a result of the rapid development in the fields of knowledge. At this stage, the process of Combination and harmony between explicit and implicit knowledge. (Birkinshaw &Sheehan, 2002)

2-4 The importance of knowledge: (Nabil, 2009)

Researchers in different fields of interest agreed that knowledge has gained great importance as a key factor in the quality of activities and the merit of the employees who carry them out, who have gained their importance in organizations through the amount of knowledge they produce and develop, where they are newly called knowledge workers; And from it, knowledge was considered as the most important

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strategic resource in enhancing the competitiveness and position of the organization in its field of activity, as some classify it as more important than tangible capital because it is a resource that does not decrease with use, but rather increases with accumulation. The importance of knowledge can be highlighted through the following: (Nabil, 2009)

- Knowledge is the basis for creating a competitive advantage in an organization.
- Knowledge is the real basis for the development and maturity of the organization.
- Knowledge can be used as a final product that can be sold.
- Knowledge can be used to modify and develop new products.
- The quality of knowledge allows society to move from a state of pre-knowledge to a knowledge societies.
- Knowledge stimulates creativity and innovation among the organization's personnel.

All this leads us to conclude that once the organization's knowledge sources dry up and its knowledge becomes obsolete, it automatically enters into a state of danger of extinction and lack of competitiveness.

2-5 Sources of knowledge: (Marquardt, 2002)

As long as knowledge is a strategic asset of the organization, attention must be paid to its sources. The references mentioned many classifications of the sources of knowledge, as some classified them into external and internal sources; These can be identified by the following:

2-5-1 Internal sources: represented in the accumulated experiences of the organization's members on various topics, and its ability to benefit from the learning of individuals and groups, and from their memories and beliefs; Examples of internal sources of knowledge include: strategy, organization databases, internal conferences, electronic libraries, dialogues, classroom learning, patents, internal research, internal operations of individuals. (Marquardt, 2002)

2-5-2 External sources: These are those sources that appear in the environment surrounding the organization, and depend on the type of relationship with other organizations and affiliation with groups that facilitate the process of knowledge

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reproduction; We mention from external sources: imitation of organizations, Internet networks, participation in conferences, competitors, suppliers, customers, universities, scientific research centers, etc. . (Marquardt, 2002)

While other classifications relied on the so-called knowledge repositories and their expectation areas; This classification can be detailed as follows:

2-5-3 Employees as a repository of knowledge: The working individual is considered a source of knowledge, where a large amount of knowledge is preserved among the employees at the individual or collective level as the work team, especially those who have knowledge and experience in the ways of doing business and the ability to be creative. (Sabherwal & Bacera, 2010)

As for the work teams, the relationships that arise between the members of the group result in a great deal of knowledge. The length of time the employees work with each other is sufficient to introduce them to their weaknesses and strengths and to understand their way of thinking and characteristics, as this knowledge becomes a given which is the highest level of latent knowledge. (Sabherwal & Bacera, 2010)

2-5-4 Knowledge produced within the organization: It is the routine organizational practices that produce knowledge for us in the form of procedures, rules, and values that can be developed in future experiences. In this regard, technologies and information systems help preserve and develop data and knowledge, as they allow us to distinguish the relationships between these different data and extract knowledge that allows us to develop important decisions. (Sabherwal & Bacera, 2010)

2-5-5 Knowledge of organizational entities: Organizational entities know three levels: Organizational units, the organization as a whole, and the relationship between the components of the organization. (Sabherwal & Bacera, 2010)

As for the knowledge stored at the level of the organizational unit that represents a formal gathering of individuals, not because of common interests, but rather under the cover of Organizational structure.

Because of the departure of employees and their replacement with others, new employees inherit some of the knowledge developed by departing employees, and

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knowledge can also be acquired through systems, practices, and relationships within the unit because the organization's customs, values, practices, and culture did not include unstored knowledge that resides within the minds of employees only, but also organizational knowledge that has developed over time across organization experiences. (Sabherwal & Bacera, 2010)

As for the emerging relationship between the organization and the various actors such as customers and suppliers, the organizations learn from the opinions of their customers about the products, to form a way for them to develop these products through their preferences and tastes, and even to crystallize ways to produce new products to attract a larger group of customers. (Sabherwal & Bacera, 2007, 2010)

2-6 Intellectual capital: (Subramaniam & Youndt, 2005)

The term intellectual capital refers to the final image of the dilemma of the organization's knowledge resources, internally or externally; There are several types according to the subject of knowledge stability:

2-6-1 Human capital: the sum of the skills, methods, and capabilities possessed by employees as individuals.

2-6-2 Organizational capital: It is the experiences preserved in the knowledge-base of the organization, such as its culture, systems, structures, and books of procedures.

2-6-3 Social capital: It is what results from employee relations and interactions.

Human capital was mentioned in this topic because its types are directly related to the sources of knowledge acquisition;

2-7 Knowledge characteristics:

The difference in the social, intellectual, economic, political, and cultural contexts makes us say that there are no fixed characteristics of knowledge, but that there are some characteristics and features that directly affect the method of knowledge management and the chances of success of its management program; We mention among these characteristics:

2-7-1 Personal (self): means that the understanding of the information that constitutes knowledge changes from one person to another and from one

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context to another, and therefore the interpretation of knowledge is closely related to the background of the individual as well as the context in which it was used; Thus, new knowledge can be generated through its assimilation by another person. (Kluge et al, 2001)

2-7-2 Cumulative: Knowledge accumulates through its interaction with new knowledge data, and this interaction results in new knowledge called creativity and innovation. (Kluge et al, 2001)

2-7-3 Self-promotion: One of the characteristics of knowledge is that sharing it with others does not diminish its value, but rather develops it more; The person who shares his knowledge does not lose it, while those who receive it acquire greater knowledge and even more than that, the sharing of knowledge between two or more individuals enhances the previous knowledge of each of them, which does not apply to the organization that tries to protect its knowledge from leakage to the outside to avoid losing its competitive advantage. (Gottschalk, 2005)

2-7-4 Clarity: It means the possibility of giving knowledge a tangible and clear image that can be preserved and transferred, and the degree of clarity increases as we move from tacit knowledge towards explicit knowledge and vice versa. (Zander & Kogut, 1995)

(Kluge & al, 2001) and (Gottschalk, 2001) add that the characteristic of clarity goes beyond classifying the type of knowledge whether it is, explicit or implicit knowledge, to take into account the ability to “encode” and “teach” knowledge so that:

2-7-5 Coding Ability: It means that even if knowledge cannot be transferred between people, it can at least be given the quality of clarity.

2-7-6 Teachability: The clearer the knowledge, the more it can be taught to other individuals through vocational training and education.

Some add to this that the clarity of knowledge is inversely related to the degree of its complexity, meaning that the simpler the knowledge, the greater its clarity, and vice versa, and the more complex the knowledge, the more difficult it is to manage and the less its degree of clarity.

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2-7-7 The implicit nature: The longer the period of storage of the amount of knowledge accumulated in the mind of the individual, the greater the degree of its complexity and the difficulty of discovering and simulating it, and thus the difficulty of converting it into explicit knowledge, because the amount of knowledge is stored in the mind and its owner may not take it out at all or take it out part of it or take it out in a specific way after a while from time. (Kluge & al, 2001)

Therefore, the success of knowledge management programs is linked to the extent of understanding this knowledge characteristic.

2-7-8 Immediateness: This characteristic stems from the fact that it is difficult to program the generation of new knowledge, as it is not possible to predict the moment of the emergence of new knowledge, but only to create the appropriate climate for its generation. (Kluge & al, 2001)

2-7-9 Severability: This characteristic is related to disappearance, when we talk about it, we target two elements, the first of which is the ability to disappear knowledge value and its importance over time, especially in the field of competitive business and the open environment, and thus the disappearance of what resulted from that knowledge in terms of achieving competitive advantage. The second is the possibility of its demise by losing its storage, whether it is documents and storage media concerning apparent knowledge, or human resources about tacit knowledge. (Kluge & al, 2001)

2-7-10 Transferability: It is a characteristic related to knowledge in its apparent part, as organizations circulate and share their successful experiences and constructive knowledge among their sites, branches, and departments, in other words among all their human resources. (Kluge et al, 2001)

The researcher believes that focusing on this feature understanding it, and working on it is extremely important for the success of knowledge management programs and maximizing their utilization.

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3 Organizational knowledge:

3-1 The definition of organizational knowledge:

The emergence of post-capitalist societies, or the so-called post-modern societies, or knowledge societies, led to a rise in interest in organizational knowledge and its management. (Vandaie, 2008)

Some researchers believe that organizational knowledge is all information that the organization has in its organizational memory, and it also includes the mental processes in the minds of managers and the rest of the employees in the organization in terms of perception, learning and thinking, and everything that enhances the organizational decision-making process. (Maria, 2000)

Most researchers confirm that workers in organizations store in their minds a huge wealth of knowledge and experience that they gained from their work and interactions at work and in various areas of life, and they also possess knowledge and experience related to the goods and services they provide, and the information of their customers and competitors. (Elisabeth, 2006). However, this organizational knowledge is distributed to workers in different locations, as it is isolated from the main structure of the organization, which makes the organization not benefit from it well, which requires it to try to extract this knowledge and make it available to everyone by storing, transferring and employing it in a better way. (Maria, 2000)

All this leads us to say that individual knowledge, whether implicit or explicit if a correct sharing environment is found, will inevitably flow into the organizational knowledge that is considered more comprehensive because it collects the tacit and explicit knowledge available in the organization that forms its organizational memory, represented in databases, files, organizational structures, and short and long-term plans. (Elisabeth, 2006)

3-2 Types of organizational knowledge:

3-2-1 Declared organizational knowledge: It is the most common knowledge among the organization's members, which makes it easy to process, and its forms include: declared goals, systems and regulations, decision trees, reports and studies, budgets,

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databases and other forms of knowledge that help to understand the organization's circumstances and clarify responsibilities and duties. (Cohen, 2006)

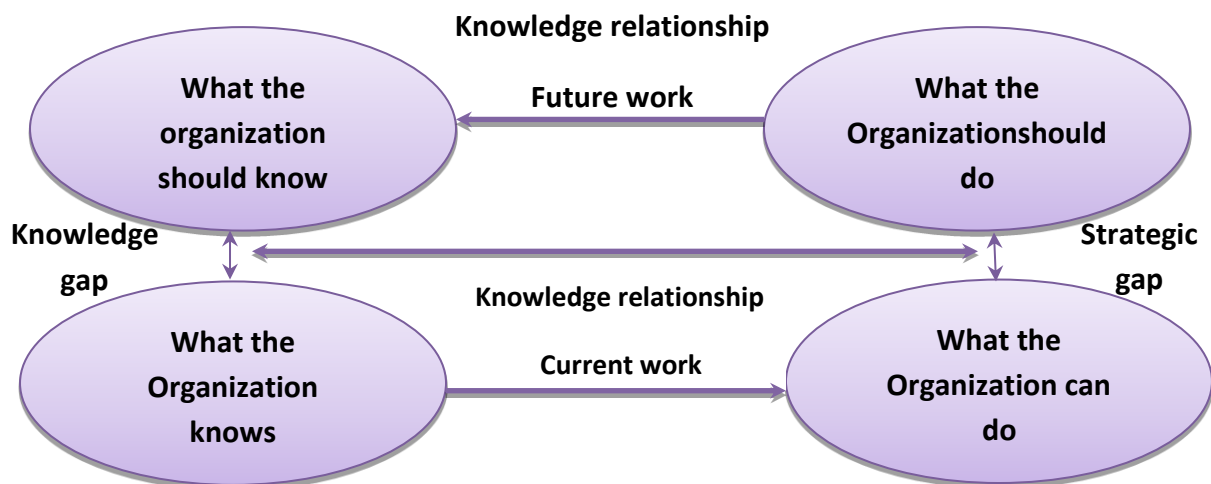
3-2-2 Latent organizational knowledge: It is what employees store in their minds and do not disclose, and it is the result of studying or self-experiences and observing daily events and experiences that interact with each other, producing outputs that affect the nature of the individual's psyche, his mental ability and his social status. (Siachou& Loannidis, 2008)

3-2-3 Internal organizational knowledge: It is the knowledge that results from the activities and interactions of the organization's members with each other and their interactions and relationships with other elements of the organization. (Jones & al, 2009)

3-2-4 External organizational knowledge: It is the knowledge received by the organization from external sources through the organization's multiple means of communication with its external environment, such as its competitors, partners, and the community in which it operates. (Siachou& Loannidis, 2008)

The following figure shows the relationship and the alignment between the organization's knowledge gap and its strategic gap.

Figure . 04: The knowledge gap and the strategic gap in the



Source : Gottschalk &Petter . Strategic knowledge management technology, (2005), p : 76

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3-3 Measure organizational knowledge:

Considering that knowledge is an intangible element in the organization, its measurement constitutes a major challenge, and if it cannot be measured, it is difficult to manage it.

Among the challenges facing the process of evaluating and measuring knowledge assets, we mention: (Kacem, 2005)

- The need to develop the best investment methods.
- A need to develop indicators for measuring the return on investment through the development of knowledge resources.
- Clarify the relationships between the knowledge and experience of the employees, and the strategic goals of the organization.
- Difficulty linking the performance of the individual and the organization directly with knowledge management.
- The problem of identifying good knowledge and bad knowledge.

3-4 Revival of organizational knowledge:

The process of reviving organizational knowledge refers to the process of its resurgence in a way that shows the processes of renewal and continuity. This can only be achieved by creating an appropriate organizational climate that adapts to environmental changes. (Boseman, 1982), Among the mechanisms that can be adopted to revive organizational knowledge are the following: (Jones, 1995) (Nonaka, 1991)

3-4-1 Adopting the method of continuous improvement in the field of knowledge, because every employee has an interest in getting to know everything new in his environment, as the combination between thinking and action leads to a revival of the movement of the "spiral of organizational knowledge", which results in renewal in the field of knowledge.

3-4-2 Relying on reshaping the capabilities and activities in new forms, and seeking to develop operations to change the image of the organization to overcome the stagnation that the life cycle of organizations knows.

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3-4-3 Simulating thought with other thought, in the sense of developing creative ideas to break traditional thinking.

3-4-4 Work to generate organizational knowledge in light of a set of operations such as purchase, creation, discovery, or absorption, because successful organizations are organizations that can generate knowledge through various sources.

4 knowledge management:

4-1 The definition of knowledge management:

Despite the increasing interest in knowledge management in recent decades, no consensus has been reached on a unified concept for it, as some see it as synonymous

TYPE			
APPROACH	EMBODIED	REPRESENTED	EMBEDDED

with information management, and others see it as a term that expresses computer activities and applications.

It is due to the multiplicity of points of view, just like the term knowledge, and we have sought in this research to try to classify the various definitions of knowledge management according to the entrances and directions. (Greiner & al, 2007) provided a comprehensive definition of knowledge management as: "the process of acquiring knowledge and using it to enhance innovation and creativity through organizational learning". Another definition: "It is to benefit from the collective experience and expertise that is proven anywhere, whether in work, documents, databases, or people's minds". As for the informatics point of view, (Kim & trimmi, 2007) believe that knowledge management is: "obtaining the right information within the right context, for the right person, at the right time, and for the right purpose; knowledge management includes (knowledge creation, knowledge storage, knowledge dissemination, knowledge application).

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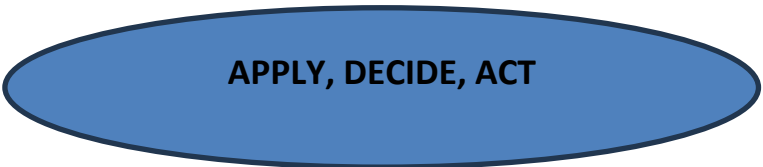
SENSE	OBSERVE	GATHER	HYPOTHESIZE
ORGANIZE	CONTEXTUALIZE	CATEGORIZE	MAP
SOCIALIZE	SHARE	DISSEMINATE	SIMULATE
INTERNALIZE	 APPLY, DECIDE, ACT		

Table. 04: Gamble And Blackwell's Km Matrix

Source: Gamble & Blackwell, Knowledge Management: A State of the Art Guide, 2001.

While (Davenport&Grover, 2001) weremore clear in defining knowledge management from the point of view of the informational approach, as he considered it "the process of developing new applications of information technology to support the acquisition, storage, retrieval and distribution of explicit knowledge".

(Steve&Sutton, 2008), focused on the human behavioral aspect in his definition of knowledge management as: "Achieving the goals of the organization through instigating and driving strategy, facilitating the growth and development of business knowledge, and strengthening and enhancing the ability to interpret data, information, experience, skill, and culture by giving meanings to them".

4-2 Knowledge management models:

4-2-1 Gamble and Blackwell model:

In their model, Gambel and Blackwell presented a theoretical framework for the knowledge management matrix with recommendations and guidelines for its implementation. They divided the process into four stages, which are as follows:

- **First**, identifying sources of knowledge by management
- **Second**, organizing this knowledge and evaluating its strengths and weaknesses to determine whether this knowledge is appropriate to the needs of the organization and can be used for multiple uses.

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- **Third**, using the necessary techniques and processes to ensure that this knowledge is shared as widely as possible in the organization. All of this is called socialization.
 - **Fourth**, Absorbing knowledge by using it in the organization's daily decisions.
- (Gamble & Blackwell, 2001)

4-2-2 Value chain model and bruijn model:

Both models believe that the best way to manage and evaluate knowledge is through the knowledge value chain, as knowledge management focuses on improving competitiveness. Knowledge management can improve competitiveness if each of its operations is characterized by effectiveness.

This model was developed by approaching knowledge management from two conflicting perspectives, a technical analytical perspective and a user perspective. The knowledge evaluation process occurs by determining how knowledge management keeps up with each perspective at all stages.

According to the value chain model, knowledge management begins with obtaining data, then converting it into information, then obtaining knowledge. This integrated and interconnected group represents what are called supporting activities, as is the case in the value chain model (by Michael Porter).

These activities aim to obtain knowledge through knowledge workers, and these activities depend on three basic knowledge elements arranged hierarchically: data - information - knowledge. This knowledge is utilized in decision-making through another group of activities called executive or primary activities. The construction of this model depends on concepts from systems theory, which are:

- ✓ **Input**
- ✓ **Transfers**
- ✓ **Outputs**
- ✓ **feedback**

The value chain process is a set of sequential and interconnected activities in a coordinated and integrated system. This model begins with obtaining data that is operated or transformed into specific results or outputs called information. On the other hand, basic activities are supporting and feeding activities for primary or executive activities. From this standpoint, the components of this proposed model

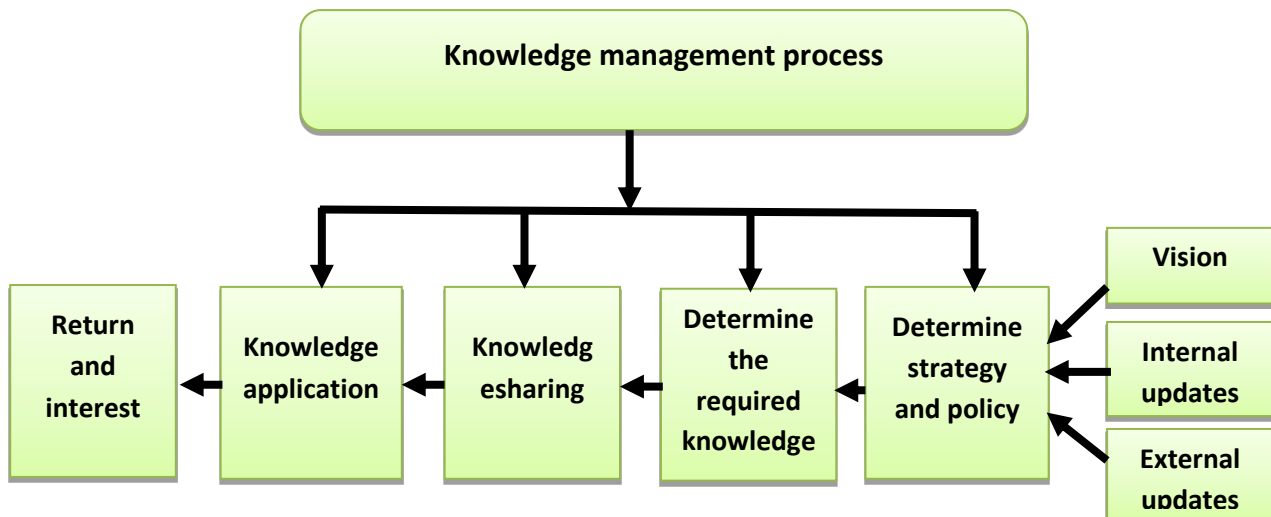
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work in several directions, front and back, vertical and horizontal, and in a coordinated, integrated, and interconnected network form. (Murray&Jennex, 2006).

Below is a figure that shows how to build a knowledge value chain model

4-2-3 Jean buck model:

FIGURE 05 : VALUE KM CHAIN MODEL



Source: Murray& Jennex, knowledge management Success Model, Encyclopedia of knowledge management, 2006, p . 430 .

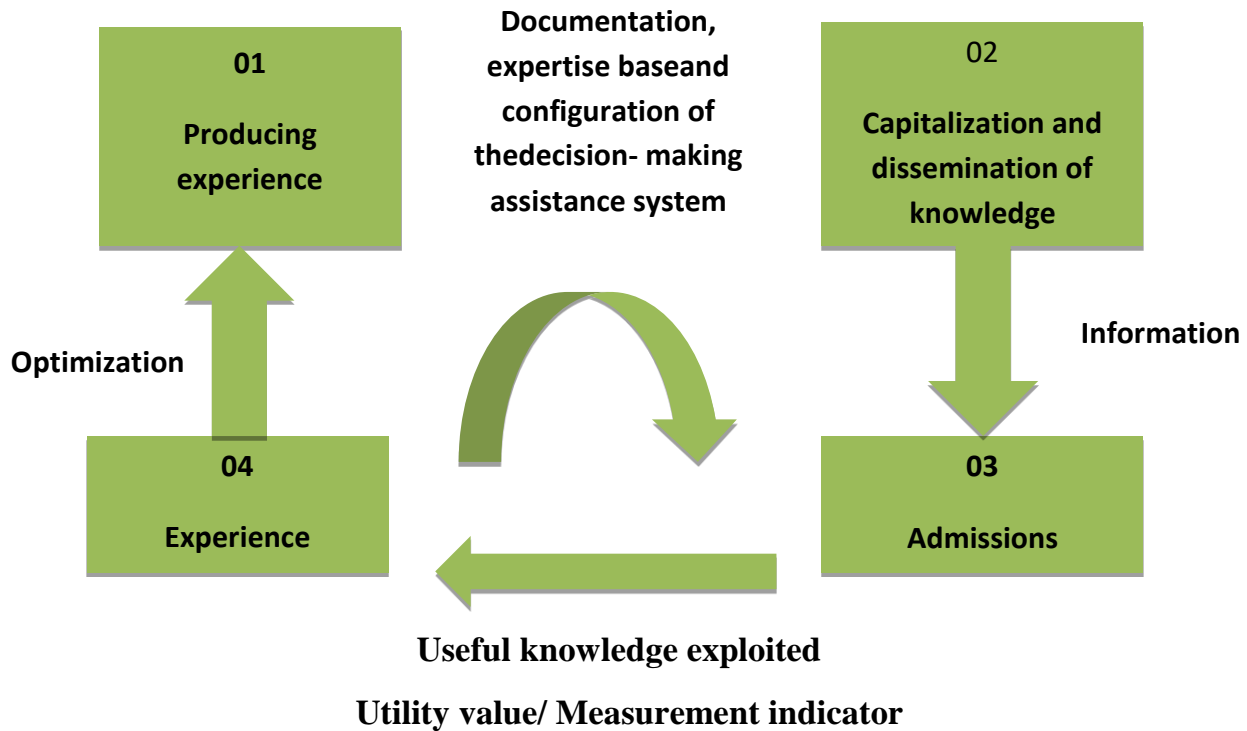
According to John Buck, effective knowledge management begins with the accumulated experiences resulting from years of work in the organization, which can be encoded and disseminated in a way that makes it usable, whether by documenting it through training or a decision-making assistance system.

Then comes the application stage through the information system, and in light of this stage its actual value in the organization is determined by (exploiting its value, adding new knowledge to it, or improving it), and this is reflected positively on the stock of knowledge resources. (Buck, 2003)

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The content of this model can be summarized through the following figure.

Figure 06 : Jean Buck KM Model



Source : Jean Yves Buck, Le management des connaissances et des compétences en pratique, 2003, p . 18 .

According to the figure above, John Buck's model does not differ from other models in expressing knowledge management through the stages that it passes through, so according to him, the cognitive process begins with producing knowledge to disseminating knowledge, then accepting it, then evaluating it to constantly improve it to reproduce it again, and so on.

4-2-4 Marquardt Model:

Marquardt proposed an approach to knowledge management in organizations that includes six stages that enable the flow of knowledge from the source to the user through the following steps:

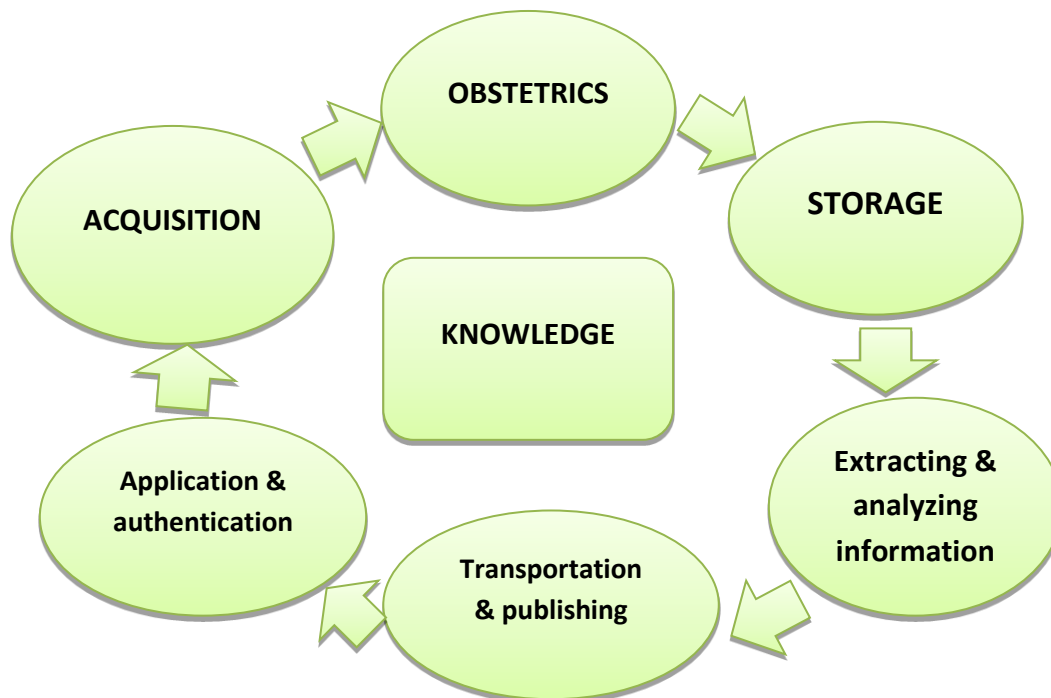
- ✓ **Acquisition**
- ✓ **Creation**
- ✓ **Storage**

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- ✓ **extraction Data and Analysis**
- ✓ **Dissemination and Transfer**
- ✓ **Validation and Application**

According to this model, which was proposed in 2002 as a comprehensive systemic approach to knowledge management in the organization, the interaction and overlap of the six knowledge management processes (acquisition, generation, storage, extraction and analysis, transfer and dissemination, application and validation), leads the organization to learn effectively, and therefore, these processes are not independent of each other, information must be distributed through multiple channels, and each of these channels has different time frames, and knowledge management must be subjected, on an ongoing basis, to review and revision processes. (Marquardt, 2002) Knowledge management lies at the heart of the learning organization, which drives knowledge through each of these six stages, as represented by the corresponding figure:

Figure 07 : Marquardt KM Model



Source: Marquardt, building learning organization, 2002, p . 28 .

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What is expressed in the figure above, representing the Markordt model, is that it is one of the simplest models that illustrates the continuous movement that is defined by the process of knowledge production in organizations through its successive stages (generation, storage, extraction, transfer. . .).

In its simplest sense, according to Markordt, knowledge management is the process of producing knowledge on a continuous and organized basis.

4-2-5 Moual Model:

This model was presented by D. E. Winnosky and is based on the fact that knowledge is an experience without beginning and end. Therefore, there is a circular chain of knowledge management. In this model, there are four basic interacting components, each of which works independently, but at the same time they are mutually dependent:

4-2-5-1 The basic basis for knowledge management:

It represents the data and information circulated through the Organization's knowledge management tools. It is the technical structure of knowledge management.

4-2-5-2 Knowledge management culture:

Culture is what determines the direction, values, and preferences in knowledge management. It is culture that brings the strategy, not the strategy that creates culture. It is also a culture that determines appropriate technology and practices.

4-2-5-3 Knowledge management objectives:

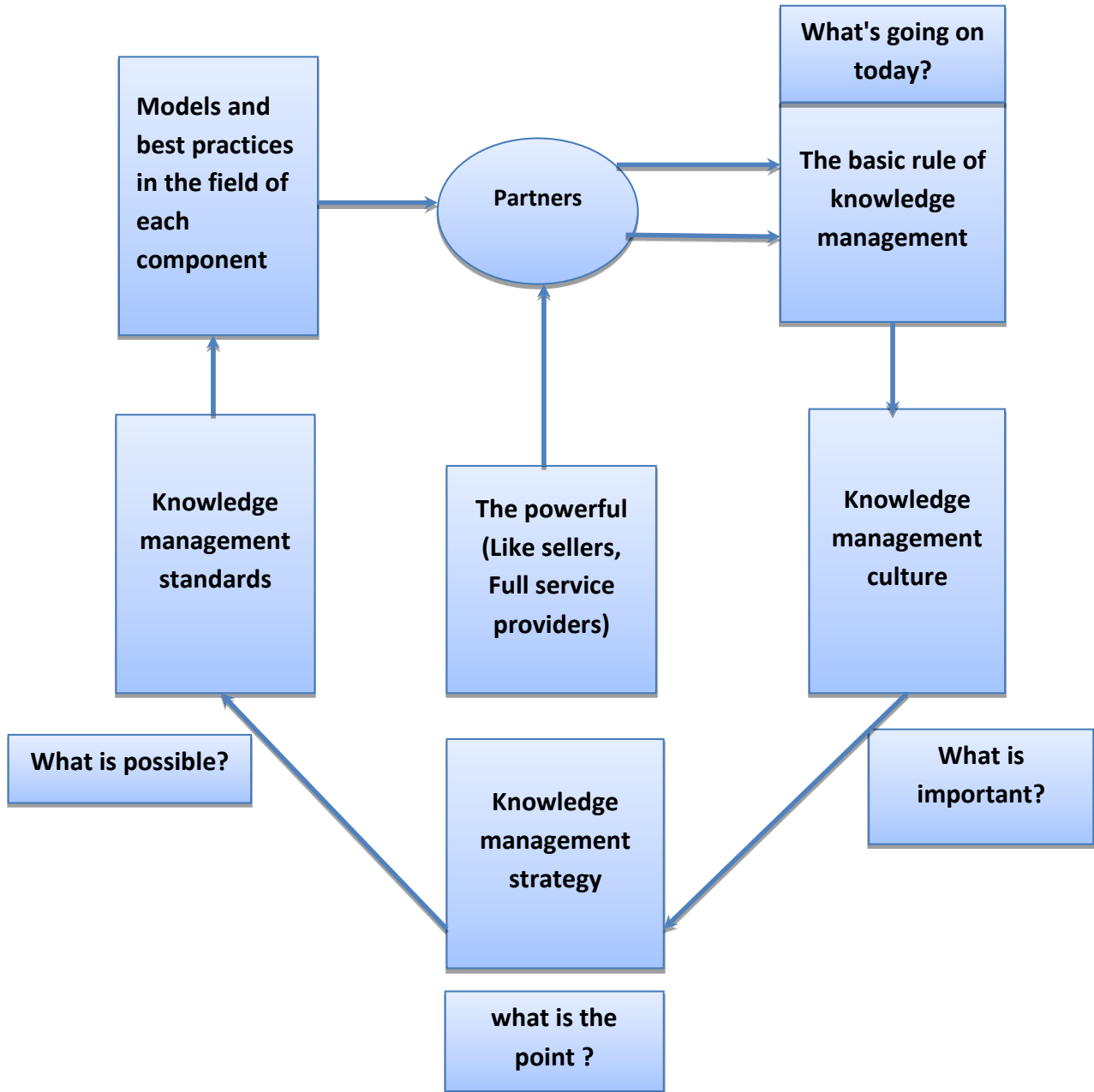
These goals usually include improving the organization's capabilities, whether in improving the organization's exploitation of its resources or improving its ability and efficiency in exploiting its resources in its products and services.

4-2-5-4 Knowledge management standards:

It refers to the best practices that organizations use in relationships with customers, suppliers, and distributors as well as with the technologies and capabilities achieved in comparison with competitors. (Aboud, 2005)

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Figure 08 : MOUAL KM model



Source: NEDJM AABOUD Nedjm, knowledge management, concepts, strategies and processes, 2021, p . 25 .

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4-2-6 Franhofer s model:

Vorbeck & Heisig used the Fraunhofer IPK Belin model in 2000 in their survey study. This model focuses on the practice of business processes and assumes that knowledge management determines the methods and tools that contribute to enhancing its core processes, which the model identifies with six processes. :

- ✓ **Determine knowledge objectives**
- ✓ **Diagnosis of knowledge**
- ✓ **Generating knowledge**
- ✓ **Store knowledge**
- ✓ **Distribution of knowledge**
- ✓ **Application of knowledge**

The quality of these stages interacts with the design of several fields, including:

- ✓ **Interactive organization processes,**
- ✓ **information technology,**
- ✓ **Leadership,**
- ✓ **culture of cooperation,**
- ✓ **Human Resource Management**
- ✓ **Control.**

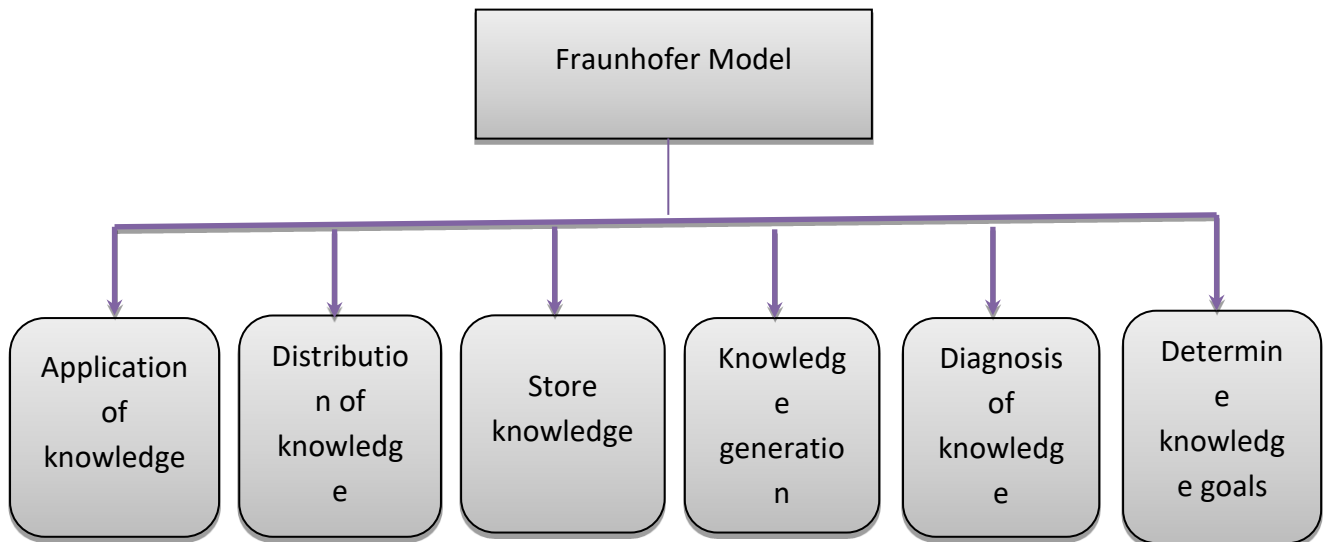
This model focuses on adopting a set of methods for all core operations, which comprise the management of the organization seeking to generate value. (Baumard, 2002)

The model shows how technology has enabled organizations to achieve their goals of creating, collecting, and applying knowledge, then re-validating and reusing it.

The following figure shows the most important aspects of this model:

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Figure 09 : Fraunhofer KM model



Source : researcher based on Kohl, et al . A Practical Approach to Process-Oriented Knowledge Management . 2015, p78

4-2-7 Jason Gupta model:

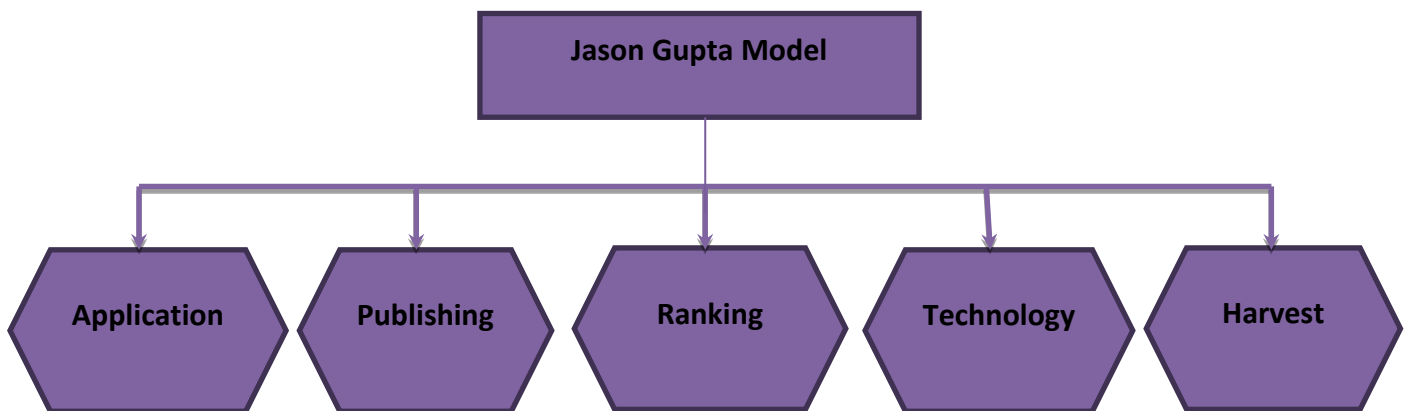
In 2002, Jason and Gupta presented a knowledge management model, based on their vision that knowledge management is a strategic process that includes achieving the goal of excellence. This model assumes the presence of five basic components to produce effective knowledge management, and these five components proceed sequentially as follows:

- **Collecting and harvesting knowledge:** The necessity of obtaining knowledge from within or outside the organization.
- **Purification:** refers to identifying knowledge that is useful to the organization and then purifying it. This step must be done following the organization's vision, mission, and goals.
- **Arrangement:** means benefiting from the development of mechanisms aimed at storing and developing knowledge to help users and beneficiaries obtain it in the decision-making process at the lowest cost and least time.

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- **Dissemination:** The processes of facilitating communication and developing organizational culture are two essential factors that have a good influence on the process of disseminating knowledge appropriately.
- **Application:** That is, linking knowledge to practical reality to achieve a competitive advantage, as previous processes are useless if there is no effective application of knowledge. (Gupta & al, 2002)

Figure 10 : Jason Gupta KM model



Source : Gupta et al, Creating Competitive Advantage By Effectively Managing Knowledge: A Framework For knowledge Management, 2002p16

4-2-8 Lindsey model:

Lindsey considers the success of knowledge management from the perspective of the balanced scorecard, and proposes a model of knowledge management effectiveness based on the combination of the organizational capabilities theory perspective and the situational theory perspective, This model defines the effectiveness of knowledge management based on two pillars

- **Knowledge foundations**
- **Knowledge processes**

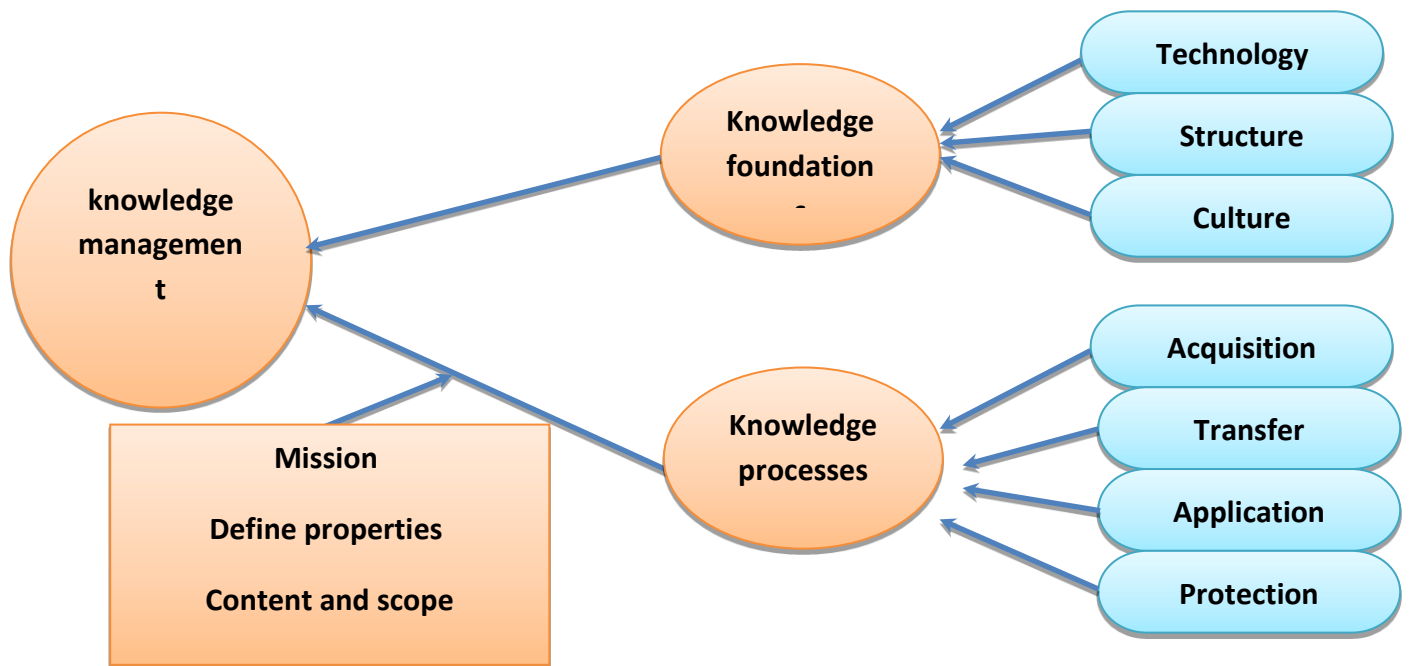
The foundations of knowledge are social capital and relationships between the source of knowledge and the user, and based on technology - electronic networks - structure - and culture. Knowledge management processes are affected by knowledge tasks, which are acquisition - conversion (making knowledge available) - application -

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protection (securing knowledge). Knowledge tasks are activities carried out by organizational units to clarify the type and scope of knowledge used (Murray&Jennex, 2006).

The following figure shows the most important aspects of this model:

Figure 11 : Lindsey KM model



Source : Murray E . Jenne, knowledge management Success Model, Encyclopedia of knowledge management, 2006 p 431

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4-2-9 Masei model

Masei and his colleagues built a model for successful knowledge management, This model is based on the framework proposed by Joshi & Holsapple, which believes that the success of knowledge management stems from understanding the organization and the users of organizational knowledge and how they use it. According to this model, knowledge management is one of the processes of organizational change whose success cannot be separated from the success of the change process, which in turn is reflected in organizational performance.

This model consists of a group of elements:

4-2-9-1 Knowledge management strategy: It defines the process of using knowledge, any knowledge acquired and its source, its users, the form of this knowledge, and the technology used to store this knowledge.

4-2-9-2 Main administrative influences: Supporting management through leadership, allocation, and management of project resources, supervising the knowledge management system through coordination and control of resources, and establishing metrics to evaluate the success of the knowledge management system.

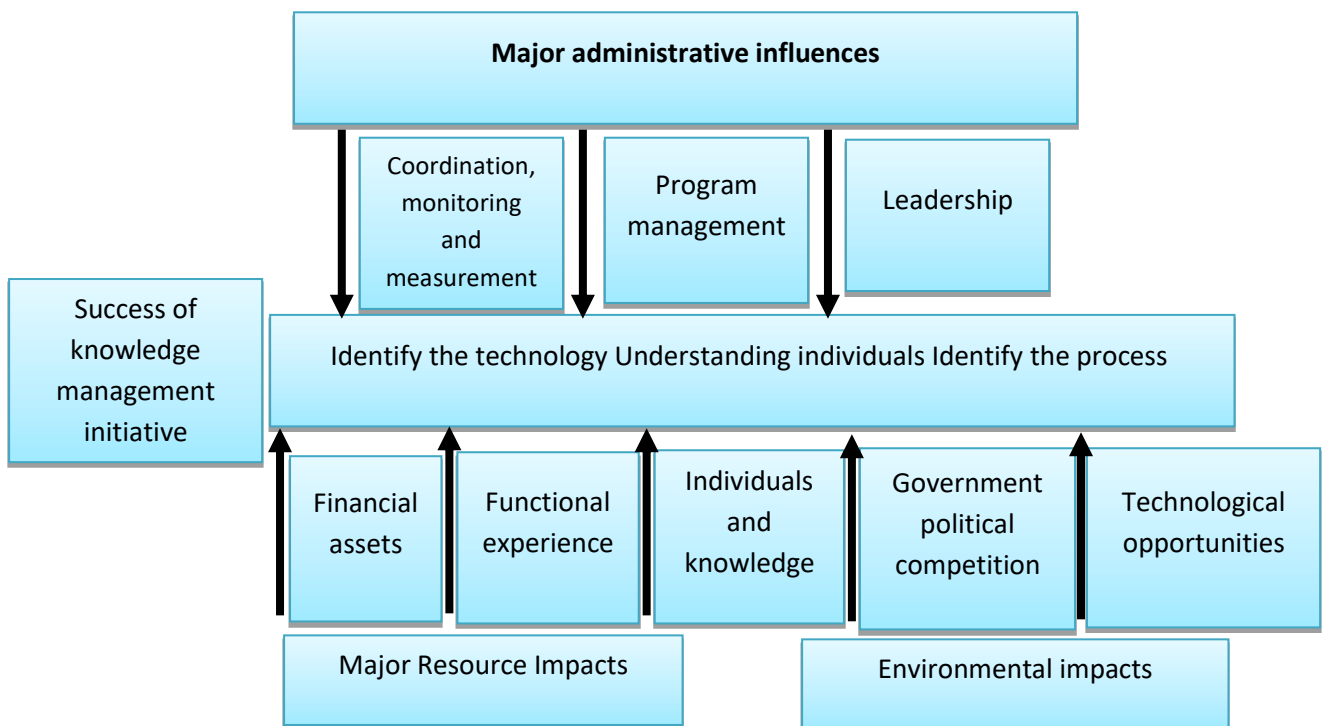
4-2-9-3Key resource impacts: These include the financial resources and knowledge sources that the organization needs to build a knowledge management system.

4-2-9-4Basic environmental influences: It describes the external forces that direct the organization to invest the knowledge that enables it to maintain its competitive position. (Murray&Jennex, 2006)

The following figure shows the basic elements of the Masai model interactions

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Figure 12 : Masai KM Model



Source: Murray Jennex & Lorne Olfman . "Assessing Knowledge Management Success, 2005 p6

According to the figure above, the success of knowledge management depends on a group of major influences that determine the path of this model (environment, resources, technologies, experience), and by understanding the individuals belonging to the organization to extract their latent knowledge and employ their expertise, knowledge management will succeed in achieving the organization's desired goals.

4-2-10 Duffy's model

This model of knowledge management is based on the fact that the organization obtains information, energy, and activity from the external environment, and through the involvement of strategy, individuals, processes, and technology, information, and energy are transformed into knowledge, processes, and structure.

Knowledge management contributes to increasing the wealth of the organization. Knowledge management is a process that includes obtaining tacit and apparent

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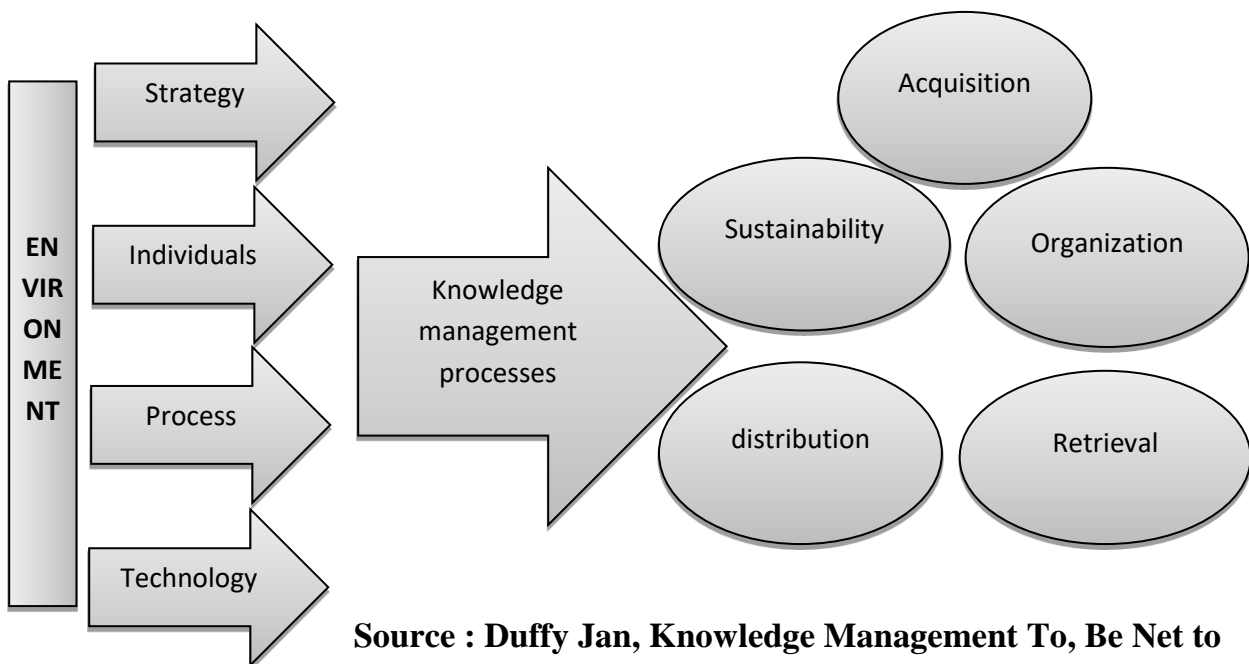
knowledge, supporting and assigning business, generating returns, emphasizing the human element as its essential aspect, and obtaining lessons learned through repeated use of knowledge.

According to this model, the processes are as follows:

- The process of obtaining knowledge includes (capturing, acquiring, purchasing, generating, and maintaining).
- The organizing process includes (classification, tabulation, and drawing).
- The retrieval process includes (searching and accessing stored knowledge.).
- The distribution process includes (sharing and transportation).
- The perpetuation process includes (refining, growing, and nourishing). (Duffy, 2000)

The Duffy model is expressed as follows:

Figure13: Duffy's KM model



Source : Duffy Jan, Knowledge Management To, Be Net to be, 2000, p . 67 .

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4-2-11 Jennex & Olfman model:

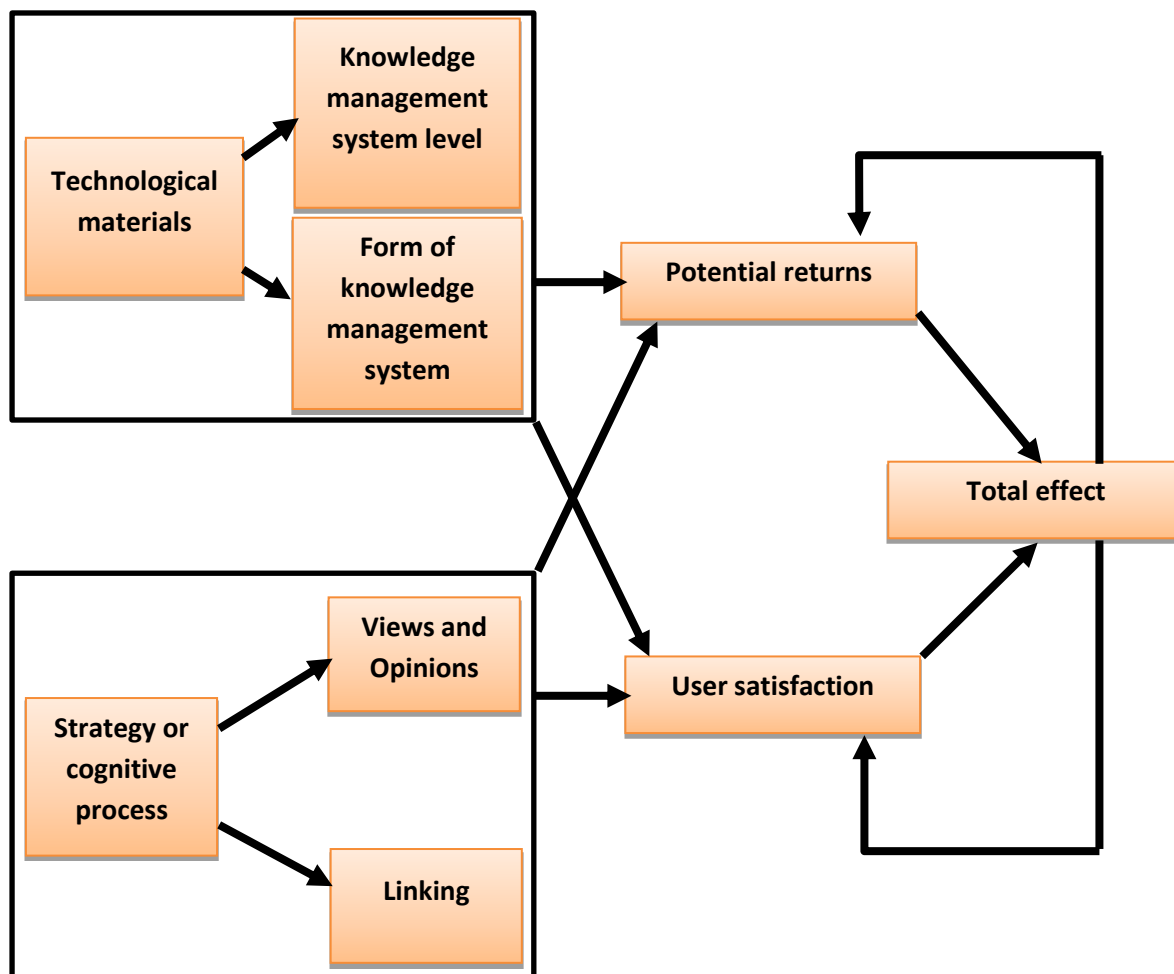
Jennex & Olfman presented a model based on the use of successful influences in knowledge management systems. The dimensions of the model include the following

- **System quality:** How the knowledge management system performs the functions of creating, storing, retrieving, transforming, and applying knowledge.
- **Knowledge quality:** ensuring that the correct knowledge acquired is available to the right user at the right time.
- **User Satisfaction:** It shows the level at which the knowledge management system achieves high levels of satisfaction for its users.
- **Possible returns:** measuring the benefits and effects that the knowledge management system creates for each user based on the tangible benefits model.
- **Overall impact:** The employee's use of the knowledge management system improves the quality of his performance in the workplace, and this is reflected in organizational performance. (Jennex & Olfman, 2005)

The working mechanisms of the Jennex & Olfman model are shown in the following figure:

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Figure 14 : Jennex & Olfman's KM model



Source: Jennex, M . &Olfman, L, Assessing Knowledge Management Success,, 2005, p43

4-2-12 Leonard bartonmodel:

This model is based on the fact that knowledge in companies represents a fundamental ability that can be embodied according to four forms:

- **Knowledge may be in physical form:** it could be, for example, in a design area represented by a patent, and this is the knowledge that we can see and touch because it is represented in a clear entity.
- **It may be embodied in administrative systems,** that is, in learning methods for doing things most effectively;

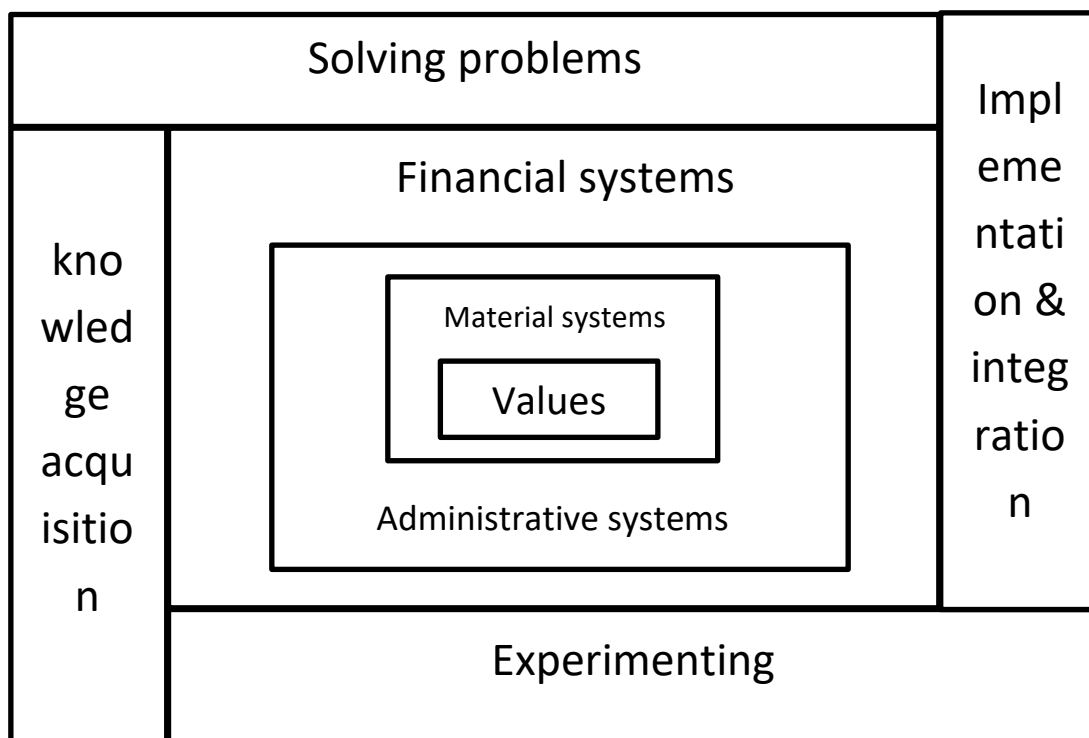
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- **Knowledge can be embodied in the explicit and implicit skills of employees:** that is, in the individual capabilities that develop the organization's performance and achievements through experience.
- **It may also be in the standards of behavior** in the workplace and the small values of work or as it is called organizational culture.

This model represents an attempt to expand the organization's knowledge to include all products, services, and processes. (Barton, 1992)

The corresponding figure shows the activities that knowledge management is concerned with according to Barton's model:

Figure15: Leonard Barton's KM model



Source: Leonard-Barton, Core Capabilities and Core Rigidities : a Paradox in Managing New Product Development . .

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According to the figure above, Barton's model of knowledge management in organizations indicates the existence of a group of systems (financial, structural, administrative, and value) that are interconnected and constitute the general system of the organization.

According to these systems, which are seen as basic requirements for the work of knowledge management, the process of experimentation takes place to obtain knowledge in an integrated manner between individuals to solve the organization's problems and achieve its goals, to keep this process ongoing as the organization continues to exist.

4-2-13 Nonaka – Takeuchimodel:

This model has been linked to the success of some Japanese companies, in terms of obtaining innovation and creativity.

It was concluded that this success did not come from a mechanical treatment of some objective knowledge but from very personal elements.

Researchers state that a key factor for Japanese companies comes from their much greater reliance on tacit knowledge;

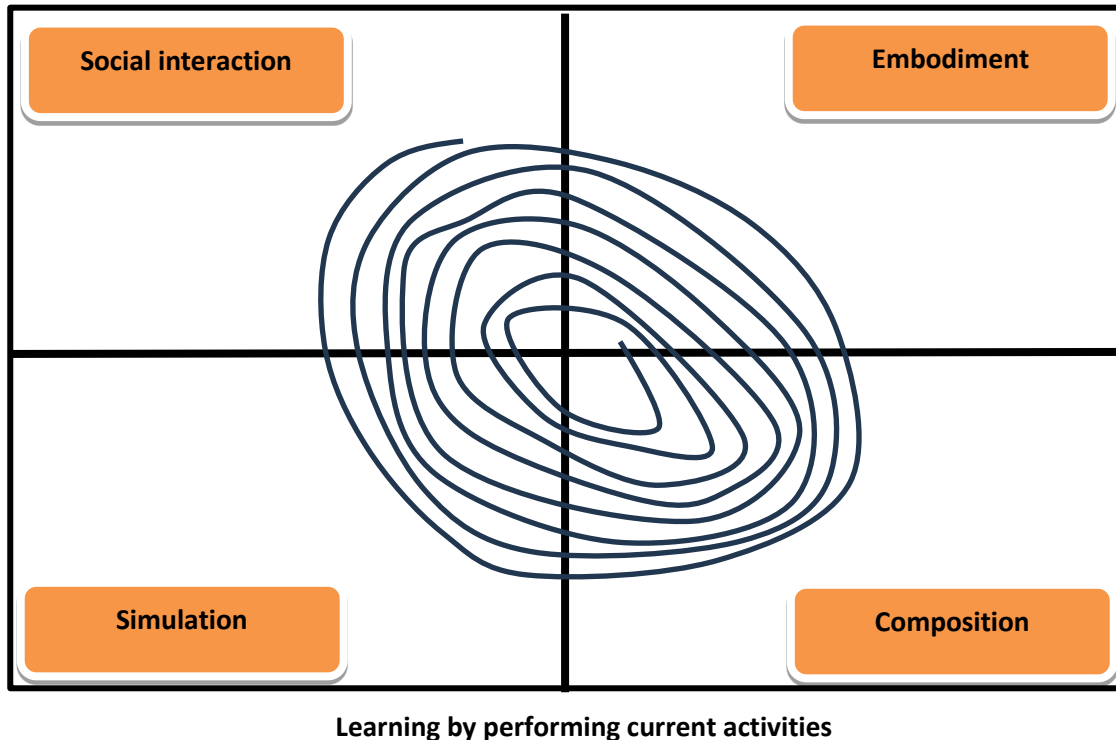
Eastern culture believes in the unity of humanity and nature, body and mind, the person and others, and such an environment knowledge exists mainly among individuals but in groups, and it is easy to transform, share, and transfer it based on the integration of all types of cultures.

Knowledge creation occurs as a continuum in all departments of the organization, as it always begins at the individual level, so knowledge is personal and often tacit, later becoming organizational knowledge. (Cristea&Capatina, 2009)

There are four ways to transform knowledge, which represent the “engine” of the knowledge creation process. The following figure shows the model:

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Figure16: NONAKA / TAKEUCHI's Knowledge Spiral



Source : Cristea & Capauna, Perspectives on knowledge management models . 2009 : p . 358

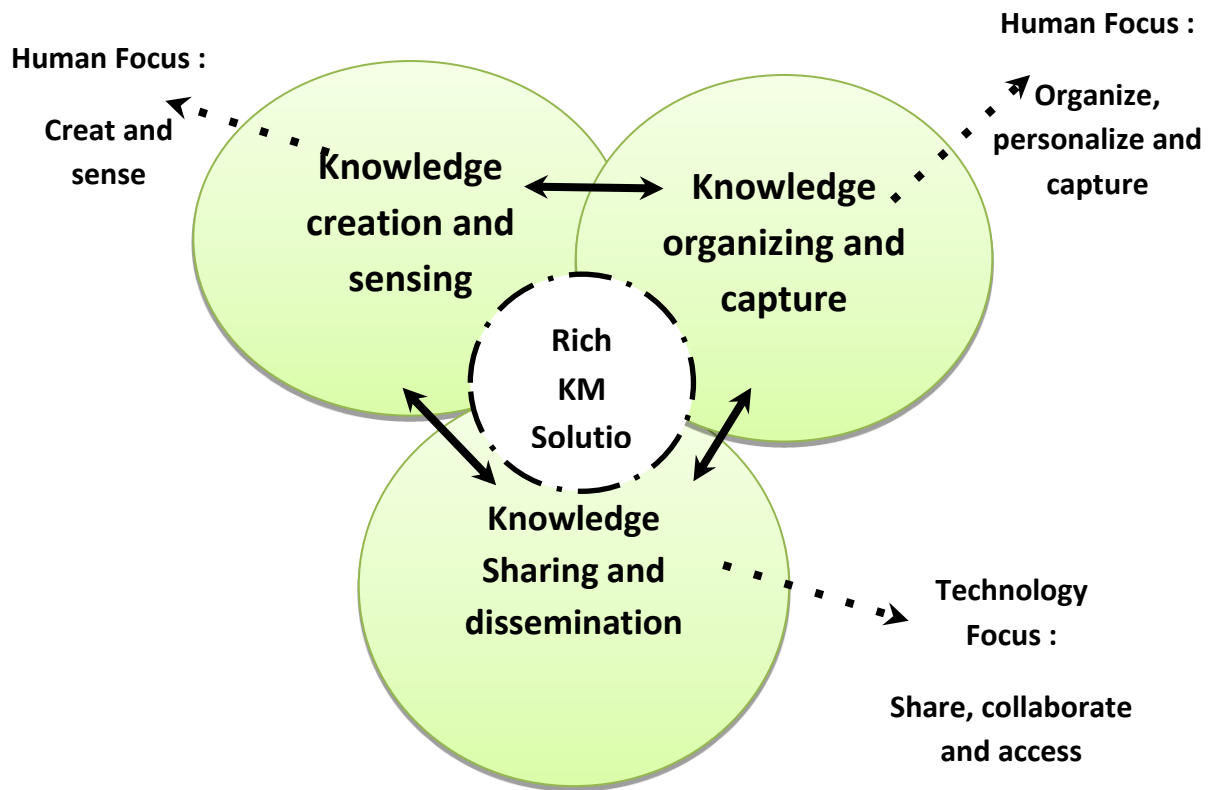
4-2-14 Botha model:

This model provided a general overview of the knowledge management process and highlighted the overlap and interaction of the three broad categories with each other. It is also distinguished by its neglect of the strategic focus and its inclusion of knowledge creation as an effective element in the knowledge management process.

The model also shows the category that is most oriented towards the human element and the category that is most oriented towards the technological element. This is largely how organizations tend to deal with this issue, that is, as a technological challenge rather than an organizational and social one. (Botha & Snyman, 2008)

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Figure 17: BOTHA Model of Knowledge management



Source : Botha et al, Coping with Continuous Change in the Business Environment, 2008

4-2-15 Wiig model:

In 1993, Wiig presented a model of knowledge management to achieve four main goals:

- ✓ **Knowledge Building**
- ✓ **Knowledge retention**
- ✓ **knowledge Accumulating**
- ✓ **Knowledge Use And Application**

In this model, an individual's activities and functions are depicted as sequential steps. In other words, it is a process that facilitates the construction and use of knowledge, given that we can perform some functions in parallel. It is also possible in this model

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to turn back to repeat the functions and activities that were carried out Earlierbut with different details and emphasis. As can be seen from the model, attention is also focused on preserving knowledge in the minds of individuals, in books, in knowledge bases, and any other form related to the topic. As for collecting knowledge, it can take many forms, starting with the dialogues that take place at the water dispensers., to networks of expertise, and work for teams.

Likewise, the use of knowledge can be achieved in many forms, depending on the situation. It is noted in this model that the basic functions and detailed activities in various areas of building and using knowledge in organizations and individuals have been integrated and unified.

On a theoretical level, these functions may be similar, but on a practical level, they are completely different.

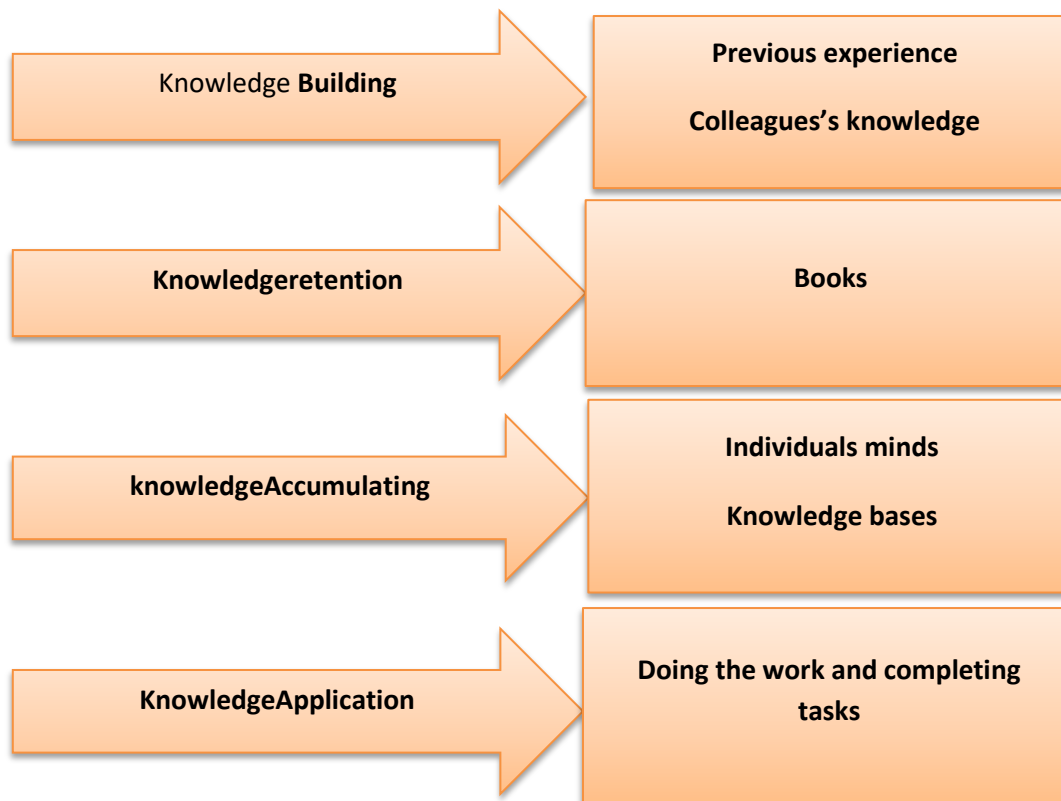
In this model, the individual's activities and functions were depicted as sequential steps that facilitate the construction and use of knowledge, given that some systems and functions can be implemented in parallel or even reversed to repeat some functions and activities that were implemented earlier, but with different detail and focus. (Cristea&Capatina, 2009)

The model also emphasizes that knowledge can be kept in different places, whether in the minds of individuals, books, documents, or knowledge bases. As for the accumulation of knowledge, it takes many forms, starting from side dialogues between individuals, to networks of expertise, and then to work teams.

The Wiig model can be explained as follows

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Figure 18: Wiig KM model



Source: The Researcher

The figure above shows that knowledge management includes four main processes divided into two groups:

- **Knowledge Building**
- **Knowledge Accumulating and using**

The figure also shows ways to obtain knowledge, including learning from personal experiences or relying on books and media, as well as ways to retain it either in knowledge base systems or in the minds of individuals.

4-2-16 Nonaka and baunard s model:

This model shows how knowledge is transferred from individuals to the group, as the transfer of knowledge and individual learning differs from group learning in terms of its methods and methodology, as well as in terms of the tools it relies on. Individual knowledge is different from collective knowledge.

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This model came to combine the individual and collective dimensions, which led to the emergence of eight methods for transferring knowledge:

-When explicit knowledge is transferred from an individual to a group, an EXTENSION of knowledge occurs.

-When explicit knowledge is transferred from a group to the individual, what is called APPROPRIATION occurs.

-When tacit knowledge is transferred from an individual to a group, SOCIALIZATION of knowledge occurs.

-When tacit knowledge is transferred from a group to the individual, INDIVIDUALISATION occurs.

-When implicit personal knowledge becomes explicit, the individual becomes aware of it and CONSCIENCE occurs.

-When explicit personal knowledge becomes implicit within the same individual, ASSIMILATION of knowledge occurs.

-When implicit collective knowledge becomes explicit, what is called ARTICULATION occurs.

-When explicit collective knowledge becomes implicit, INTERIORISATION occurs. (Baumard, 2002).

4-2-17: Von Krogh & Roos Model

The Von Krogh & Roos Model distinguishes between individual knowledge and social knowledge, by analyzing the following features:

- Why and how does knowledge reach the organization?
- Why and how does knowledge reach the organization's users?
- What does knowledge mean to users and the organization?
- What are the obstacles to organizational knowledge management?

According to the model, the cognitive system, whether human or artificial, creates representations and models of reality, and the learning process emerges when these representations and models are processed in some way.

According to this model, knowledge exists both in people's minds and in the connections between them. That is, it is a cognitive theory that views organizational

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knowledge as a system with self-organizing characteristics, where individuals are characterized by transparency and clarity. It considers information that comes from the outside through sensations and uses it to create mental models. (Von Krogh, Nonaka, 2000)

4-2-18 Nonaka & Hedlunds model

Nonaka & Hedlund (1993) argue that the characteristics of knowledge management can have serious consequences for different types of activities such as creativity and strategies, and this can affect the success or failure of organizations.

So; It suggests that the essence of the survival and success of organizations can depend on how they create, analyze, and exploit their knowledge sources

Therefore, a more detailed version of Nonaka's simple model was developed by describing four levels of knowledge providers and agents in organizations. These four levels assume that knowledge is classified into individual, group, organizational, and inter-organizational levels. (Haslinda&Sarinah, 2009)

Table. 05: Nonaka & Hedlunds model

	Individual	Group	Organization	Inter-organizational
Explicit knowledge	Knowledge of calculations	Documented analysis of the department's performance	Organization chart	Documented practices atents
Implicit knowledge	Common culture Negotiating skills	Coordinate the team in complex work	Organization's culture	Customer behaviors and expectations of products.

Source: Haslinda & Sarinah, A Review of Knowledge Management Models, 2009p. 190.

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4-2-19 Frid's model:

According to Frid's knowledge management framework, the levels of assessment of knowledge management maturity and knowledge management application can be divided into five levels:

- **First Level; Mixed (chaotic) knowledge:**

It is suggested that organizations at this level are in the process of understanding and applying KM which includes KM vision - KM objectives - KM indicators as well as performing KM maturity assessment.

- **Second Level; Perceived knowledge:**

It is suggested that organizations at this level are a step above their counterpart in chaotic knowledge, as at this level they focus on developing a knowledge management roadmap.

- **Third level; Knowledge concentration:**

It indicates that organizations must cover the consolidation of features at the lower two levels and begin to focus on new activities. Organizations at this level must enhance knowledge management by:

- ✓ process engineering;
- ✓ Supporting the initial knowledge management infrastructure,
- ✓ Services and training;
- ✓ Supporting early adopters and the knowledge community;
- ✓ Monitor and report on administrative indicators;
- ✓ Including knowledge management within budgets.

- **Fourth level; knowledge management:**

Adopting the core activities suggested at the first, second, and third levels, organizations should try to include knowledge management in performance reviews, and also in individual business plans.

- **Fifth level; Central knowledge:**

Since the last level is the highest of all levels of knowledge management maturity and application based on the Frid model, the distinct activities that organizations should focus on are establishing successful initiatives and evaluating knowledge assets. These activities distinguish knowledge from other levels. (Haslinda & Sarinah, 2009)

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4-2-20 Boisot's Model:

This model is based on the key concept of “information goods” which are distinct from a physical asset. It distinguishes information from data by emphasizing that information is what the observer will extract from the data as a function of his expectations or prior knowledge.

Therefore, the efficient movement of information goods depends largely on senders and receivers who share the same coding and language. Effective knowledge sharing requires that senders and recipients share a domain, as well as schema encoding.

Boisot suggested the following two basic points:

- The more easily data can be structured and transformed into information, the more widespread it becomes.
- The least structured data requires a shared domain to spread and become the most widespread.

The previous two points form a simple conceptual framework for the information space model KM Space. I, where data is structured and understood through coding and abstraction processes. The Boisot model discusses the problem of the implicit form of knowledge, since in many cases, the content of knowledge can be lost due to its encoding.

This content requires a common domain to interpret and indicates face-to-face interaction and spatial proximity similar to social interaction in Takeuchi & Nonaka's model. The Space I model can be visualized as a 3D cube with the following dimensions:

1 coded - uncoded;

2 summarized - coherent;

3 widespread - not widespread

Boisot's model represents a theoretical basis for social learning and is useful in linking together the management of knowledge, information, and content in a more effective way in an approximate manner.

The coding dimension is related to the classification and tabulation dimension;

The summation dimension relates to creating knowledge through analysis and understanding;

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The publication dimension is related to the transfer dimension and circulation of information. (Cristea&Capatina, 2009)

4-2-21 Choo model:

The Choo model focuses on how informational elements are selected and presented in an organization's business (activities). These activities result from concentrating and absorbing information that comes from the external environment in each session.

During the identification phase, the priorities that are used to filter information will be known. At the individual level, shared interpretations will be built from the exchange of pieces of information integrated with previous experiences. Weick proposed a theory in which he distinguished four processes described by Choo's model.

- Changing the organization's external environment.
- having the ability to interrupt the information flowing between participants.
- Adaptation.
- Selection and preservation are when individuals try to interpret what has been observed.

This process requires creating an organizational memory that collects these experiences for reuse, which leads to the unification and cohesion of the organizational vision. (Cristea&Capatina, 2009)

4-2-22 Zander & Kogut s Model:

This model is based on emphasizing the strategic importance of knowledge as a source of competitive advantage and on the idea that what an organization does is to create and transform knowledge within it.

Knowledge, which includes information and skill, is not only carried by individuals but is also regularly embodied through which members of a social group cooperate.

Organizations as social groups function as a “repository” of capabilities defined by social knowledge embedded in enduring individual relationships and structured by organizing principles.

Principles of organization refer to the knowledge of the organization that establishes room for conversation and coordination among individuals with disparate experience,

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and that the organization multiplies over time, creating consensus for changing expectations and defining its members.

The results of testing this model concluded that:

- Companies are efficient through the way they create and transform knowledge.
- Shared understanding is developed by individuals and groups in an organization through repeated interaction to transform knowledge from ideas into products and markets.
- The boundaries of an organization are determined by the difference in knowledge and capabilities involved between those who create the knowledge and those who use it.
- Individuals have introverted sociability, meaning they have the desire to become a member of the group, and at the same time they have the desire to maintain their privacy. (Haslinda & Sarinah, 2009)

4-2-23 Sutton & Pfeffer s model:

This model reflects eight steps necessary to transform the knowledge generated by the organization into application:

- **Know the reason before the method:** Organizations must define their philosophy and know the reason for following and understanding it before learning how to use methods, applications, and behaviors.
- **Knowledge is realized at work and accumulated by teaching others how to do it,** as repetition of work, experience, interaction with workers, and observation are among the most important means of generating and exchanging knowledge.
- **The importance of implementation compared to what is planned:** Implementation is more important than theoretical plans because through it the organization learns about the chances of success of its new ideas.
- **Accepting mistakes:** Preparing the Organization and its management to accept the idea of failure without reprimanding the person who came up with the failed idea, and thus motivating individuals to take the initiative to put forward new ideas without hesitation for fear of failure.

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- **Removing fear:** It leads to not displaying knowledge because fear leads knowledge makers to keep their ideas and not take the initiative with new knowledge.
- **Beware of false analogies and spread the spirit of cooperation and participation instead of competition between individuals.** Converting the knowledge generated by the Organization into practice is easier for Organizations that eliminate internal competition among its members.
- **Measuring the important aspects through which assistance can be achieved in transforming knowledge into reality,** as determining the appropriate measure for each stage of implementing the knowledge management program is sufficient to ensure success in reaching the goal.
- **Defining the work of leaders, how they perform their work, and how they allocate resources and address problems:** The daily administrative systems and practices that spread knowledge culture and the methods of transferring and participating in it are more important than bringing in individuals with high knowledge, and leaders must establish systems for applying knowledge management that allow knowledge to be transformed into applied work and translated into tangible reality. (Pfeffer& Sutton, 1999)

4-3 Knowledge management processes:

Knowledge management processes refer to a group of main operations and integrated activities that must be carried out, (Ode& Ayavoo, 2020) which, although they differ according to the nature of the organization's work, are crucial and necessary for the success of any knowledge management system, as they work sequentially and complementarily with each other; Where each process depends on and supports the other at the same time; We can explain the knowledge management processes as follows:

4-3-1 Knowledge Creation:

The process of creating or generating knowledge is considered the most essential knowledge management process, as it includes (knowledge capture, knowledge purchase, knowledge discovery, knowledge innovation, knowledge absorption, and knowledge acquisition).

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All knowledge is considered implicit in the minds of individuals, so even explicit knowledge in organizations is originally tacit knowledge of members unless it is successfully encoded and converted into explicit knowledge; Therefore, the creation of knowledge is to come up with new knowledge at the level of the individual and the organization, and this may be either in an informal way through the interaction of employees outside work among themselves or with others, in a formal way through the activities carried out by the organization to achieve effective generation and acquisition of knowledge, or transform what it has of tacit knowledge to explicit knowledge; Among these activities:

- Manage informal meetings to help relieve tension arising from formal relationships between managers and subordinates.
- The use of functional analogy and storytelling to explain and interpret conceptual matters.
- Translating the tacit knowledge that has been explained, by linking it to the reward system.
- Introducing systems of rewards and compensation in the skills assessment process, to encourage individuals to convert the tacit knowledge they possess into declared knowledge. (Uriarter, 2008)

4-3-2 knowledge Storage:

Knowledge storage includes all activities that ensure the preservation of knowledge and allow it to remain in systems, perpetuate it, update it, and easily retrieve it when it is needed.

The storage and preservation process is for explicit knowledge and not for tacit knowledge, because tacit knowledge is preserved in the mind of its owner, and the importance of storing knowledge emphasizes the importance of organizational memory that contains knowledge in the organization in various forms, including documents and information stored in electronic databases and human knowledge stored in expert systems, as well as knowledge manifested in procedures and documented organizational processes.

Information technology plays an important role in the accumulation of organizational knowledge, and the resulting expansion of organizational memory, which is

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considered a repository in which knowledge is stored for future use, and we can classify it into two types, internal and external.

Internal memory: includes expert systems, databases, and registers, as well as the culture of the organization.

External memory: It is the database located in the external archives of the organization. (Warren, 2000)

4-3-3 Knowledge transfer and sharing:

We mentioned earlier that knowledge is increased by the use, participation, and exchange of experiences, and knowledge sharing is considered one of the most important and most difficult knowledge management processes because it aims to deal with individuals who possess the knowledge and encourage them to disclose it, and put it in media that benefit the organization before they leave it; Where knowledge is distributed to users to ensure its access to organizational centers through direct and indirect means of communication, learning, and training, which requires the creation of a culture that encourages the sharing of knowledge and the provision of an appropriate climate and an appropriate organizational structure (Han & al, 2016) . In addition to adopting a system of incentives that encourages it, the amount of transferred knowledge remains dependent on the ability of the holder of knowledge and the recipient of it. (Audreg, 2001)

4-3-4 Knowledge Application:

Benefiting from knowledge is through its use and employment to benefit from it in producing new products and services that give the organization its competitive advantage, and expresses the success of transforming knowledge into operational processes that directly contribute to individual and organizational performance through improving decision-making. (Martensson, 2000)

4-3-5 knowledge Organizing:

The application of knowledge requires that the latter be organized through classification, indexing, and tabulation in an appropriate way that enables easy retrieval and access to it in the shortest time, in addition to making it usable by deleting the inconsistent parts and introducing the appropriate new ones.

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The process of organizing knowledge takes place by organizing data and information into arranged groups called knowledge maps and usually includes texts, some storytelling, graphics, models, and figures. (Liebowitz, 2011)

4-3-6 Knowledge retrieval:

It is the process that aims to easily and quickly access knowledge, to apply it in solving work problems or in improving daily activities. (Gamble & Blackwell, 2001) (Botha et al, 2008). The following table represents a summary of the basic and subsidiary processes of knowledge management:

Table. 06: Knowledge Management Process

Author	Main Processes	Subprocesses
Laudon&Laudon2002	Knowledge acquisition and coding	Obtaining knowledge from internal and external sources Coding knowledge in an appropriate way
	Knowledge creation	Reaching new knowledge
	Knowledge sharing	Making knowledge available for sharing Group sharing systems
	Knowledge transfer and distribution	Make knowledge easily accessible through storage and dissemination
mark	Define knowledge	Organizational routines and contracts Knowledge relevant to the organization's work
	Knowledge acquisition	Acquiring and documenting knowledge Make it available to everyone
	Knowledge generation	New knowledge for research and development New knowledge about the customer

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	Knowledge verifying	Knowledge ownership rights Exploitability of knowledge
	Disseminating explicit and tacit knowledge	Transfer of knowledge and practices
	Knowledge renewal	Transforming knowledge into value Training Organizational culture
	Knowledge achieving	Awareness of knowledge origins Achieving added value for the organization and customers.
	Knowledge application and exploitation	Achieving specific goals Using knowledge in dialogues
-		
Darroch and McNaughton, 2003	Knowledge acquisition	Converting new knowledge into value Bring external knowledge to the organization
	Knowledge sharing	A convenient format of knowledge that is easy to obtain Making knowledge available to everyone, anytime and anywhere
	Knowledge response	Using knowledge in dialogues
-		
Alavi 1997	Knowledge providing	Providing new knowledge practices
	Knowledge organization	Putting knowledge in an appropriate format
	Knowledge storing and retrieving	Putting knowledge in an appropriate format Store knowledge for easy access

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	Knowledge distribution	Make knowledge easily accessible through storage and dissemination
	Knowledge disposal	Getting rid of useless knowledge, and unusable documents
-		
Marquardt 2002	Knowledge acquisition	Converting new knowledge into value Bring external knowledge to the Organization
	Knowledge generation	New knowledge for research and development New knowledge about the customer
	Knowledge storing	Putting knowledge in an appropriate format Store knowledge for easy access Encoding knowledge to preserve it Evaluating knowledge to make it relevant
	Knowledge extraction and analysis	Knowledge ownership rights Exploitability of knowledge
	Knowledge transfer and dissemination	A convenient format of knowledge that is easy to obtain Making knowledge available to everyone, anytime and anywhere
	Knowledge application and validation	Achieving specific goals Using knowledge in dialogues
-		
	Diagnosis of knowledge and setting objectives	Organizational routines and contracts Knowledge relevant to the organization's work Acquiring and documenting knowledge

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Heisig and vorbeck 2000	Knowledge generation	New knowledge for research and development New knowledge about the customer
	Knowledge storing	Putting knowledge in an appropriate format Store knowledge for easy access
	Knowledge dissemination	Make knowledge easily accessible through storage and dissemination
	Knowledge application	Achieving specific goals Using knowledge in dialogues
-		
D. skyrme 2001	Knowledge creation	Generating new ways of working Developing technical know-how
	Knowledge acquisition	Converting new knowledge into value Bring external knowledge to the organization
	Knowledgecollecting and acquiring	Organizational routines and contracts Knowledge relevant to the organization's work Acquiring and documentingknowledge Make it available to everyone
	Knowledge organization	Putting knowledge in an appropriate format
	Knowledge sharing	A convenient format of knowledge that is easy to obtain Making knowledge available to everyone, anytime and anywhere
	Learning	Accepting new knowledge from Colleagues
	Knowledge application	Achieving specific goals

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		Using knowledge in dialogues
	Knowledge exploitation	Achieving specific goals
	Knowledge protection	Encoding knowledge to preserve it
	Knowledge evaluation	Encoding knowledge to preserve it Evaluating knowledge to make it relevant
-		
Hllupic 2002	Knowledge generation	New knowledge for research and development New knowledge about the customer
	Knowledge coding	Coding knowledge in an appropriate way
	Knowledge transfer	A convenient format of knowledge that is easy to obtain Making knowledge available to everyone, anytime and anywhere
-		
Bothiller and shearer 2004	Knowledge diagnosis	Organizational routines and contracts
	Knowledge discovery	Knowledge relevant to the organization's work Acquiring and documenting knowledge
	Knowledge acquisition	Converting new knowledge into value
	Knowledge generation	New knowledge for research and development New knowledge about the customer
	Knowledgestoring and organizing	Putting knowledge in an appropriate format Store knowledge for easy access Encoding knowledge to preserve it

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		Evaluating knowledge to make it relevant
	Knowledgeapplication	Achieving specific goals Using knowledge in dialogues
-		

Source: The Researcher Based On:

- **Dezso Szakaly, Knowledge Management Strategies, 2002.**
- **Renald Young, Knowledge Management Tools And Techniques, 2010.**

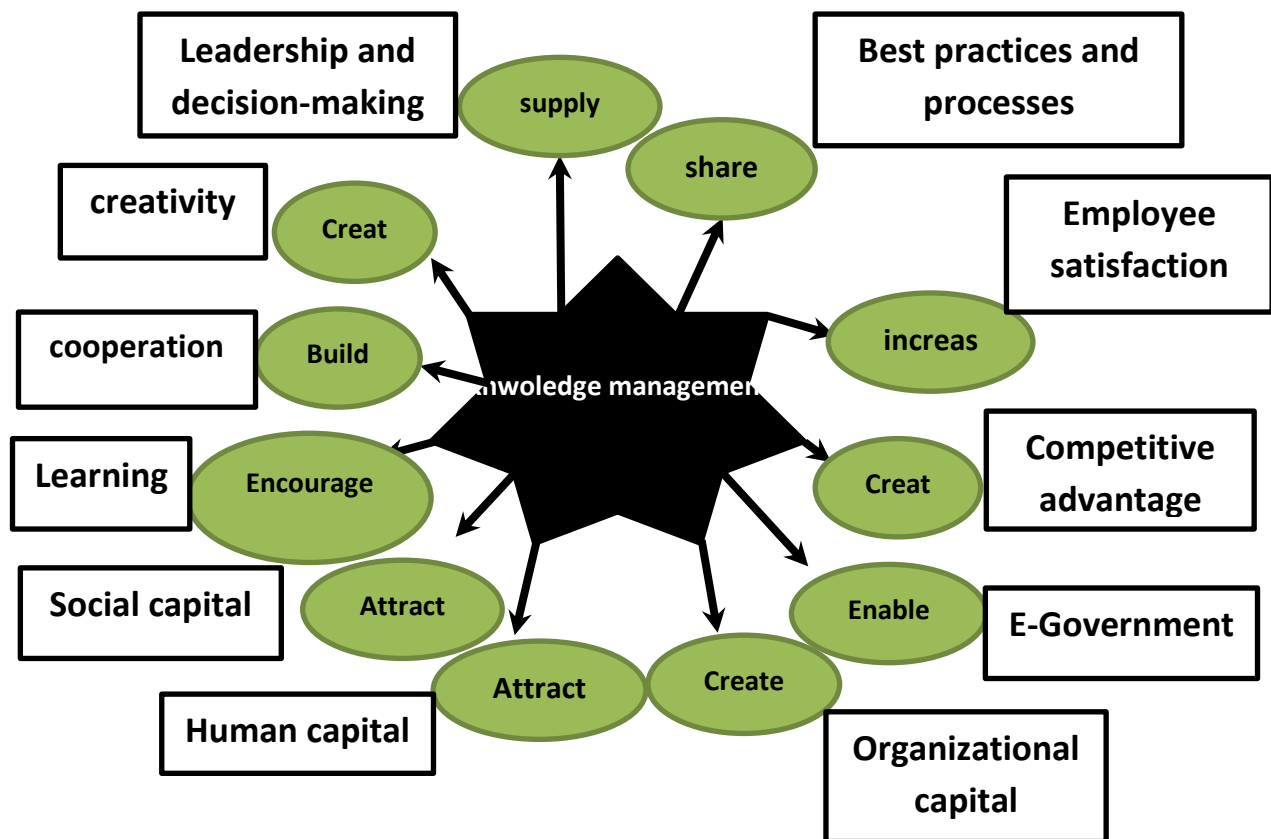
4-4 Knowledge management benefits:

Good management of knowledge, both implicit and explicit, leads to positive results at the individual, collective, and organizational levels, such as improving employee performance and making good decisions, and improving the administrative process by directly reducing training and its costs, because knowledge becomes available to everyone (Zammit& al, 2017) .

The benefits of knowledge management appear both at the level of quantitative performance results such as saving costs, increasing profit margins, and maximizing market share, or qualitative results such as increasing employee loyalty, empowering them, stimulating their desire for innovation and creativity, and better management of their ideas (Obeso&, al, 2020) . All this and more can be summarized in the following figure:

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Figure 19 : Importance of knowledge management



Source: Robert E . Neilson, Knowledge Management and the Role of the CKO, 2013

5- Organizational knowledge transfer and sharing:

5-1 Definition:

Despite the simplicity of knowledge transfer, the transfer of organizational knowledge is not as easy, because most organizations do not know what knowledge they possess, in addition to what they suffer from internal factors that impede the transfer of knowledge in its various forms between their sites and employees. (Yamao, Fenwick, 2006)

The diversity of the field of previous studies concerned with the concept of organizational knowledge transfer showed multiple viewpoints and formulas for it, perhaps the simplest of which is the transfer of knowledge through sharing it among employees, in the sense of taking and giving framed information within the environment of the participants. (Bou-Llusar & Cipe, 2006)

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Thus, it can be defined as the process by which explicit or tacit knowledge is transmitted to other individuals through communications that take place between them; It can also be considered as the search for knowledge in its locations in the organization, so that individuals share it through its storage media, so that the recipients obtain it and benefit from it. (Li, 2007) (Lei& al, 2019)

Knowledge sharing can also be defined as the process of perceiving different interpretations based on knowledge, in which receivers acquire the ability to perform multiple actions. (Berryman, 2005) (Yi, 2009)

Thus, we can say that knowledge sharing is when an individual possesses it and has the desire to share it by exchanging it using communication or social aspects that facilitate interaction between the members of the organization, allowing for the benefit of existing knowledge and the creation of new knowledge. (Nonaka&Toyama, 2002)

The researchers distinguished between the transfer of knowledge that takes place in an informal, automatic manner and that which takes place through formal routine procedures, as the transfer of knowledge is a linking process, not a collection, and depends on the desire of the individual, whether the donor or the receiver (Nguyen& Tran, 2019); Hence, two activities can be highlighted on which the knowledge sharing process depends: (Wijk, 2008)

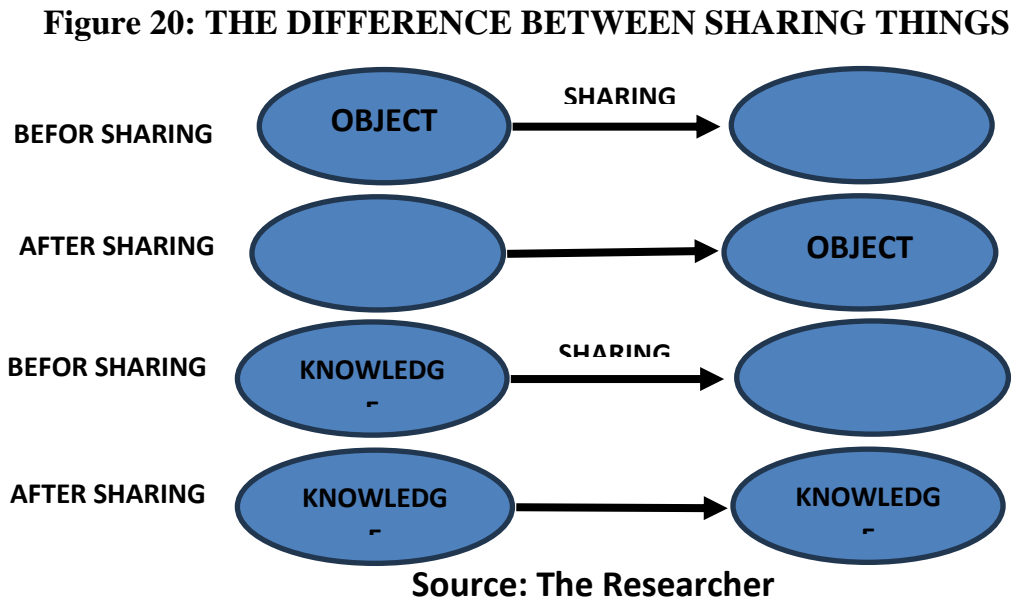
- Granting knowledge and the ability of the recipient of knowledge to absorb and retain it.
- Absorption of knowledge by the receiver and its success in changing his behavior.

Among the obstacles to sharing knowledge is the difference in mentalities and psychological and perceptual characteristics between the sender and the receiver, which creates an imbalance in the conformity of the knowledge received from the receiver with that, sent by the sender. (Yang, 2007)

Based on the aforementioned, a comprehensive definition of knowledge transfer can be deduced as the delivery of appropriate knowledge to the right person at the right time, allowing for full benefit from it, whether in terms of changing behaviors or

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improving performance. (Berryman, 2005). The following figure explains the difference between sharing things and sharing knowledge:



5-2 Types of organizational knowledge transfer: (Aissam, 2010)

The types of knowledge transfer differ according to the desired purpose of the process, we mention among them:

5-2-1 Sequential transfer: It is the transfer of knowledge by the same team that transfers its expertise from one site to another, as it performs the same tasks through the same experiences with a difference and changes in the place of activity. In other words, taking over tasks is due to the quality of knowledge that characterizes the same team, and this method informs us that it is a guarantee that costly mistakes will not occur or be repeated due to skill and mastery in completing the work.

5-2-2 Close transfer: It is the transfer of knowledge and its applications from the team that possesses it to another team that receives it, whether it is in the case of completing the same task and within the same framework, but in another place, and the knowledge transferred is with the same unified standards and specifications and it is an explicit knowledge.

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5-2-3 Remote transfer: This method relies on the transfer of tacit knowledge in the minds of a team of experts who move to help another team with less experience, and the receiving team tries to interpret the expert information through interactive relationships.

5-2-4 Strategic transfer: This type depends on a high degree of complexity due to the difference between the sending and receiving teams.

5-2-5 Expert transfer: This type refers to the transfer of tacit knowledge associated with repetitive tasks usually performed by one expert person, not a team.

The different types of knowledge transfer lead us to the necessity of testing an appropriate transfer technique. Among these technologies, we mention the following: (Chen&Mcqueen, 2010)

- **Selective copying:** according to which the receiver of knowledge selectively chooses the knowledge that is appropriate to his cognitive stock.
- **Adaptation:** It is a technique that requires a greater commitment from the receiver, so he must change or modify his knowledge stock following the new knowledge.

5-3 Organizational knowledge transfer models:

5-3-1 Communication model: It is a traditional model whose importance lies in the ease of determining the reason for the failure or impossibility of the knowledge transfer process, as through it the ineffective element in the knowledge sharing process can be observed, as the recipient of the information in it is the user because he is the one who acquires knowledge and benefits from it; While the message in this model is considered the subject because it is presented in the form of knowledge or information transmitted through the means of communication used. The following are the components of a contact form:

- Knowledge sender (source)
- Message (knowledge or information)
- The receiver of knowledge (its user and beneficiary)
- The channel (the medium that transmits knowledge)
- Feedback (reaction of The receiver of knowledge.)

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- The organizational framework in which knowledge sharing takes place. (Szulanski, 2000)

5-3-2 The spiral model SECI MODEL:

This model was developed by **NONAKA & TAKUCHI** who consider the creation of knowledge a continuous process that includes a continuous interaction between tacit knowledge and explicit knowledge within An interactive spiral movement accompanied by four transformational processes leading to the formation and creation of new knowledge (Oyemomi& al, 2016); These operations are as follows: (Rhodes, Hung, 2008)

- **Upbringing (from implicit to implicit):** Upbringing is the shift from tacit knowledge to another tacit knowledge, and it is the basis for creating the tacit side of knowledge through the process of creating and sharing knowledge; That is, during the interaction between working individuals or between employees and customers or suppliers through team work, coexistence and exchange of information, experiences, and feelings within the organization.
- **embodiment (from implicit to explicit):** embodiment refers to the encoding and expression of tacit knowledge that is generated because it is difficult to interpret and can only be transferred to benefit by translating it into forms that are understandable by others; That is, the process of embodiment is the conversion of tacit knowledge latent in the mind of individuals into explicit knowledge written or expressed in some form, and therefore we can say that embodiment is the self-transcendence of the individual to integrate with the group to encode and clarify the tacit knowledge.
- **Connection (from explicit to explicit):** It is the process of reconfiguring pre-existing explicit knowledge, to create new explicit knowledge; In other words, it is the process of converting explicit knowledge into another, deeper, and more complex explicit knowledge. This is done by perceiving and assimilating existing explicit knowledge and applying it through operational practices by individuals who add their touches of knowledge to

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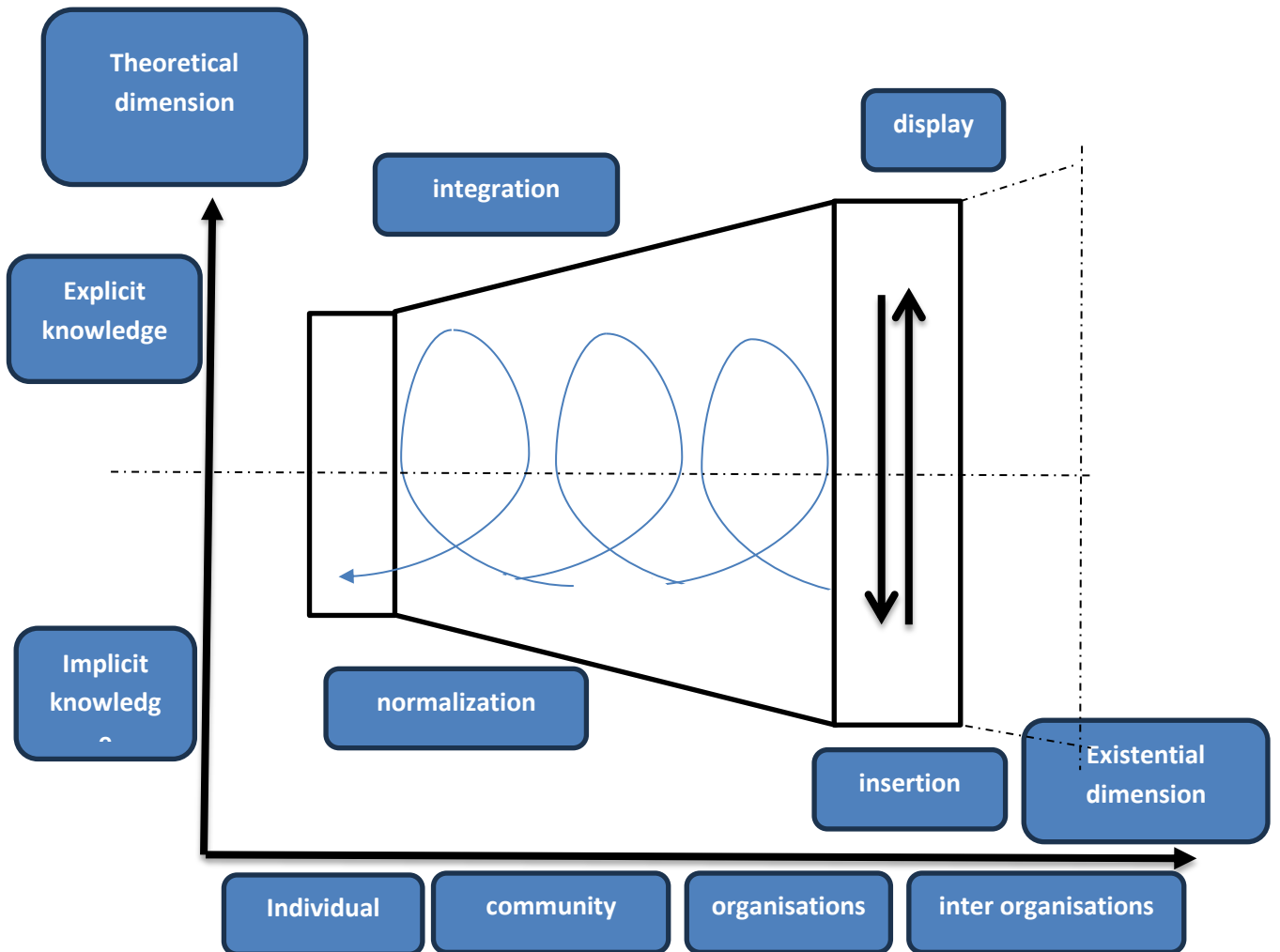
it to turn it into new, more valuable explicit knowledge; Among the practical tools: are interconnection, databases, the Internet, and intranets.

- **Dissolution (from explicit to implicit):** Through this process, explicit knowledge is introduced into the total tacit knowledge of the organization; That is, the organization's members acquire explicit knowledge of the practice and devise facts and ideas to be added to their knowledge stock, and thus this process is affected by the individual's beliefs and his ability to absorb and understand the knowledge, so it is stored in his mind implicitly different in form and value from the implicit knowledge formed in the mind of the other individual.

The following figure shows the spiral model of knowledge transfer:

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Figure 21 : Knowledge generation spiral



Source: Adachi Yoshimichi, An Examination of the SECI Model in Nonaka's Theory in terms of the TEAM Linguistic Framework, (2011)

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5-4 Forms of knowledge transfer: (Marquardt, 2002)

Knowledge is transferred within the organization either intentionally or unintentionally, and the difference between the two forms lies in the following:

5-4-1 The intended form: It is the process of sharing knowledge intentionally within the organization through pre-programmed individual communications, through written methods such as notes and reports, or through holding conferences and seminars, especially training programs, and the transfer and rotation of tasks among employees.

5-4-2 Unintentional form: It means the unintentional sharing of knowledge through any form of informal interaction between employees, through storytelling, past incidents, and group conversations.

It should be noted that each method of knowledge transfer is appropriate to a specific type of knowledge, as implicit, non-encoded knowledge is often transferred through dialogue and observational training; explicit knowledge can be disseminated through documents and organizational learning courses.

5-5 Obstacles to knowledge transfer: (Coakes, 2006)

The process of knowledge transfer encounters several obstacles that may be caused by either organizational related to the characteristics and status of the organization or individuals related to the extent of readiness or reluctance of individuals to share what they know with others; We mention among these obstacles:

- The absence of an encouraging and supportive environment allows employees to transfer their expertise to less experienced individuals.
- The Absence of a culture of sharing in the organization.
- The incentive system is not linked to what encourages the appreciation of the culture of sharing.
- The incentive system is not structured in a way that encourages and motivates individuals to transfer or receive new knowledge.
- The desire to keep knowledge, and the fear of sharing it, to preserve the material gains resulting from it.
- The fears of individuals who knew losing their authority and power resulted from the knowledge they possessed.

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- Individual and competitive characteristics of employees.
- Sharing useless knowledge or wrong knowledge that puts the organization at risk.

5-6 Terms of Organizational Knowledge Transfer: (Gupta & Govindara, 2000)

The transfer of knowledge to develop it and create new knowledge requires many conditions, including:

- Availability of an effective means of transferring knowledge without harming it or losing its value, and this means may be either a person or another means of communication (Wang & al, 2016) .
- If the method of transferring knowledge was a person; He must be fully aware of this knowledge, its aspects, and meanings, and be able to convey it.
- Appropriate incentives should be provided for the transfer of knowledge.
- Seek to remove the obstacles that hinder the knowledge transfer process.
- The readiness of the transmitter and receiver of knowledge and motivating both.

5-7 Benefits of knowledge transfer:

- The effective use of the acquired knowledge leads to achieving a competitive advantage for the individual and the organization (Podrug & al, 2017) .
- The transfer and sharing of knowledge among the members of the organization increases its knowledge capital, which allows for better practices.
- Rich tacit knowledge bases help better respond to environmental changes.
- The continuous transfer of knowledge helps in transferring useful solutions from one department to another within the organization, which increases the rate of cooperation and coordination between them (Wening & al, 2016) .
- The continuous flow of knowledge helps decision-makers to reach solutions more effectively. (Grant, 1996) (Athar & Maqbool, 2015)

5-8 Determinants of organizational knowledge transfer: (Grant, 1996)

In this part, we highlight the most influential factors in the transfer of knowledge, namely: information technology, organizational culture, organizational structure, incentive systems, and knowledge absorption capacity (causal ambiguity and result ambiguity); we explain these factors as follows:

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5-8-1 Information Technology: (Greiner&al, 2007)The huge amount of information and knowledge that organizations have become in possession of has led to an urgent need for electronic systems that allow them to access this information on time, which made it an integral part of knowledge management by facilitating its sharing.

Information technology is used to mitigate geographical and time constraints to better coordinate work activities. Information technology includes telephone and computer communication techniques such as e-mail, video conferencing, and expert systems.

5-8-1-1 The role of information technology in the success of knowledge transfer: (Steve, 2004)

The role of information technology in the success of the knowledge transfer process can be explained as follows:

- The pivotal role played by decision support systems and functional situation simulation systems in creating models, solutions, and alternatives to help make the best decisions.
- Accelerate the process of transferring and exchanging knowledge, reducing its costs, and increasing its volume thanks to communication techniques.
- Removing geographical and temporal obstacles and not having to be in a common location and at a common time, without harming the quality of the knowledge that was shared.

It should be noted that it is not possible to make maximum use of information technology except by fulfilling some conditions, including:

- The compatibility of the selected technology with what its user needs.
- Ease of dealing with the selected technology and controlling the process of providing it with inputs and absorbing its outputs.
- The compatibility of information technology with the characteristics of the target organization, whether large or small.

5-8-2 Organizational culture: Organizational culture is defined as a set of values, standards, principles, meanings, practices, and beliefs shared by individuals in the organization, which lead and direct the action and thinking of people in the organization (Han& al, 2016) . It reflects the visible and invisible aspects of the

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organization that can be observed at all levels of the organization; And benefit from it as follows:

- Unifying concepts, coordinating efforts, and standardizing performance. (Wening& al, 2016)
- Enabling employees to have a collective identity and circulating it to all members, creates common habits and values that are perceived by them.
- Enhancing the stability of the collective system through cooperation, integration, and compatibility among the members of the organization.
- Instilling a spirit of collective commitment, strengthening communications, and unifying the goal. (Ngoc, 2008)

5-8-2-1 Elements of organizational culture: (Chang, 2007)

Different definitions of organizational culture lead us to identify a set of elements and components, including:

- Organizational values that represent the agreements of the members of the same organization about what is desirable and what is not desirable, and what is important and what is not important, which leads to guiding the behavior of employees within the different organizational circumstances.
- Organizational beliefs that express common ideas about the nature of work and how to accomplish it.
- Organizational norms and habits, which are a group of agreed-upon importance that must be adhered to.
- The organizational expectations that the individual expects from his organization, and the organization expects from its members during the term of the work contract.

5-8-2-3 The role of organizational culture in the success of knowledge transfer: (Allameh, 2011)

Organizational culture is a source of knowledge-sharing processes because it defines the concept of important and useful knowledge that must be focused on sharing and disseminating at the level of the organization. The organizational culture is the basis of social interaction leading to the interaction and renewal of knowledge.

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The following are some of the contributions of organizational culture to the process of transferring and sharing knowledge:

- The culture of the organization mediates the relationship between individual knowledge and organizational knowledge because it determines the knowledge of the individual that is useful to his organization, and it encourages him to circulate it and share it with others.
- The organization's culture that encourages the exploitation of information enhances the employees' quest to acquire and search for knowledge that contributes to making new decisions.
- The existence of a culture of communication between employees affects the smooth flow of knowledge and the diversity of channels for sharing information.
- Organizational culture is responsible for clarifying the norms and desirable behaviors to support knowledge-sharing processes.

5-8-3 Organizational Structure: (Mullins, 2016)

The organizational structure constitutes the official lines that clarify the relations and authorities within the organization and defines aspects of the activities and official relations between the organizational units and the lines of communication.

5-8-3-1 Dimensions of the organizational structure:

A - complexity:

There are 3 defining elements of the complexity of an organizational structure:

- **Horizontal division:** It expresses all functions, specializations, and administrative units that the more numerous and diversified, the higher the degree of complexity of the organizational structure.
- **Vertical division:** The complexity of the organizational structure increases with the number of organizational levels.
- **Geographical division:** The complexity of the organizational structure increases with the widening of the geographical extent and the spread of the regions belonging to the organization.

B - Centralization:

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Refers to the extent to which the decision-making authority in the organization is concentrated in a specific direction; The high centralization of the organization reflects a low level of employee participation in decision-making.

C - Official:

It is the degree of the organization's reliance on laws, regulations, rules, instructions, and procedures in directing and controlling the individual's behavior and actions while carrying out his work activities. In the sense that there is an inverse relationship between formality and flexibility and the scope of individuals who can make decisions.

5-8-3-2 Types of organizational structures: (Chang, 2011)

Business organizations know two types of organizational structures:

- **Formal organizational structures:** define business, activities, functional relationships, authority, and responsibility.
- **Informal organizational structures:** various patterns of social relations arising between employees to satisfy their psychological and social needs.

The role of the organizational structure in the success of knowledge transfer:

Organizational structures play a pivotal role in the success of the process of transferring knowledge and sharing it among employees, as organizations whose organizational structure knows a greater degree of complexity fall under the inevitability of developing a knowledge flow program commensurate with what determines the degree of this complexity; Organizations that know a great diversity in their administrative units and professional specializations, or a large spread in their geographical area, must use techniques and means to ensure the opening of channels between these units despite their geographical distance.

In addition to the degree of complexity, the degree of centralization and formality plays an important role in the effectiveness of sharing knowledge between employees. Exaggerated formality limits the ability and desire of the individual to share what he knows, or to seek to acquire new knowledge because he is not concerned with using it in the decision-making process.

5-8-4 incentive systems: (Bau & Dowling, 2007)

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It is the set of tools used to direct the interests of individuals towards common organizational goals because incentives are the driving forces that direct the behavior of individuals; The most important types of incentives are:

- **Individual incentives:** They are directed to the individual to improve his performance and productivity, which would stimulate positive competition between individuals, which could negatively affect team spirit.
- **Collective incentives:** These are the incentives that aim to encourage cooperative behaviors, team spirit, and focus on the main goals of work.
- **Material incentives:** manifested in salaries, bonuses, and performance-related wages.
- **Moral incentives:** It is the recognition of the efforts and sacrifices that the employee has achieved in his profession in order to encourage him to continue developing and achieving more. It also represents the involvement of workers in the decision-making process and setting goals.

5-8-4-1 The role of incentive systems in the success of knowledge transfer:

Due to the impact of material and moral incentives on the behavior of employees, directly or indirectly, placing them in a system that interacts with the activities of the individual in acquiring useful knowledge for the organization or sharing the knowledge that the individual has to help improve the performance of his colleagues necessarily leads to stimulation and activation of information exchange and Increasing the individual's desire to share what he knows with his colleagues and team members. (Bau & Dawling, 2007)

5-8-5 knowledge absorption capacity: (Cohen & Levinthal, 1990)

The ability to absorb knowledge is an important determinant of the transfer of organizational knowledge because it represents a positive factor that helps pay attention to and absorb the transferred knowledge.

The associations that are successful in transferring knowledge among their employees are the organizations that have a high degree of ability to absorb and assimilate external and internal knowledge; Hence, achieving additional value from using them and deriving new knowledge from them.

5-8-5-1 Characteristics of the ability to absorb knowledge: (Colin, 2006)

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- Affected by the volume of expenditures allocated to scientific research, continuous development, intensifying learning processes, and focusing on dimensions and innovation.
- Positive connection with the external environment, represented in government policies and industrial relations.
- Reliance on the organization's stock of internal knowledge, which includes human capital and technology.
- Link to the organizational strategies of the organization.

Conclusion

Through this chapter, the concept of knowledge was exposed, as it is the combination of learning and accumulated experience that depends on human values and perception, and its importance is evident in it being a basic resource of the organization and a source of competitive advantage, as its classifications and sources have varied, some of which stem from the organization and some of which are in the environment surrounding it.

The researcher also tried to clarify the strategic importance of knowledge, which is related to human thought through understanding complex facts and phenomena that contain analysis, deduction, and deduction, from which experience and wisdom are formed. Here, intelligence plays a fundamental role in generating and inventing new knowledge.

It has also been shown that knowledge is of two types: implicit knowledge in the minds of individuals that is difficult to share and imitate. It is composed of two dimensions: a cognitive dimension that includes beliefs, opinions, ideals, values, and emotions, and a technical dimension that includes skill, experience, and the ability to create. The researcher believes that the cognitive dimension is easy to deal with and share with others.

As for the technical dimension, which is the most important for the organization, it is the one that represents the real challenge to share with others, and the explicit knowledge that is encoded and available to others, and this knowledge is easy to share and can be imitated by competitors unless it is protected by laws.

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The researcher also presented several models and processes of knowledge management in an attempt to understand and define its activities and consider it the key through which the optimal use and investment of that knowledge can be achieved to collect and build knowledge assets that help it achieve its goals. However, some factors affect its development and these factors may be internal or external. .

Our review of the theoretical literature related to knowledge management allowed us to address the following elements.

1- Determine the goal of knowledge management, as it is necessary for the knowledge management strategy to be linked to the goal that the organization seeks to achieve, the purpose for which a knowledge management strategy is adopted, and the expected benefits that the organization can gain from knowledge management and the extent of its impact on the performance of employees.

The main task of knowledge management is how to translate and encode it. Since knowledge is widely tacit and owned by individuals, the basic task is how to transform tacit knowledge into explicit knowledge that is easy to manage and control effectively.

This conversion process has become easier now due to the rapid development of information technology.

2-The knowledge management system is essentially based on communication between individuals and each other and between them and the organization, and this communication and interaction can only take place in an environment that has a technological and communication structure that facilitates the flow of that communication and interaction.

The use of information technology in knowledge management programs would also improve the ability of workers to communicate with each other due to the absence of barriers related to constraints of place, time, and job level, and would allow more flexibility in dealing with information and data, due to the presence of databases and the possibility of operating them remotely and in any place, since they are available to all individuals and not Monopolized by certain people.

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3 - Knowledge management depends on humans and emphasizes the importance of the human element in implementing the knowledge management strategy. The human element is not viewed as individuals only but as individuals working within the framework of sub-groups organized within the framework of a total group that is the organization. This highlights the importance of the prevailing organizational culture, whether at the level of the organization as a whole or in the form of sub-cultures within the organization, as it is difficult to cross Cultural barriers, especially among those who prefer to keep the knowledge to themselves rather than share it with others, are explained in the competition between employees and whether it is explicit and obvious or hidde.

Chapter 02
Conceptual
framework of
organizational
memory

Chapter 02: Conceptual framework of organizational memory

Introduction

Improving the performance of employees in organizations was and still is a complex problem in light of the advancement of technologies and changing markets. For performance to develop, the organization must pay attention to analyzing and benefiting from its cognitive component due to good knowledge management.

The role that knowledge plays in its processes and practices achieves wonderful results in the individual and organizational context, as performance is improved, work is enriched, and productivity is enhanced. This can only be achieved for the organization by building special rules in which the organization's various knowledge and experiences are stored, or what is known as "organizational memory".

However, the organization's preservation of its knowledge does not guarantee that it will maintain its position in the market. Therefore, it had to generate new knowledge to avoid obsolescence, in addition to ensuring easy access to it, sharing it, and circulating it to its employees to apply it and use it on time, solve problems, and support better decision-making processes (Anselmann& Mulder, 2018) .

Therefore, the presence of advanced organizational information storage media that supports the structuring, reuse, and processing of organizational knowledge is a success factor in achieving the organization's goals, because the organization does not have a mind, but it has cognitive systems and memories (Muskat& Deery, 2017) .

Therefore, to attain and maintain organizational effectiveness and competitiveness, an organization needs to learn from past and present experiences and lessons learned and formalize organizational memories to enable the elaboration of the individual's tacit knowledge and the society's tacit knowledge as well.

1- The concept of organizational memory:

The subject of organizational memory has been of great interest to researchers with different specializations, which made it difficult to give an integrated and unified concept of what the term "organizational memory" means, as different points of view were given according to the different topic that it was associated with such as information technology, organizational knowledge, organizational learning, and the

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most important of these Opinions about the concept of organizational memory, we can list: (Sevelinger, 2000)

- It is the store of the organization's knowledge for future use. (Selinger, 2000) (Jasimuddin, 2006)
- It is a form of stored information about an organization's history that can be retrieved to support current decisions. (Walsh & Ungson, 1991)
- It is an information system based on recording knowledge to make it useful for people and projects. (Ficher, 1999)
- It is learning from the stock of the history of the organization to exploit it for the benefit of individuals and work teams. (Laudon & laudon, 2004)
- It is the unlimited storage, retrieval, and distribution of organizational knowledge. (Stijn & Wensley, 2001)
- It is a mechanism that enables the continuous storage and digital processing of organizational knowledge. (Vasconcelos, 2002)

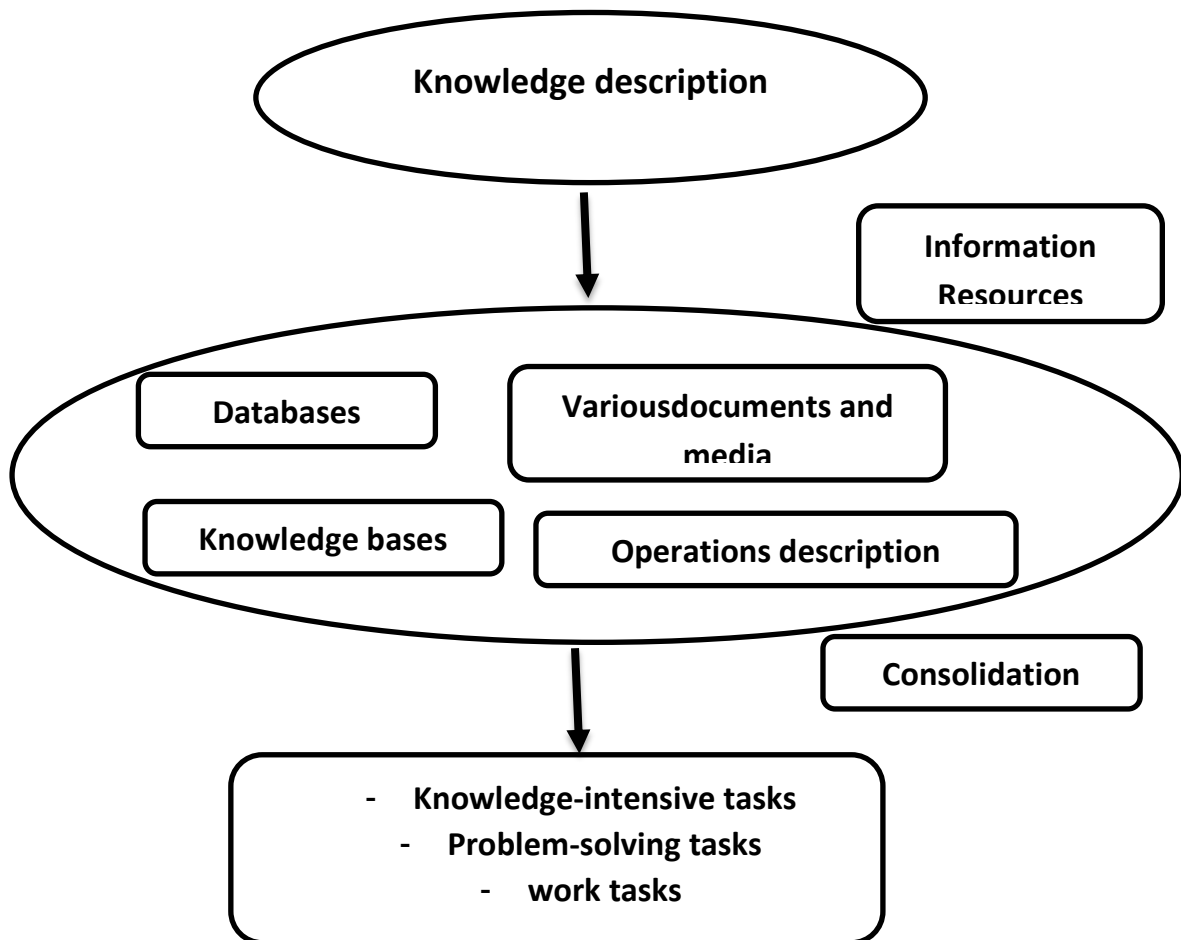
Others believe that the issue of organizational memory is one of the vital issues that sustain knowledge in the organization, given that it leads to: (Conklin, 2007)

- Avoid costly accidents and repeat the same problems.
- Providing the appropriate knowledge to decision-makers.
- Preserving important knowledge, and isolating it from old knowledge is harmful to the organization.
- Constantly discovering and generating knowledge.

And all this is based on the search and retrieval mechanism that supports the following two processes: (Vasconcelos, 2002)

- **Discovering knowledge:** It is concerned with and researches the creation of knowledge and its location, whether from within or outside the organization.
- **Exploitation of knowledge:** This helps the organization define, understand, distribute, and apply existing knowledge.

Figure22: Organizational Memory



SOURCE : Vasconcelos jose & Gouveie, Feliz& Kimble . Chris . 2002 . An Organizational Memory Information System Using Ontologies . 2002 . P . 9 .

1-1 Definition of Organizational Memory:

The term organizational memory is characterized by a great complexity because it is related to other terms such as organizational knowledge, information technology, and organizational learning, especially since most research has dealt with these concepts independently of each other but with very similar definitions, and also because they require storage and retrieval of organizational knowledge, which creates a two-way relationship Between organizational memory and knowledge management. (Ackerman&Halverson, 2004)

BOTREF believes that the definition of organizational memory is based on the distinction between the types of knowledge that are present and targeted, whether they

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are competencies (how to take responsibility and make decisions); or practical knowledge (how to carry out the activities); or empirical knowledge (experimental gains); or procedural knowledge (current and customary procedures); Theoretical knowledge (concepts and schemes). (Ben Hamadi, 2012)

As defined by ARGYRIS, it is a set of standards and operational procedures.

Walsh and Langston defined organizational memory as stored information that can affect current decisions, and its storage includes six elements: individuals, culture, organizational transformations, organizational structures, organizational environment, and external preservation. (Walsh&Ungson, 1991)

Mormon and Miner defined organizational memory as a repository and store of the organization's insight and collective wisdom represented in policies, procedures, routines, and rules that can be retrieved when needed. What distinguishes this definition is that he considered the databases stored in the computer, name and fame, operations and procedures, commercial secrets and publishing rights, bills, messages, records, patents, employee knowledge, ancient experiences, and the products of the organization are all elements of the organization's memory. (Mooman&Miner, 1997)

Other researchers believe that the definition of organizational memory exceeds that it is only a storehouse of knowledge and information, to its inclusion in everything that the organization includes, and it can be retrieved in one way or another, and it is also a set of explicit and implicit knowledge that can be developed and transmitted by preserving behaviors and positions and then re-used them. (Bannon &Kuutti, 1996) (BenHamadi, 2012).

We note that the most important characteristic of this definition is that organizational memory was found to solve the problem of the organization's need for storage and archiving systems for documents and information and their retrieval despite its large size, while the second problem is the organization's loss of its memory by losing employees who hold its strategic knowledge.

1-2 Organizational memory approaches:

1-2-1 Content Approach: (Marléne & Thomassian, 2004)

Some definitions of organizational memory indicate that they are a stock that collects accumulations from the non-homogeneous knowledge that allows dependence

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on it as a pillar and directed to the behavior of employees, and the researchers divided this knowledge according to the content approach to the following:

1-2-1-1 Explicit knowledge: It is all administrative scientific knowledge, whose characteristics are easy to share, circulate, and generalize.

1-2-1-2 Procedural skills and knowledge: This knowledge is formed as a result of the experience and personal experience of its owner, which makes it related to the context of its use and personal characteristics it, which makes it difficult to transfer, as the best way to obtain it is through teamwork and contact with its owner or through simulations.

1-2-1-3 Behavioral knowledge: It is acquired knowledge such as the ability to find solutions and understand contexts.

1-2-2 Approach to the process: (Arrow, 1962)

This approach considers organizational memory as a pillar of the knowledge that the employee needs to make the right decisions related to his work activities, and this process depends on four stages: construction, modernization, distribution, and retrieval.

According to this approach, organizational knowledge is settled in the memory of individuals - the culture of the organization - the archive of the organization - and its external environment.

We note that the difference between the two approaches is that the content approach considers organizational memory just a store of knowledge that is used only when needed, while the process approach considers organizational memory as a support for knowledge and processes, and considers it more than just a stock, but also a set of foundations that allow the process of organizational memory, that is, the retrieval of knowledge appropriate at the right time and appropriately.

It should be noted that some other studies mentioned and adopted other approaches, the most important of which are distinguished in the following table:

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Table. 07: Organizational memory approaches

Approach	Researchers	Nature of Memory	Means of Memory Preservation
Content Approach	Cyert & March 1963. Argyris & Schon 1978. Nelson & Winter 1982. Cohen & Bacdayan 1994	Simple central supportworks to influence behavior.	individuals procedures Process Work rules Group routines
Process approach	Walsh & Ungson 1991 Stein 1995 Moorman & Miner 1998	acquisition Governorate recovery Create	Individuals culture transformations Structure Environment External archive
Connectionist Approach	Girod 1995 Ackerman & Halverson 2000	The sum of competencies that generate relationships within and between arrangements that lead to a parallel information processing process.	Interactions between tangible and intangible supports of memory.
Sociocognitive Approach	Walsh 1995. Akgun & al 2003. Feldman & Feldman 2006.	A message and a process, culturally and historically complex, that was jointly determined by individuals with social and emotional tendencies.	culture traditions Authority Personal emotion

Source: Afef & al, La mémoire organisationnelle et la dynamique de pouvoir dans l'entreprise, 2012, P29.

1-3 Perception of the organization, and its definition of organizational memory:

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(Marie-Hélène, 2007), GIROD referred to the different definitions of organizational memory to the different perceptions of the organization and put three forms for this:

1-3-1 The organization as a culture: If we consider the organization as a set of shared values and meanings that explain the practices of the organization and make up its beliefs, we define its organizational memory as a group of elements carrying a common interpretation, mutual belief structures, and collective interpretation patterns based on various media such as rituals, customs, language, stories. . . etc.

1-3-2 The organization as a political system: If we consider that the organization is a system based on various conflicts, interests, and power relations in the organization, then we define organizational memory as a group of individuals with special interests who possess points of authority and influence mainly the way it works and the keys to making decisions.

1-3-3 Organization as a machine: If we consider the organization as an automated system consisting of parts and pieces that perform a specific task for a common goal, then we define organizational memory as the physical procedures carrying action plans, methods of behavior, and pre-established decisions.

Table. 08: Knowledge storage methods

Nelson & winter, 1982	Formal and informal routines, procedures, and scripts
Stein, 1995	Standard routine procedures
barton, 1992	Technical administrative systems and capabilities
El Sawy et al ., 1986	Individuals
Cook & Yanov, 1999	Culture
Olivera & argote, 2000	Products
Campbell 1996,	Manufacturing techniques in the organization
Stein & zwass, 1995	Computer Information Systems

Source: Jasimuddin., & al, Understanding Organizational Memory, Encyclopedia of Knowledge Management, 2009 p266.

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2- Organizational memory models:

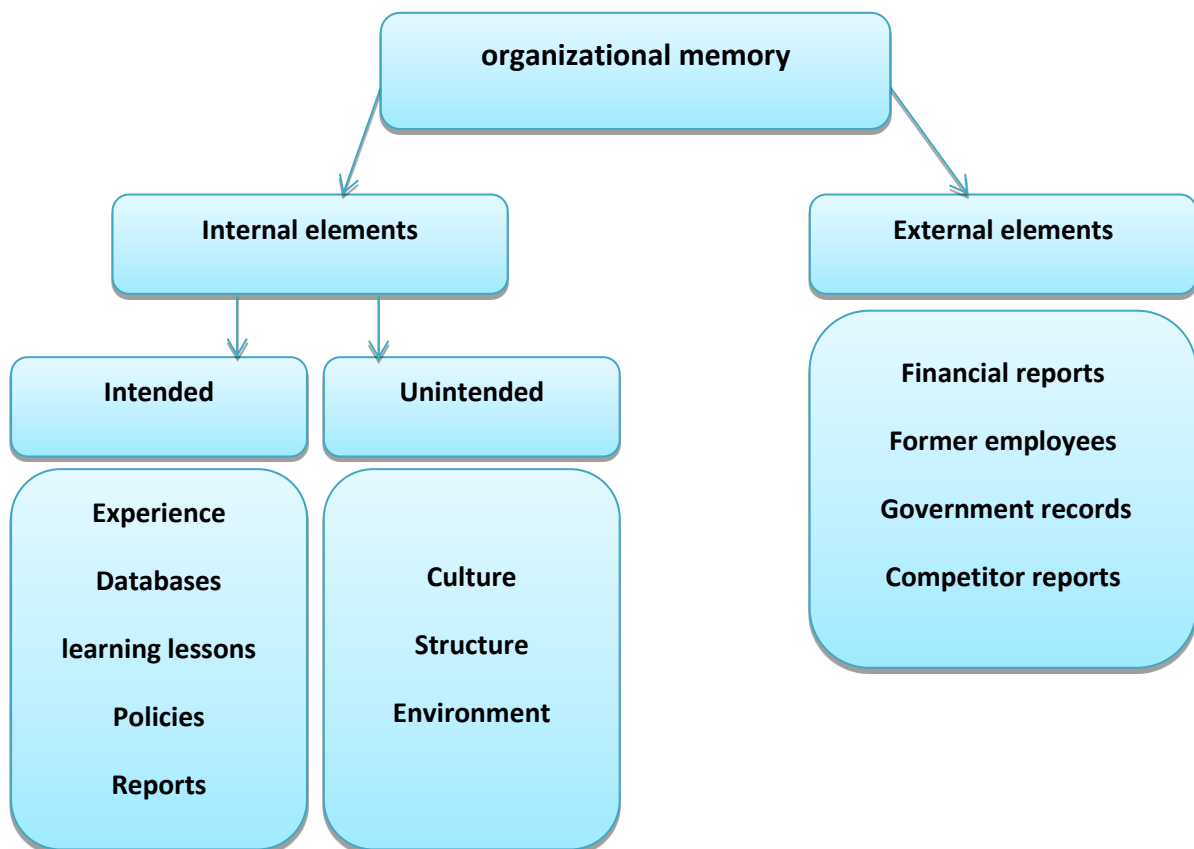
There have been numerous studies on the subject of organizational memory, according to researchers' orientations. On this basis, many models have been developed to explore and investigate them; Among these models:

2-1 Dixon model:

Created in 2005, Dixon classified organizational memory into two components, internal memory and external memory.

- **Internalelements:** In turn, it consists of the intended elements such as experience, databases, learning lessons, policies, and reports, while the unintended elements represent the organization's culture, structure, and work environment.
- **External elements:** It consists of financial reports, former employees, government records, and competitor reports. (Aboud, 2005)

Figure23: Dixon's model of organizational memory



Source: Najm Abboud Najm, Knowledge Management: Concepts, Strategies,

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2-2 Walsh model:

Walsh sees organizational memory as consisting of individuals, culture, environment, external archives, organizational structures, and transformations. (Walsh & Ungson, 1991)

2-2-1 Individuals: The individual is considered the most important store for the organization's information due to the experiences and direct observations he has in his mental (mental) memory, in addition to maintaining records of files and supporting storage media.

2-2-2 Transformations: by which we mean the organization's procedures, operations, rules and inclusion to process its inputs and outputs.

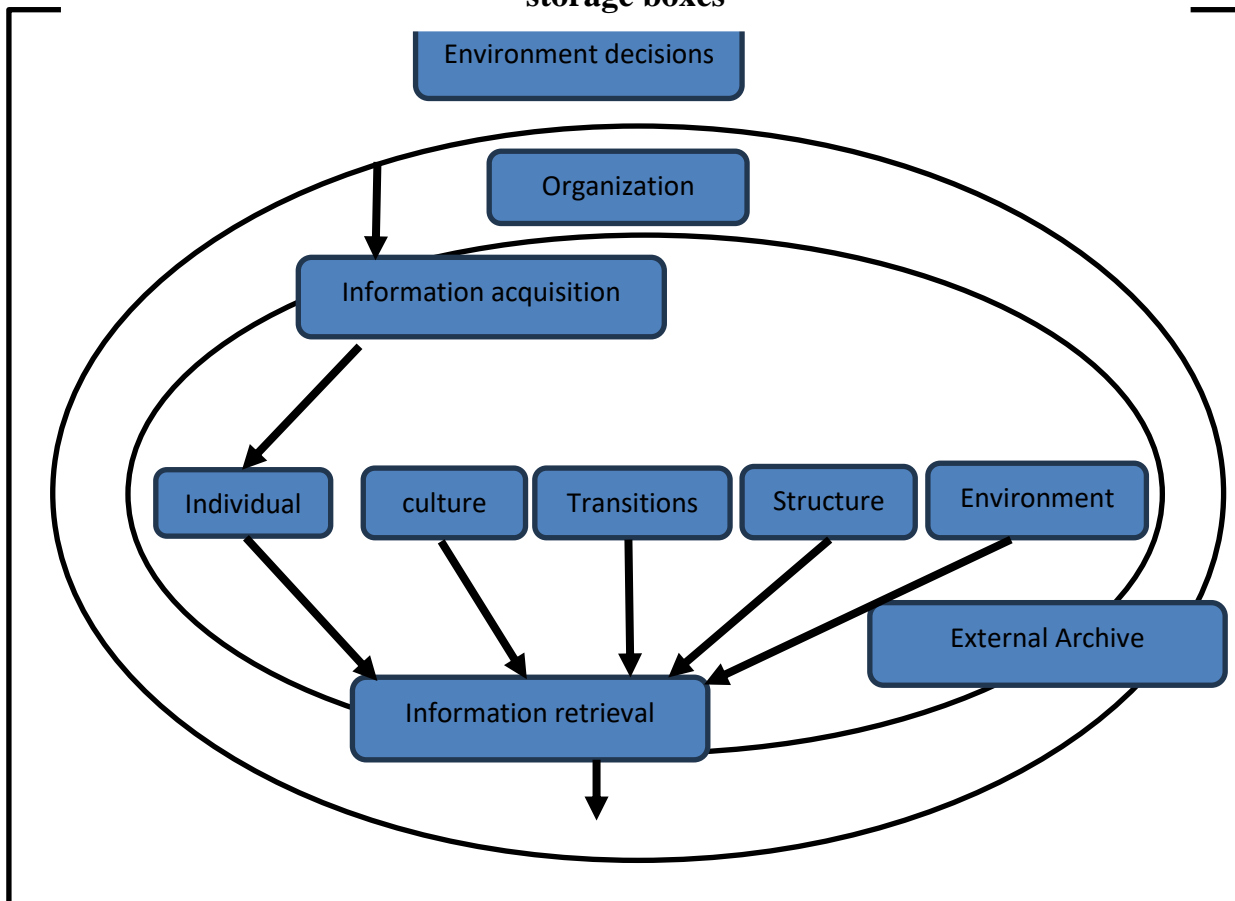
2-2-3 Environment: The workplace holds a significant amount of information about the facts, members of the organization, and their forms of behavior that interact with the shape and design of their work environment.

2-2-4 Culture: It is the embodiment of past experiences affecting the way of dealing with the present and the future, which makes it one of the most important means of retaining organizational knowledge in the form of stories, decrees, and contents of conversations.

2-2-5 Organizational Structures: As the individual and the organizational processes are two stores of organizational memory, the formal framework that regulates the role of individuals and their relationships with their environment and their tasks to be performed is considered one of the knowledge storage boxes in the memory of the organization.

2-2-6 External archives: They are places to store documentary information and past events related to the organization, and they are represented in the organization's archives, competitor records, government databases etc.

Figure 24 : WALSH & UNGSON model for organizational memory storage boxes

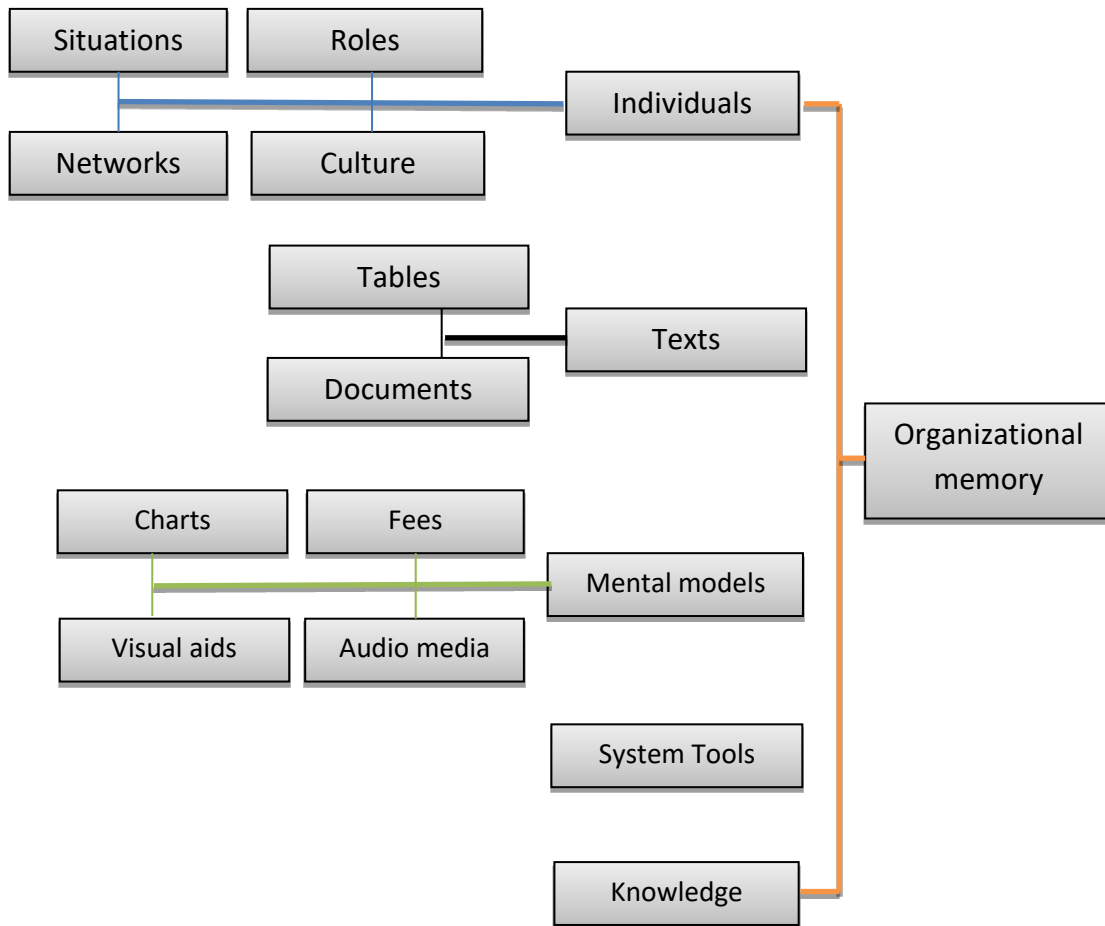


SOURCE : WALSH & UNGSON, ORGANIZATIONAL MEMORY, 1991. P . 66 .

2-3 Watson model:

Watson represented organizational memory through knowledge, media, documents, social networks, and organizational culture. (Gueerrero&Pino, 2001)

Figure 25 : Watson 's model of organizational memory



Source : Guerrero & Pino, Understanding Organizational Memory, 2001 . P . 3 .

Jacqueline model:

This model divides organizational memory into four main dimensions:

- **Culture:** It consists of ideologies, norms, values, symbols, legends, customs, rituals, work environment and customer expectations.
- **Structure:** It is represented in communication channels, methods, techniques, tasks, guidance groups, job intersections, work teams, meetings, responsibilities, tasks, and authority structures.

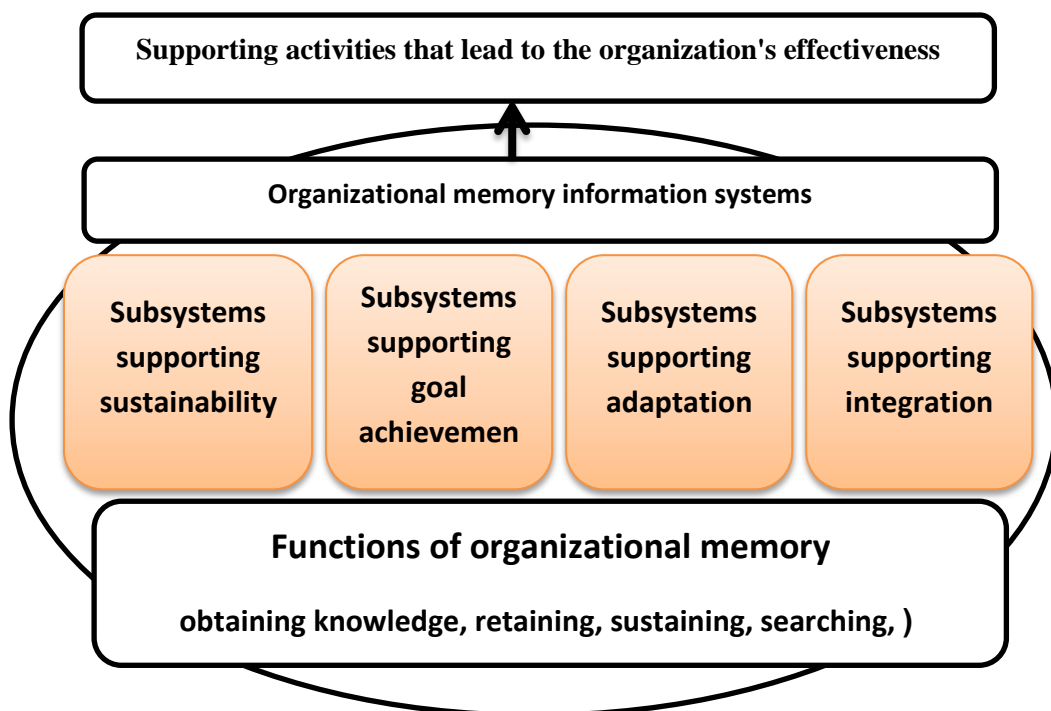
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- **System:** It consists of training and education systems, complaints settlement, wage systems, financial systems, control systems, documents, and reports.
- **Procedures:** are the rules, sources of investigations, work procedures and production activities.

2-5 Stein model:

This model consists of two levels, the first includes a set of subsystems supporting the functions of achieving effectiveness, while the second level includes a set of functions supporting the operations of the first level, as shown in the following figure: (Scott, 1996)

Figure26: Zwass & Stein's model of organizational



Source: Scott, The impact of organizational memory information systems 1996, p24 .

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3- Organizational memory processes: (Stein, 1995)

Organizational memory processes according to Stein are represented in the activities that form the foundations supporting the process of building it, namely: knowledge acquisition, knowledge retention, knowledge dissemination and perpetuation, and knowledge retrieval.

3-1 Acquiring knowledge: It is the acquisition of new organizational knowledge through the process of organizational learning, or by informing the organization of the knowledge of its new employees and what is happening inside and outside it.

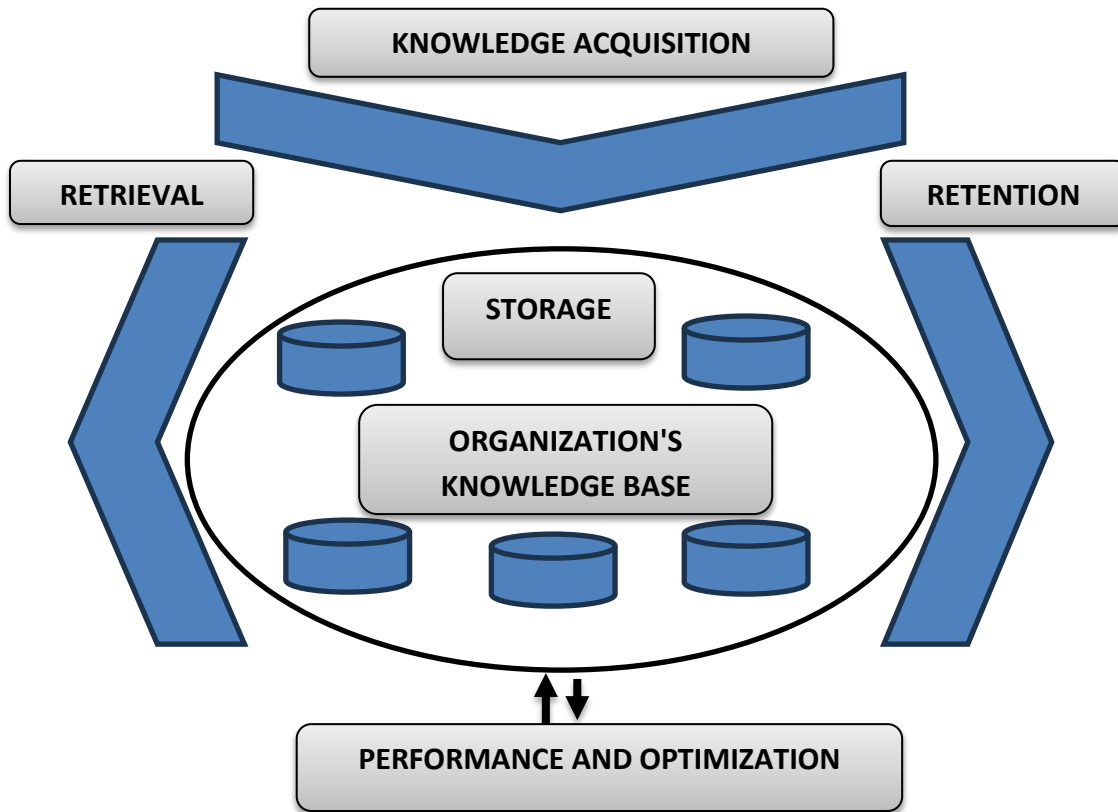
3-2 Storing knowledge (retaining it): includes all activities of coding knowledge in preparation for its preservation in the form of texts, documents, images, diagrams, or various procedures.

3-3 Perpetuating knowledge (dissemination): It is the process of preserving organizational memory by providing access to knowledge and sharing it among the members of the organization, as well as seeking to adapt and update it to suit the environment and requirements by adding and deleting the necessary knowledge.

3-4 The process of retrieval of knowledge (its use): It is the process of applying the stored knowledge according to what the organizational decision-making process is based on, either through verbal communication and the interaction of employees among themselves or by resorting to decision trees and databases.

The following figure shows organizational memory processes:

Figure27: Organizational memory processes



Source : Stein, Actualizing Organizational Memory with Information Systems, 1995, p . 24 .

Levels of organizational memory: (Marie-Hélène, 2007)

Gerod distinguishes between three levels of organizational memory:

4-1 The individual level of organizational memory: individual memory (the memory of individuals) differentiates between the knowledge in the minds of individuals and the visual knowledge embodied in the form of documents (files in the office, various documents, . . .)

4-2 The non-central collective level of organizational memory: These collective memories are the results of the interactions between individual memories and the emergence of the need for exchange and communication between two or more individuals, so that they can lead to a common interpretation that allows decisions to be made.

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4-3 Central level of organizational memory: When the collective memory includes all stakeholders in the organization, it becomes coordinated and centralized, and this leads to the existence of a database or consulting document that is used by everyone.

5-Organizational memory systems:

Organizations had to provide a climate for their employees in which they can access the valuable contents and knowledge stored in the memory of these organizations, which raised the urgent need to create so-called organizational memory systems that help to store the results of the organizational learning process, and then allow access to these results and use them easily.

The existence of these systems not only avoids organizational forgetfulness but also helps to ensure the continuity and flow of knowledge between current workers and future generations of employees.

Weeksler identifies four storage models for organizational memory, which are as follows:

- **Storage box model:** It focuses on the process of storing knowledge.
- **Narrative model:** focuses on the process of retrieval and use of knowledge.
- **Creativity model:** It focuses on relying on this knowledge, and there is no need for solutions to the problems faced by the organization.
- **The political resource model:** focuses on the process of gaining and losing power and strength during the process of using the knowledge contained in the organizational memory.

In the same context, Walch put forward a model that refers to organizational memory storage boxes that support knowledge management processes

6- The role of organizational memory: (Maurel & Bergeron, 2009)

Organizational memory aims to facilitate work procedures by providing the best directions and necessary procedures for making the best decisions, by making available previously acquired knowledge stored in the organization's memory; The roles of organizational memory can be grouped into four main roles:

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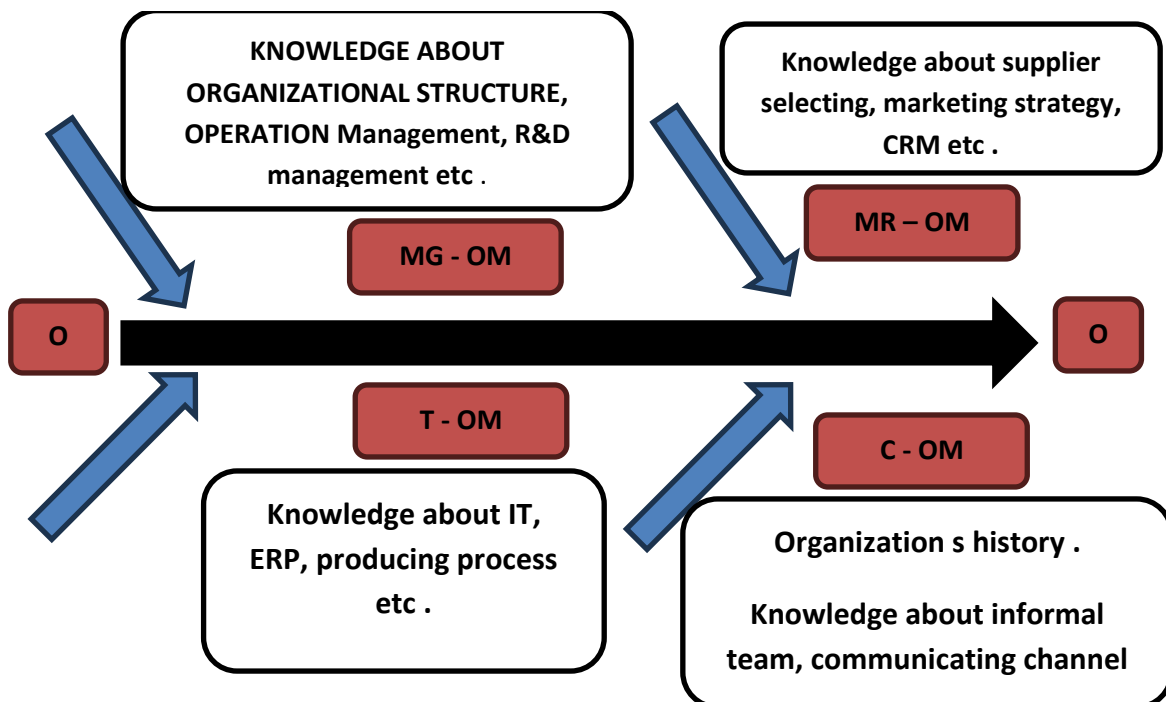
6-1 Informational role: the information stored in the organizational memory of the organization and documented previous decisions contribute to the efficiency, effectiveness, and speed of the future decision-making process.

6-2 The supervisory role: The information stored in the organization's memory frames and molds the required behaviors, decisions of future deals, and the necessary activities without high costs.

6-3 Political Role: Possession and control of knowledge create for the organization a source of authority and power that the individual exercises to influence, enhance, and maintain his position in society.

6-4 An explanatory and guiding role: the organizational memory has a direct impact on the quality of its products and services. The knowledge that the organization stores in its memory is what turns into a part of its policies, identity, and the experiences of its employees and the main source of its competitive advantage, because this knowledge helps reduce mistakes, reduce transaction costs, and influence the behavior of individuals by directing their activities.

Figure28: ARGANIZATIONAL MEMORY AND ORGANIZATIONAL PERFOOTMANCE



Source : Li, An empirical study on the impact of organizational memory on organizational performance in manufacturing companies, 2004, p4

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7- Organizational Memory Variables: (Dunham&Burt, 2014)

By organizational memory variables, we mean the various components that constitute it and that allow it to be measured and evaluated, and they are as follows:

7-1 JobKnowing is the memory that allows the employee to reach the essence of the matter when it comes to making important decisions regarding his work tasks and helps him to accomplish these tasks in an effective, easy, and comfortable manner.

7-2 Social knowledge: is the memory that enables the employee to understand the social aspects of his workplace, such as his knowledge of informal cooperation with his colleagues, his ease of understanding the language and terminology used in his organization, as well as knowledge of the strengths of his colleagues at work and the extent of their experiences and specializations; All this allows him to know which of his colleagues he should go to to get useful information to solve his problems.

7-3 Political knowledge: is the memory that provides the employee with information about the individuals who have real power in the organization, and who need their support rather than the product of his ideas; In addition to this, political knowledge gives the employee a perception of the characteristics of the person who will advance quickly in the organization's career ladder, an understanding of the types of leaders approved, and knowledge of the priorities of his organization in allocating its resources and building its budgets.

7-4 Cultural knowledge: Cultural knowledge gives the employee the ease of understanding acceptable and unacceptable behaviors in the organization, and helps him to know why some behaviors are considered inappropriate, so the employee relies on this knowledge to avoid reprimand and punishment in the organization.

Cultural knowledge helps the employee visualize the acceptable behavior pattern in his organization, as well as perceive and adhere to unwritten rules.

7-5 History Knowledge: It provides a database about the stages of the organization's development, turning points, and its various crises. It also provides information on how to deal with these crises, and determine responsibility for mistakes as well as achievements.

A knowledge of history also helps to understand the origin of most organizational traditions prevailing in the workplace (Zammit& al, 2017) .

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7-6 Industrial knowledge: The employee's industrial knowledge is based on his strong awareness of the evolution of the performance of competing organizations for his, and the quality of his organization's performance and its comparison with other similar organizations; Thus, the employee is aware of everything that could represent a major threat to the survival of his organization, in addition to creating a network of colleagues internally and externally to exchange information and advice about the work.

Another study gave different classifications for the dimensions of organizational memory variables, and these dimensions were as follows:

7-7 Experience: (Brown, 2003) It is the set of knowledge, skills, observations, qualifications, and capabilities that the employee possesses and accumulates during his working life; It is also the product of dealing with, confronting, and passing through things and situations during a time context.

Thus, a definition of experience can be deduced as the practical wisdom and knowledge of the skill and the various fields of knowledge acquired through perceiving, understanding, and remembering the successive situations experienced by the individual during the years of his actual practice of the activities and tasks of his job.

7-7-1 Types of experience: Experience can be classified into several categories, including physical, mental, emotional, and social experience.

7-7-2 Physical experience: This type relates to experiences gained through physical contact with a particular work environment, its variables, and the total of observations.

7-7-3 Mental experience: It relates to the intellectual aspect that is affected by everything that interacts with perception, imagination, emotion, and memory, whether conscious or unconscious cognitive processes.

7-7-4 Emotional experience: The concept of emotional experience appears in the topics of emotional intelligence and is the product of entering and exiting experiences and situations that interact with the spiritual and emotional side of the individual.

7-7-5 Social experience: It is an example of an individual's interaction with and observation of his community, which constitutes a set of common norms and habits.

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7-8 Data archiving systems: (Lawrence, 2006) They are the means of storing data and events and the processes of archiving and retrieval in the long term in a systematic manner, which meets the needs of management on time, thus reducing the costs of unstructured random storage.

Data archiving is done by providing an organized and automated approach that allows storing, managing, and searching files, data, events, and transactions, and performing advanced searches using large volumes of information without losing or changing it.

7-8-1 The benefits of data archiving: Save money by extending the life cycle of storage media and reducing the costs of acquiring storage and storage devices.

Reduce storage because data archiving prevents the organization from storing redundant data, which means fewer storage requirements for less data.

The ability to access relevant data more easily.

Gaining significant operational efficiencies across process systems due to the role of technology in accelerating business.

7-9 Standard operating procedures: (EPIA, 2006) are the procedures that show how to perform a process, or to deal with certain events during the conduct of the activity; They are written instructions that explain the repetitive routine activities needed to perform the work consistently, resulting in safe and quality end products.

7-9-1 The benefit of having standard operating procedures: Documenting the optimal ways to carry out activities allows for the creation of coordination and coordination between work teams.

- Facilitating the task for the new generations to perform the work with the same quality.
- Ensure compliance with governmental and regulatory laws and regulations.
- Exploiting them as training programs to improve the performance level of human resources.
- Minimizing the tensions, risks, and fears caused by miscommunication.
- Reducing work effort by directing it, which increases its quality and effectiveness.

7-10 Organization policies: (Berl, 2005) are the rules and principles guiding the decisions of the organization, are derived from its objectives, and appear in several main areas such as employment policies, evaluation, auditing, public relations, and

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financing policies, and are clear to the members of the organization to avoid the need to constantly agree to employee decisions.

7-11 Organizational learning: (Tanya, 2011) It is the process through which the organization creates new knowledge or reconstructs pre-existing knowledge, allowing the formation of a collective awareness of the organization and its members, and making them able to solve problems and discover errors and correct them.

Organizational learning targets the continuity of experiences and expertise of the organization, monitoring the resulting information and then reviewing it periodically to benefit from it in improving performance and developing behaviors (Auntunes& Pinheiro, 2019) .

7-11-1 Characteristics of Organizational Learning:

It is a systematic process practiced by the organization continuously, intentionally or automatically, as a result of conducting experiments.

Organizational learning is based on acquiring, interpreting, distributing, and retaining knowledge to benefit from it according to the needs of the organization.

Employing organizational learning expands the knowledge base of the organization, which affects the capabilities and behaviors of its members (Auntunes& Pinheiro, 2019) .

8- Organizational Memory Classifications:

Many studies have presented different classifications of organizational memory, including the BARTHES classification, which stipulates four forms of organizational memory, as follows:

8-1 Administrative organizational memory: (Stein, 1995) is the organizational knowledge that controls administrative processes, and it is also the method of managing the organization and its organizational structure.

- **The method of managing the organization:** It reflects the daily activity of the organization because organizational memory is the means that allows the transfer of organizational knowledge from the past of the organization and its projection on the current activities, represented in the areas of leadership, planning, design, organization, communication, motivation, decision-making, knowledge management, crisis management, total quality management, and

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human resource management, in addition to the management of documents and administrative documents.

- **Organizational Structure:** It is the memory that holds the information that shows the form of the hierarchical relationship and its connection with the tasks of human resources and how to accomplish the activities and tasks.

8-2 Technical organizational memory: (Markus & Tanis, 2000) Technology is defined as the tools, techniques, and activities that interact with professional knowledge and skills to support the processes of transforming the organization's inputs into meaningful and useful outputs, which includes: information systems, quality management, re-engineering system, product development systems, a network of activities and equipment, used equipment and production control methods.

8-3 Cultural organizational memory: (Walsh & Ungson, 1991) the results of accumulating knowledge of the organization's history, suggestions of workers, shared values and norms, and outcomes of informal interactions; This type of organizational memory is affected by the actions and actions of its members and the organization's interaction with the external culture of its environment.

Organizational culture is the vessel that carries meanings, values, and practices guidance among the members of the organization, and at its level, the ideas of its employees interact with the experiences of its past.

8-4 Marketing organizational memory: (Faouri, 2012) It is the set of organizational knowledge related to the organization's external partners such as brokers, distributors, and especially the organization's customers.

The importance of this type of organizational memory lies in developing an appropriate strategy for marketing the organization's products and services, enhancing cooperation with other organizations, and setting useful rules for building distribution channels and intermediaries that help protect the organization from its competitors.

Other studies dealt with different classifications of organizational memory, including: (Nissley & Casey, 2001)

8-5 Individual/collective memory: It is a classification that has focused on psychology research, which sheds light on the social impact on individual and collective memory.

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Being aware of the aspects related to social interactions at the level of the organization is very important in building the memory of the organization, and these aspects include:

- Provide sufficient time space for social interaction.
- Creating a collective culture that supports and develops relationships between team members.

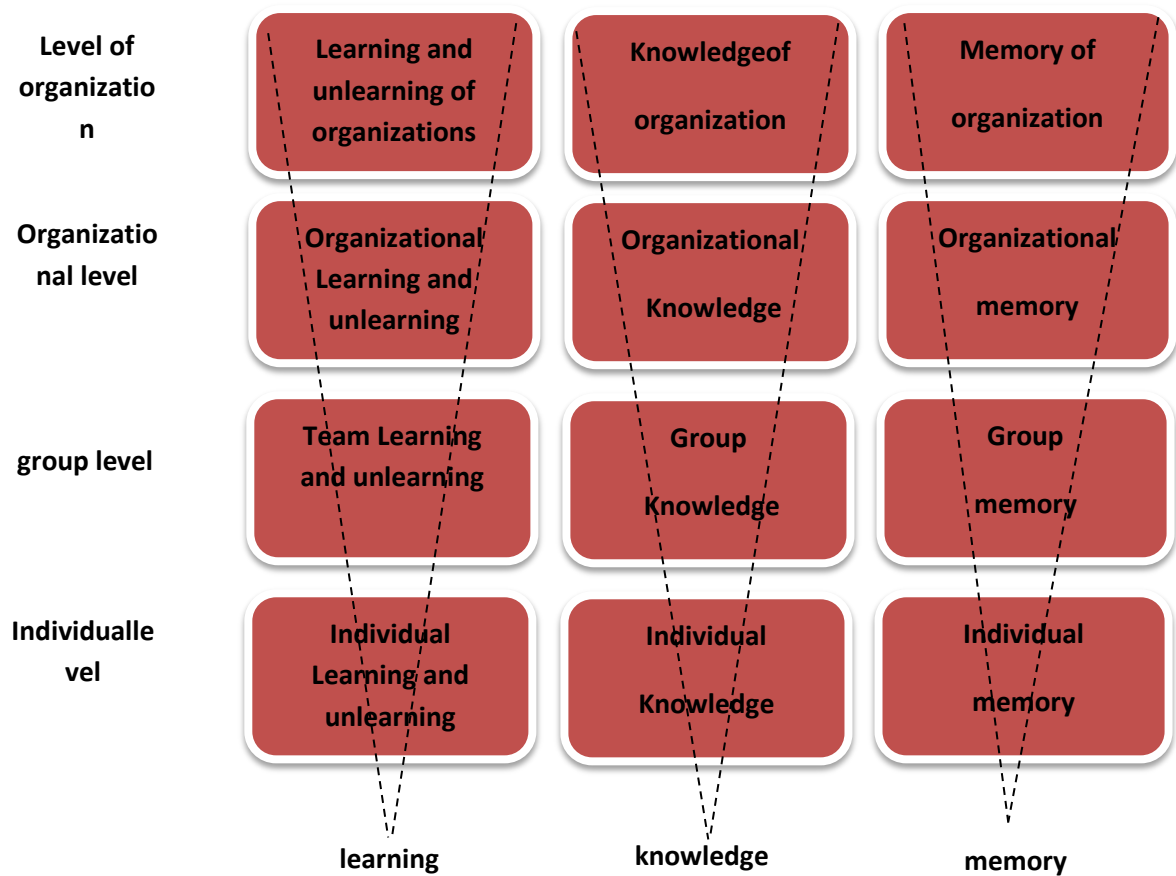
Collective memory is considered a set of shared explanations with a social structure of what happened in the past and history of the organization, and it does not represent only a process of polarization and exchange of knowledge but goes beyond it to make this knowledge useful to the organization and its members within the framework of their work; Since the organization is a social entity consisting of a group of cooperative individuals that have social and human relations, the organizational memory is present in the minds of the employees and their ongoing relationships with each other; And the organization's recognition of the knowledge of its members helps to enhance its competitiveness and adapt it to its unstable environment, such as the constant change of the needs and preferences of its customers.

Interaction between individuals is one of the most effective ways to acquire and share the types of knowledge that can be applied in the workplace because employees seek help from their colleagues who trust their abilities instead of referring to the databases and records of the organization.

The following figure provides a better explanation of the shift from individual memory to collective and then organizational memory:

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Figure 29: Multilevel of interpretation of learning, knowledge, and memory .



Source : bencsik, From individual memory to organizational memory, 2009, p2

(Tourtier, 1995) Also gave different classifications of organizational memory, as follows:

8-6 Occupational memory: This includes all references, documents, methods, and curricula related to a particular profession.

8-7 Organizational memory: it is closely related to the Organization, its activities, products, partners or customers, and suppliers.

8-8 Individual memory: It includes the elements that are personally related to the individual such as his career path, his competencies, his practical knowledge, his activities.

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8-9 Project memory: It includes all the information related to a particular project, such as its definition, activities, history, and results.

9- Organizational memory storage media: (Stein, 1995)

Among the many techniques relied on in building organizational memory, we find computer software techniques, and non-computer documentary techniques, regarding the continuous tendency to rely on technological solutions to support file management and documentation and preservation systems to avoid losing knowledge due to the loss of human resources; This contributed to the emergence of the so-called **Organizational Memory Information System (OMIS)**.

Among the tools and forms that contribute to the embodiment of organizational memory, we mention the following: (Vrincianu, 2008)

9-1 Documentary memory: It is the effective exploitation of the organization's files based on document modeling techniques. Documentary memory is manifested in several forms, the most important of which are:

9-1-1 Paper Documentary Memory: It is in the form of documents and reports stored in the central repositories of the library and archive.

9-1-2 Computer Documentary Memory: It includes computer-based documents as a storage medium.

9-1-3 Autobiographical memory: It includes paper and computer documents, but it does not acquire an official status but is considered important only to the person who stored it.

Building documentary memory requires the following:

- Choosing the target documents to be part of the memory.
- Digital encryption of target documents.
- Indexing documents to facilitate their retrieval.
- Organizing and managing documents through effective electronic systems.
- Taking into account the homogeneity of the form and nature of documents.
- Portability of preparing new documents from homogeneous documents.
- The ability to develop organizational memory by deleting or adding new documents.

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9-2Cases memory: It is the memory formed in the previous experiences of the organization, such as success and failure stories, which were stored to benefit from them during facing similar cases and problems, where similar cases are matched to help make decisions similar to successful experiences and avoid decisions similar to failed experiences.

10 - Building organizational memory:

The concept of organizational memory and management of organizational knowledge are used as synonyms, and this is due to the relationship between them and stems from their treatment of the same problem of loss or insufficient use of organizational knowledge.

Knowledge management is the process of creating, disseminating, and using organizational knowledge to improve performance and enhance competitiveness; The intermediary mechanism that allows knowledge management processes is the organization's memory that is built through the process of constantly sharing knowledge and seeking to store it to facilitate access to it in the future, in addition to adapting it by integrating modern knowledge with current previously stored knowledge. (Kuhn& Abecker, 1998)

10-1 Steps to building organizational memory: (Verincianu, 2008)

10-1-1 Documentary memory:

It is the memory that depends entirely on the so-called document engineering process, i. e. a documentation system that depends on the exploitation of the current documents of the organization; This exploitation is carried out through the following steps:

- Identification of documents (s) that fit into the organization's memory.
- Scanning these documents, ie converting them from their paper form to their electronic form.
- Choosing the best format to be adopted in keeping these documents according to the nature of the need.
- merging documents with common characteristics.
- Indexing documents to facilitate access to them.

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- Choosing the way to organize the final form of documentary organizational memory.
- Using the electronic system allows for modifying the contents of the organizational memory by deleting or adding the necessary.
- Making the organizational memory available for remote access.

10-1-2 Knowledge base memory:

It is the building of an organizational memory through modeling the knowledge and opinions of the organization's experts. This memory is characterized by its containing the official knowledge presented in the form of graphs or conceptual that leave the user the freedom of interpretation and final evaluation according to the situation he encounters, and its construction is as follows:

- a.** Competencies Guide: It allows for building the organization's competency maps and identifies the contexts from which the consultations were drawn
- b.** Create a knowledge base about best practices for the organization's activities and functions.
- c.** Book of knowledge: includes textual specifications and graphs of the models of knowledge obtained.

10-1-3 Group memory (group work memory):

This memory includes multi-use interactive systems that can enhance teamwork through the interaction of employees with each other by presenting their work among themselves without finding differences and common points, which are four categories:

- a.** Applications dedicated to human-to-human communication, such as e-mail, video conferencing. . .
- b.** Common text editing applications.
- c.** Coordination applications between workflow systems and decision support systems.
- d.** Simulation applications and online games.

10-1-4 Case-based memory: It seeks to build a solution to current problems by reusing stored decisions and solutions from past problems similar to the current

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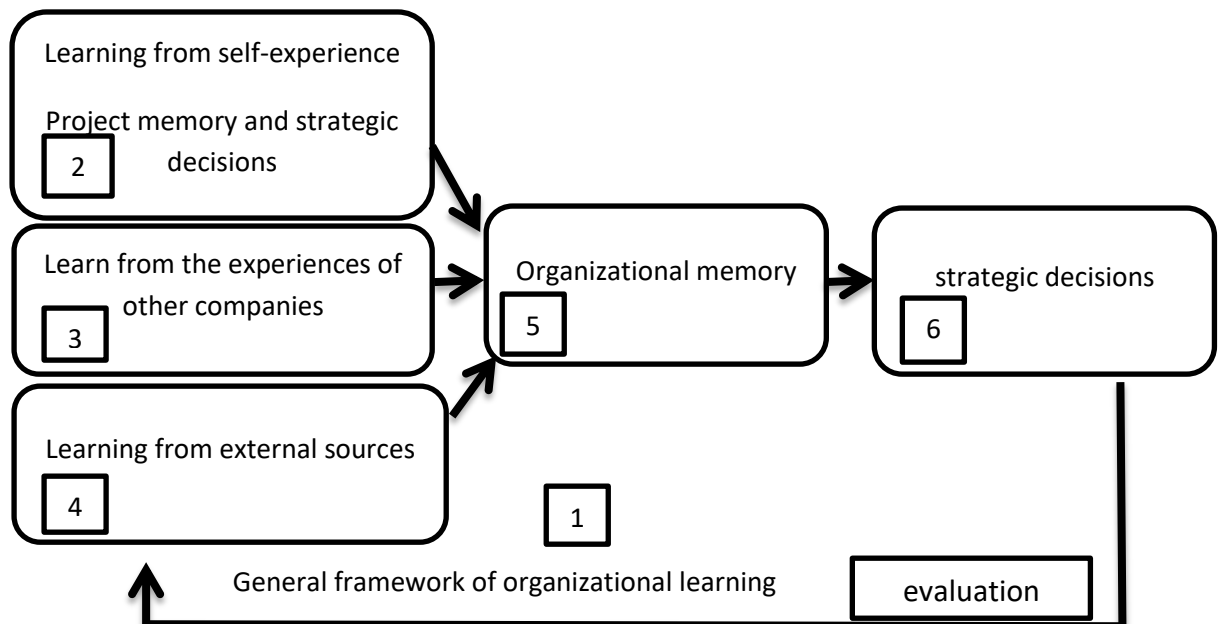
problem, that is, by making use of previous success and failure experiences that are preserved in the so-called case base.

This type of organizational memory is based on establishing the relationship between the past and the present and on giving the ability to divide the experiences of the organization as follows:

- a. Cases that are formal and can be included in the case database must be recurring cases and their solutions can be reused.
- b. The experiences that can be included in the database are based on a human expert.
- c. Having a detailed analysis of the problem field and documentation that describes the situation well.

The following figure shows the sources of updating and building organizational memory:

Figure 30: Sources for updating and building organizational memory



source: Ozorhon, **Organizational memory in construction companies: a case based reasoning model as an organizational learning tool**, 2004, p . 28 .

10-2 The relationship of knowledge sharing to building organizational memory:

Chapter 02: Conceptual framework of organizational memory

The main objective of knowledge sharing is to make it accessible, both internally among its members or externally with other organizations, to update, adapt, develop, and exploit it; All this leads to maintaining a useful organizational memory for the employees of the organization, to resort to it when needed, and in turn, it is reflected in their performance positively. (Ellaouadi & Fourati, 2002)

The process of sharing knowledge in the organization depends on many mechanisms and techniques, the most important of which are the exchange of best practices, formal and informal conversations, and discussion groups based on the web; The latter is considered an important medium to facilitate the exchange of information and data and make it accessible from a distance. (Ellaouadi & Fourati, 2002) (Auntunes& Pinheiro, 2019)

10-3 Obstacles to building organizational memory:

Activation of organizational memory faces many challenges, most notably the following:

10-3-1 Transforming tacit knowledge into explicit knowledge:

It is considered one of the most important challenges faced by human resources management, business teams, and effective communication; Hence, sharing knowledge among team members is extremely important, which poses the need to make unauthorized knowledge clear and available enough to be picked up by team members. (Wheelen, Hunger, 2010)

10-3-2 Documents without context:

One of the obstacles to building an effective organizational memory is preserving documents without preserving their context, which gives them meaning and allows them to be used in the future.

Focusing on preserving, organizing, and indexing knowledge in documents and databases for future retrieval is not enough. Rather, that knowledge must be linked to the context that represents the facts, assumptions, and rational decisions accompanying the documentation process.

10-3-3 Size

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Among the problems facing the construction of organizational memory is the question of the extent to which the organizational memory expands and the need to preserve the most important knowledge and not others; Storing and using unimportant knowledge increases the injury of an organization to what is called organizational stupidity.

10-3-4Organizational forgetfulness

which is a condition that affects the organization as a result of the destruction or loss of its documents and notes, or the failure of its knowledge storage media, which puts the organization in front of the inevitability of addressing the errors that could lead to this. (Atwood&Michael, 2002)

Conclusion

Pioneering experiments have shown a significant relationship and impact of organizational memory on individual and then organizational performance, either through the formation of knowledge bases or through the formation of information bases, which can be stores of knowledge, information, experiences, and previous decisions, and make access to these stores within the reach of their members, as they are constantly updated in addition to making them shareable and usable. Within an organizational culture conducive to this,

All of this obliges today's organizations to build an effective organizational memory that preserves their knowledge, experiences, and identity. The organization's memory is embodied in several forms, such as a system for documenting the organization's various explicit knowledge represented in the documents circulating in it, and models for finding solutions to the organization's problems by reusing a stored solution for a problem similar to the current problem, in addition to operational knowledge, which is a way of working that connects individuals within the organization. .

Knowledge management processes, through their operations, also play an important role in building the organization's memory, as these processes are the spirit that drives the organizational memory in terms of its updating or effectiveness, and this importance does not appear prominently except when the performance of the organization's members increases, individually or collectively.

Chapter 03

The concept of individual performance and its measurement principle

1- individual performance:

1-1 Definition of individual performance:

Organizational administrative thought was concerned with the issue of individual performance because it is linked to the efficiency of the organization in achieving its goals, as the ability of the employee to perform his duties and his desire to do so are two influential elements in the quality of the outputs of the organization's production system, (good or service), which made the main problem facing organizations is the extent Its ability to control the determinants of employee behavior, and to improve the individual performance of its employees. (Thomas, 2007) (Koopmans & al 2016)

Performance is defined as any recognized achievement, which is based on the use of knowledge that the employee possesses, and refers to the degree of achievement and completion of a set of tasks constituting an individual's job; It reflects how the individual achieves or satisfies the requirements of the job he occupies. Also defined as the degree to which the working individual achieves the tasks entrusted to him in terms of effort, and quality achievedwhile striving to reduce the costs of the resources used. (Viedge & al, 2011) (Vel & al, 2018)

SHIELDS defines individual performance as the output or quantity of production for one employee estimated at a specific unit of time, and it represents a reflection of his ability or not to achieve the goals related to his work. (Shields, 2020)

We can conclude from the previous definitions that:

- Definitions are not limited to a specific work and not anotherbut can be applied to all works, regardless of their content and nature.
- Performance can be subject to measurement by comparing it with the target performance, which is predetermined.
- Individual performance depends mainly on the employee's knowledge of work requirementsand the form of ideal performance.
- Work performance requires the employee to possess physical and mental energy, as well as personal and behavioral traits.
- Work requirements must be in harmony with the characteristics of the employee assigned to accomplish it.

It should be noted that to achieve a good level of performance, there must be an acceptable minimum level for each component of the performance, as the employees who make great efforts and possess superior capabilities, but whose understanding of their roles is non-existent, their performance is not acceptable in its final form.

1-2 The importance of individual performance:

Performance is related to the life cycle of any organization (the emergence stage - the survival stage - the stability stage - the reputation stage - the excellence stage - the leadership stage), being the most determining factor for its transition from the stages of its life cycle to a more advanced stage. Individual performance occupies a special place within any organization, as it is the final image of the interaction of all its activities, and therefore the organization is more stable and competitive when its employees perform their tasks excellently. (Armstrong, 2009)

The level of individual and group performance is not only an expression of the effectiveness and efficiency of the employees but also reflects the capabilities and skill of the superiors, which makes the organization's senior management's interest in performance levels exceed the interest of the employees. (Armstrong, 2005)

1-3 Performance dimensions: Studies investigating the success of employee performance identified three dimensions, as follows:

1-3-1 Quality of work performed: By this dimension, we mean the level of accuracy and proficiency in carrying out tasks, and the extent to which the exerted effort conforms to predetermined qualitative specifications; it falls within this framework that the performance outputs (goods or services) conform to the specifications specified by the administration or to quality standards, in addition to the performance being free of manufacturing errors and implementation gaps, as well as containing a certain amount of creativity and innovation.

Ghetto adds that the quality of work is an effective system to achieve integration between the efforts of all parties and groups within the organization, which build, improve, and maintain that quality, allowing the provision of goods or services at the lowest cost while achieving complete customer satisfaction.

1-3-2 Commitment: The concept of functional commitment was linked to the school of human relations in the field of management that emerged at the end of the first half

of the twentieth century, which considered human resources as one of the main determinants of the work of organizations, which makes it necessary to explore and determine the nature of the relationship between the employee and the organization he is affiliated with, and the degree of his desire to integrate and continue in work.

A good examination of commitment represents one of the basic indicators for predicting the future behavior of employees within the organization, thus avoiding aspects of negative behavior such as absence, delay, evasion from performing work, high rates of work turnover, and low levels of job satisfaction. Thus, functional commitment can be described as a mutual investment between the employee and the organization by continuing a contractual relationship between them, which results in desirable behavior on the part of the employee toward the organization and works to improve the competitiveness of the organization and raise their effectiveness.

It should be noted that the term job commitment differs from the term job satisfaction, as the employee may be satisfied with his work, but not with the organization to which he belongs; Among the aspects of the strong commitment of employees to the organization:

- ✓ Carrying out more activities than what is required and specified to continue working in the organization and his desire to establish his position in it.
- ✓ Respecting the organization's work rules, regulations, and procedures.
- ✓ The employee's willingness to work under difficult working conditions, without grumbling or complaining.
- ✓ Contribute and participate in some organizational events such as attending meetings, seminars, and volunteering, to perform unwanted work and provide advice and consultations to colleagues.

1-3-3 Amount of work done:

It means the amount of work that the employee can accomplish under normal working conditions during a specific unit of time, in the sense that it is an expression of the physical and mental energy that the employee exerts, the speed of performance, and the quantitative dimension of the expended energy.

This dimension includes the effort that the employee puts into work and the way he performs his job because the amount of performance output and the amount of effort

determines a mix based on the performance pattern and the type of movements and activities.

The amount of work performed is one of the most important outputs of the efficiency component in the performance of workers, which depends on the desire and ability to work. Efficiency means the relationship between the amount of resources used in the process of production or service provision and the amount of results achieved from that process.

In his studies of 1990 and 1993, Campbell discussed the dimensions of individual performance in a different way and presented them as follows:

- Proficiency in job-related tasks, i. e. related to the employee's main task.
- Mastering non-job-related tasks, meaning those activities that the individual is not required to perform.
- The effectiveness of written and oral communication, meaning the employee's ability to receive the message to accomplish the task, and his ability to communicate the message clearly to his colleagues.
- The employee shows effort and a high level of commitment while completing his duties.
- The employee maintains personal discipline and compliance with the rules of the organization.
- Facilitate the performance of colleagues and the team, support and participate in teamwork.
- High sense of supervision in jobs that need supervision.

In his studies, Koopmans pointed to other dimensions of individual performance, which the researcher adopted in his study, and we mention them as follows: (Koopmans&al, 2011, 2014, 2016)

1-3-4 Task performance and contextual performance:

1-3-4-1 Task performance:

It is considered a summary of the dimensions that express the activities and behaviors indicating the percentage of the employee's completion of the activities and tasks of his job; This model contains the traditional dimensions of ability represented

in the amount of performance, the time required to complete the task, efficiency and mastery.

It should be noted that these dimensions are effective in measuring employee performance in the productive sector. As for the service sector, other dimensions have been added, such as knowledge of functional aspects, commitment, creativity, innovation, good decision-making, and judgment.

1-3-4-2 Contextual performance:

It is also called the patterns of performance outside the role because it is not directly related to the performance, and it can be mentioned as follows:

- **Volunteering.**
- **Agreeing with organizational goals.**
- **Affiliation.**
- **Cooperat.**
- **Helping colleagues.**

1-3-5 Negative and adaptive performance:

1-3-5-1 Negative performance: refers to behaviors that lead to dysfunction in the employee's performance, and one of the most prominent behaviors of negative performance is the desire to withdraw; Where the employee begins to distract himself from the tasks of his job and is absent intentionally and repeatedly, which leads to a decrease in his productivity.

1-3-5-2 Adaptive performance: It is the behavior that expresses the individual's efficiency and ability to change his behavior in line with the continuous changes of his functional environment, resulting from technological innovations, restructuring, intensified competition, and the creation of new tasks. (Nguyen & Tran, 2019)

1-4 Performance determinants:

Based on considering performance as a practice of the various activities and tasks that make up the job, and considering that practice as human behavior that is affected negatively or positively by some factors; "Basht" says, there is almost no phenomenon in economic and social life or life in general that is not affected in performance.

These phenomena or elements that lead to raising or lowering performance rates are usually called performance determinants, and they are divided in terms of their

relationship to the employee and his ability to control them into two main parts: internal determinants and external determinants. (Locke & Latham, 2004).

1- 4-1 internal determinants:

- **Motivation:** Motivation is defined as the source of behavior and the fuel of performance, and refers to the individual's desire to carry out specific work tasks and his impulse to perform these tasks. (Torrington & Hall, 2008) (Axelsson & Bokedal 2009) (Charles& al 2007)
- **Capabilities:** We mean by them the personal characteristics and the necessary skills that the employee uses in performing his work as planned, such as the ability to endure and the ability to absorb, and these capabilities can be built through training, learning, and acquiring new knowledge.
- **Effort:** It is the effort used by the employee to perform his task, and it is the physical, kinetic, and mental energy that the worker expends while practicing the activity.
- **Role perception:** It is the basic process for organizing and interpreting information, to translate it into a specific behavior, as the employee's performance is determined by the extent of his understanding of his role and mission.

1-4-2 External determinants:

It is everything that is beyond the control of the employee, and at the same time affects his performance, including:

- **Work requirements:** that is, everything related to the employee's duties, responsibilities, tasks, and activities expected of him; In addition to the methods of performing these tasks and the available equipment used in the employee's activities.
- **Organizational environment:** includes work environment, scope of supervision, administrative systems, form of organizational structure, communication system, incentives, and leadership style; It also includes the extent to which the organization cares about the welfare of employees, treats them fairly, and helps them solve problems.

- **The external environment:** among what affects the level of employee performance, including:

The intensity of external competition, economic challenges, social status, and sometimes politics define the general environment of the employee outside his organization.

1-5 Performance elements:

The performance elements include the characteristics, attributes, capabilities, skills, and qualifications that the employee must possess in his work and behavior, to be able to perform his work successfully and efficiently, and they are of two types:

- **Personal elements:**

They are elements related to the worker's personality in terms of ability, willingness, interests, values, and abilities. . . etc, They are the elements mainly related to the employee's personal qualities and are characterized by being difficult to measure because of their abstract, imperceptible nature and cannot be easily tracked and observed. (Campbell 1990)

- **Professional elements:**

Related to the practices and behavior of the employee while carrying out his duties, and are defined as observable and measurable elements such as the ability to make decisions, respect work schedules, the ability to solve problems, leadership, oral communication, and interpersonal relationships; These elements are determined from the results of the job analysis and description, which determines the tasks of the job and thus the performance required to carry it out, while specifying the qualities that must be provided in the employee who occupies it. (Hafiz, 2017)

Other studies put forward another form of individual performance elements, the most important of which can be explained as follows:

- **Knowledge of job requirements:** It means informing the employee of general knowledge, technical and professional skills, and general background about the job and its related areas.
- **Quality of work:** It is represented in the extent to which the employee is aware of the work he is doing and what he possesses of desire, skill, and ability to implement, without making mistakes. (Hafiz, 2017)

- **The amount of work accomplished:** that is, the amount of work that the employee can accomplish under normal work conditions and the speed of this achievement. (Hafiz, 2017)
- **Perseverance and reliability:** It includes seriousness and dedication to work and the ability of the employee to take responsibility for work and to complete the work in the specified times.

1-6 Factors affecting performance improvement:

Since the employee's performance does not happen in a vacuum, targeting its improvement passes through providing factors that will affect it, including:

- Training programs and what can be addressed for problems related to poor performance. (Athar& Maqbool, 2015)
- Enriching job knowledge and what results from it in terms of the employee's feeling of greater comfort and confidence in his workplace, and allowing him to perform his job with higher efficiency.
- The employee obtaining material and moral rewards for his efforts gives him an additional incentive.
- The level of employee satisfaction is related to the quality of performance, as studies have shown that employees who feel a sense of belonging to their place of work perform their activities better than those who have a less sense of belonging. (Sonnentag & Frese 2005)
- Matching the employee's qualifications with the job he occupies is a guarantee of making his performance level rise.
- Employees who have a framework of knowledge are more creative in solving the problems they face in the short and long term. (Amit, 2017)

2- Performance evaluation:

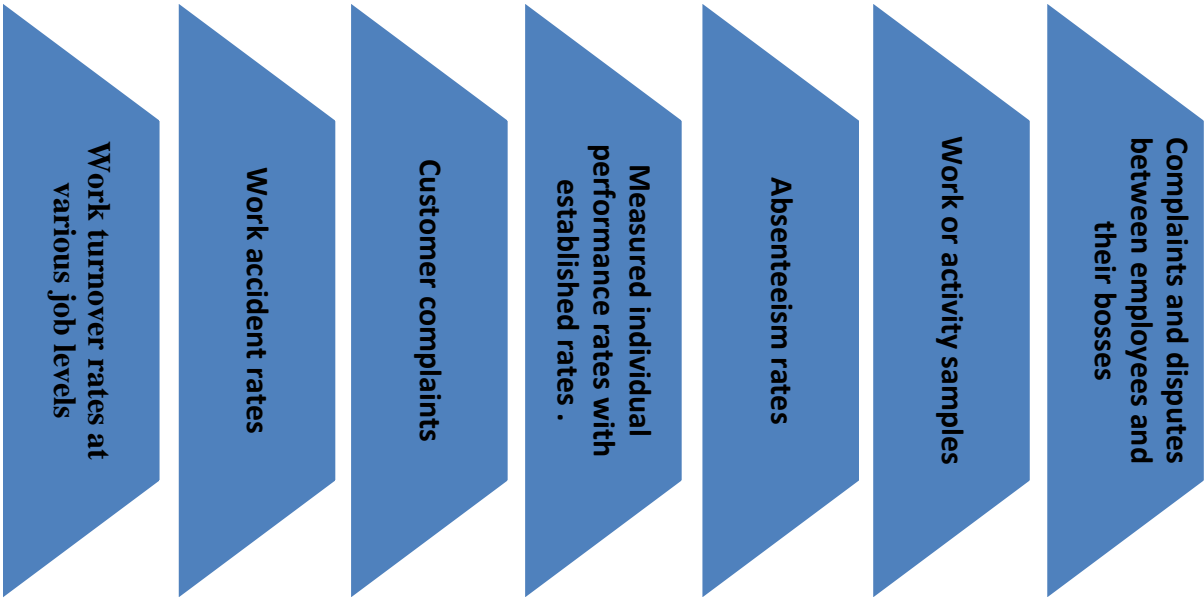
2-1 Definition:

To ensure the desired level of performance of employees, organizations adopt a follow-up system for each job to know the pros and cons of various activities and their efficiency, to arrange and compare them through a system consisting of well-thought-out processes called employee performance evaluation.

Employee performance evaluation is described as a formal system that measures, evaluates, and affects the employee's performance and behavioral characteristics, and an attempt to identify the possibility of repeating the same performance and behavior in the future to benefit the employee, the organization, and society, because it is an attempt to analyze the employee's performance by focusing on everything related to him in terms of psychological, physical, occupational, or Technical, intellectual, or behavioral skills by analyzing strengths and working to enhance them, as well as identifying and confronting weaknesses to ensure the effectiveness of the employee and the organization, present and in the future.

The following figure presents indicators for evaluating individual performance:

Figure 31: Individual performance evaluation indicators



Source: the researcher

According to the employee performance evaluation process, the employees are evaluated in a fair and just way through a comparison of what they have accomplished and what they were requested to achieve in quantity and quality to reward the employee based on the outputs of this process because it provides a comprehensive

analysis of the person's capabilities and competencies, which allows accurate, expert and important decisions to be taken.

It should be noted that a distinction must be made between two types of activities:

- Activities that can be quantitatively evaluated and distinguished as being a tangible material thing whose units can be counted and their predetermined specifications confirmed.
- Actions that depend on mental effort, such as planning, organizing, controlling, supervising, and leading, which are qualitative activities whose outputs are difficult to measure and limit.

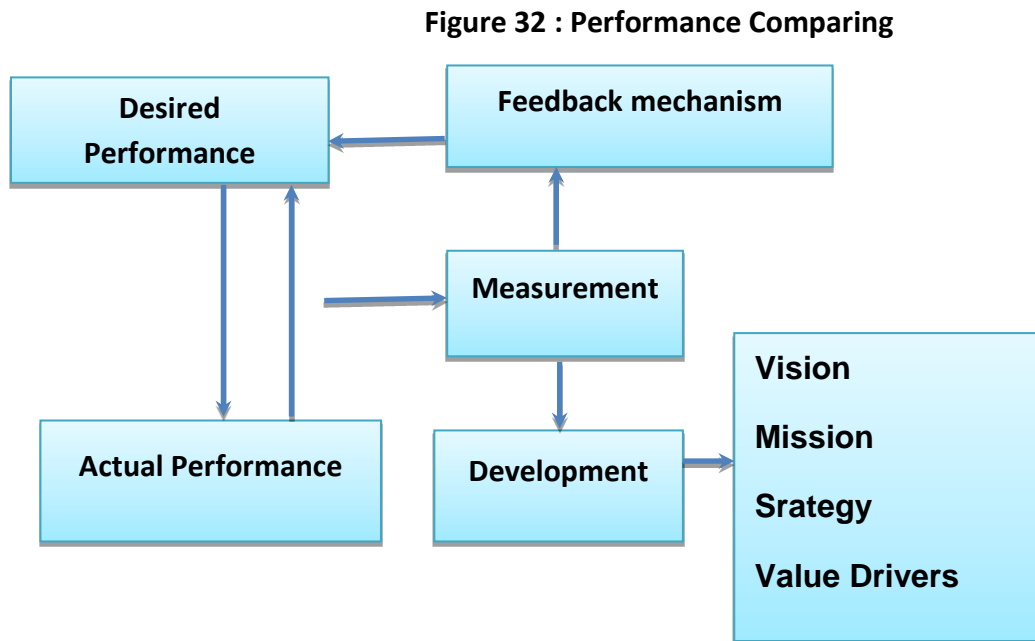
Performance evaluation is also defined as the process used by employers to identify the individuals who have completed the work according to what is intended, and by which a value, degree, or weight is given to the quantitative or qualitative human effort, whether mental or physical, in a field during a certain period.

Some studies indicate that the process of evaluating the performance of employees is an integral part of organizational life because it determines whether the employee supports the organization's goals or works against them. The results of this process are relied upon to justify decisions related to human resources such as raising wages, providing incentives, termination of service, as well as programming training courses.

From all these definitions, several important points can be deduced:

- Evaluation is a quantitative and qualitative measure of an employee's achievement.
- The evaluation process measures the employee's physical and mental effort and his level of skill and accuracy.
- The performance evaluation process is based on predetermined standards and rates.

- The integrity, objectivity, and competence of the person in charge of the evaluation process is critical to its success. The following figure illustrates comparing actual individual performance with the organization's desired performance:



Source : Ashford & Cummings, *Feedback as an Individual Resource: Personal Strategies of Creating Information*, 1983

2-2 Principles of performance evaluation:

Many principles must be guided by when conducting the performance evaluation process to achieve its objectives and ensure the fairness, accuracy, and sincerity of its results, including:

- **The principle of inclusiveness:** in the sense that the performance evaluation process includes both the positives and negatives of performance and addresses both strengths and weaknesses so that one is not focused on more than the other.
- **The principle of integration:** In the sense that the items of the performance evaluation process include all the important aspects of the employee's performance, concerning his knowledge, behaviors, skills, and methods of performing his activities.

- **The principle of clarity:** in the sense that the performance evaluation process relies on clear and understandable criteria and objectives for the appraiser and the employee concerned with the evaluation.
- **The principle of objectivity:** is the need to use unified and objective criteria, which keeps the evaluator away from relying on personal aspects while giving his judgments.

2-3 The importance of performance evaluation and its benefits:

The benefits of job performance evaluation can be identified from two perspectives: (Gomez & Cardy, 2001) (Gomez & al 1992).

2-3-1 Employer's perspective:

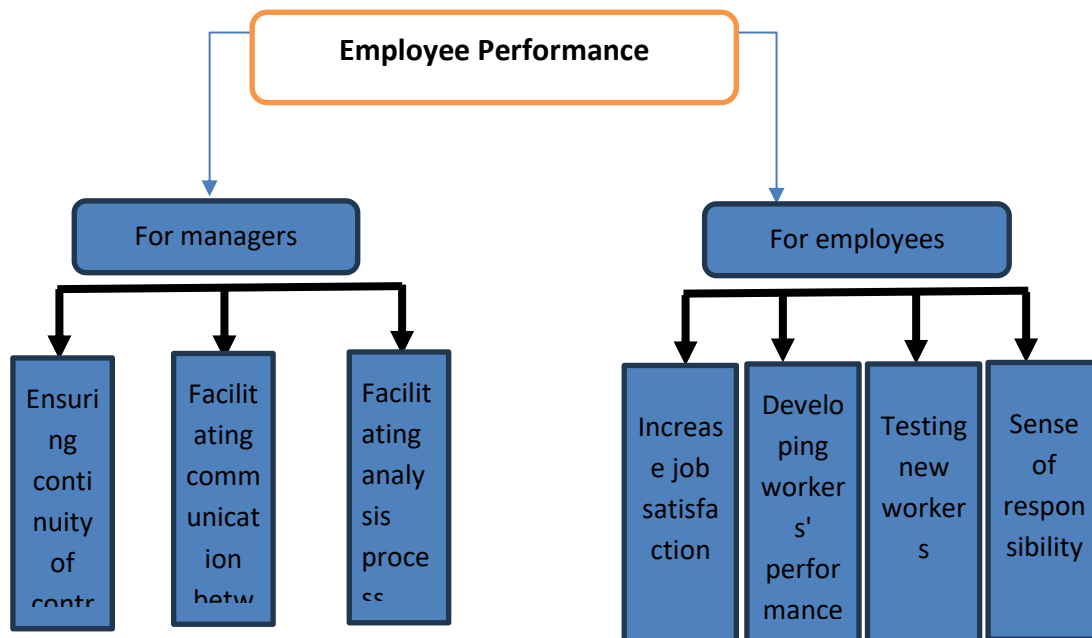
- Individual differences in performance affect differences in the performance of the organization, and therefore it is important for managers to accurately identify low performers and good performers to maintain competitiveness.
- Good performance evaluation leads to facilitating the task of the managers in developing effective training programs.
- Identifying the possibility of transferring an individual from one job to another.
- Standing on the capabilities of supervisors through the seriousness of performance evaluation reports.
- Obtaining sufficient information to achieve justice in the system of reward, merit, and promotion.

2-3-2employee perspective:

- Feedback to the performance evaluation process, which the employee benefits from in acquiring information that helps him know what he needs to develop in aspects of his performance.
- The evaluation also helps the employee to know what the organization expects from him in the future.

- Performance evaluations provide a clear picture of the target performance level, which creates positive motivation for employees.

Figure 33: Importance Of Evaluating Employee Performance



Source : The Researcher

2-4 Performance Evaluation Objectives: (Schultz 2010)

2-4-1 For employees:

- Performance evaluation is a means of developing self-performance because it is a tool through which each employee can know the reality of his performance, the extent of his competence in his field of work, and weaknesses and gaps in his performance.
- Performance evaluation is a means to ensure fair treatment, as it is the employee's path to what he deserves, and it targets various job benefits such as promotion and salary increases.
- The employee's sense of responsibility when he realizes that the results of his performance evaluation lead to decisions related to his future career.
- Raising the morale of employees by improving work relations and enhancing trust between employees and their superiors.

2-4-2 For manager:

- Performance evaluation develops the competence of the superiors, their sound judgment on matters, and the ability to control effectively and continuously through their continuous observations of the behavior of their employees and to give estimates of what has been observed.
- Facilitate the provision of advice and guidance to employees when needed.
- Discover qualified employees for leadership positions.
- Facilitating contact with employees during the evaluation process and the resulting personal knowledge, consolidating positive relationships, and gaining the trust of subordinates.

2-4-3 For organization:

- Suggesting suitable employees to perform the work under their qualifications and skills.
- Providing information and indicators that show the status of the Organization concerning its productivity and the vision of its future.
- Creating an appropriate ethical climate based on trust and free of conflicts and complaints.
- Rationalizing production policies and employment policies by reducing the costs of human work by linking cost and return.
- Assisting the Organization in setting accurate performance rates.
- Helping to plan human resources and charting career paths, helping to attract highly qualified human resources. (Gomez-& Cardy, 2001) (Meyer and Kirsten 2015) (Werner, 2011)

By observing what has been mentioned, we conclude that the objectives of the performance evaluation process can be grouped into two large parts: administrative objectives, and developmental objectives.

2-5 Stages of the performance evaluation process:

The process of evaluating employee performance is carried out according to sequential steps based on logical foundations, as follows:

(USDI, 2008), (OPM, 2002), (Nel, et al 2014) (McPheat 2010)

2-5-1 Formulating performance expectations:

or what is called performance planning, which is the first step in the performance evaluation process, where cooperation takes place between the organization and employees to direct their efforts towards agreement on the tasks to be accomplished and the results that should be achieved so that this agreement becomes the motivation and guide for the behavior of employees and is the basis for evaluating their performance.

These stages mainly include determining the answers to the following questions:

- What should be done? - Why should it be done? - How should it be done well?

2-5-2 Job description and analysis:

Job description and analysis contribute to many activities of human resources management, as its results are a fundamental pillar to ensure the success of any program of human resources management.

The job description defines the features of each job and clarifies its responsibilities and duties, the degree of skill required to fill it, and the amount and type of information to assist in performing it.

2-5-3 Monitoring and real evaluation of performance:

In every effective organization, tasks, and projects are constantly monitored, and continuous feedback is provided to employees about their progress toward achieving goals, which provides the opportunity to verify the extent to which employees' performance matches pre-set standards and to address possible imbalances.

2-5-4 Using the results of the performance evaluation: After taking the step of evaluating the individual performance of the employees, and preparing detailed reports on their performance, the subordinates are informed of the results of the evaluation; As the use of the evaluation results is evidence of the effectiveness and importance of the evaluation process, and among the most important areas of using these results, we mention the following:

- **Determining training needs:** it is considered one of the most important means for preparing sound training programs whose outputs match performance deficiencies and identifying employees who need to develop their competencies and capabilities.

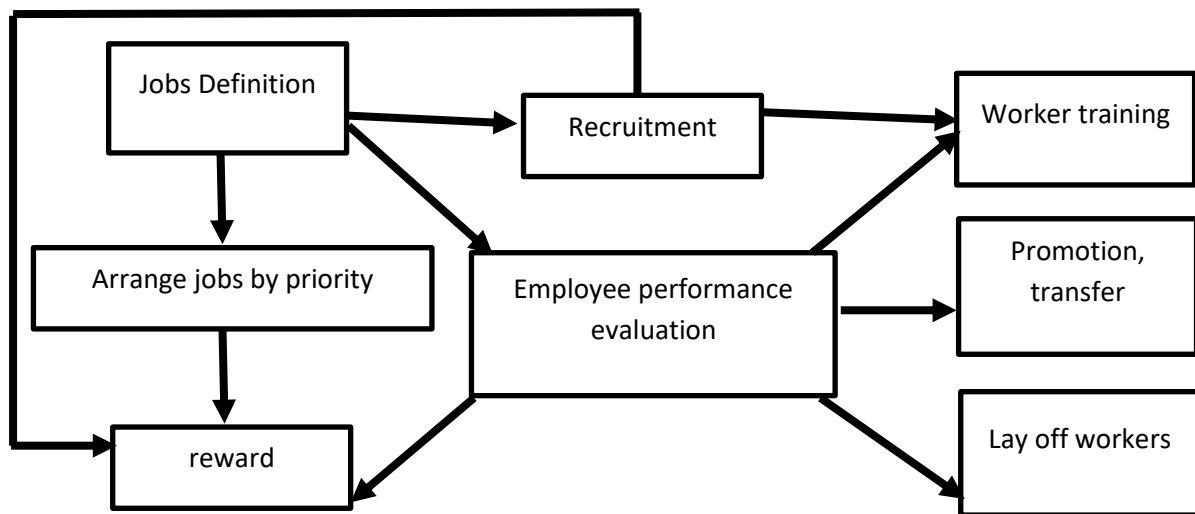
- **Determining incentive rewards and granting allowances:** this is done according to the results obtained in the evaluation, and the classification of employees who deserve to be affected by the incentive system.
- **Discipline and punishment:** The results of the evaluation are relied upon to confirm the truth of the complaints against an employee, based on which he is punished by freezing his promotion, demotion, or dismissal.
- **Recruitment and transfer:** Human resources management relies on the results of performance evaluation as an important criterion for judging the feasibility of hiring employees, the job that matches their competencies, or the need to transfer them to another job.
- **Promotion:** The results of the performance evaluation reveal the number of employees qualified to occupy higher positions because the high efficiency of the employee for several years is considered the most accurate measure to be relied upon to grant precedence in promotion.

2-5-5 Human resources planning: The human resources department benefits from the outputs of the performance evaluation process in the planning process as follows:

- In the case of negative evaluation results: the organization dispenses with low-level human resources, and the need to compensate them emerges in plans, which affects the estimates of the organization's need for human resources in quantity and quality, which is the essence of the human resource planning process.
- In the case of positive evaluation results: we can produce employees with a high level of competence, which poses a challenge to the organization on how to benefit from them and exploit them to increase production.

The following figure explains the position of the individual performance evaluation process within the organization's management processes

Figure 34: The place of evaluating employees' performance within the organization's management processes



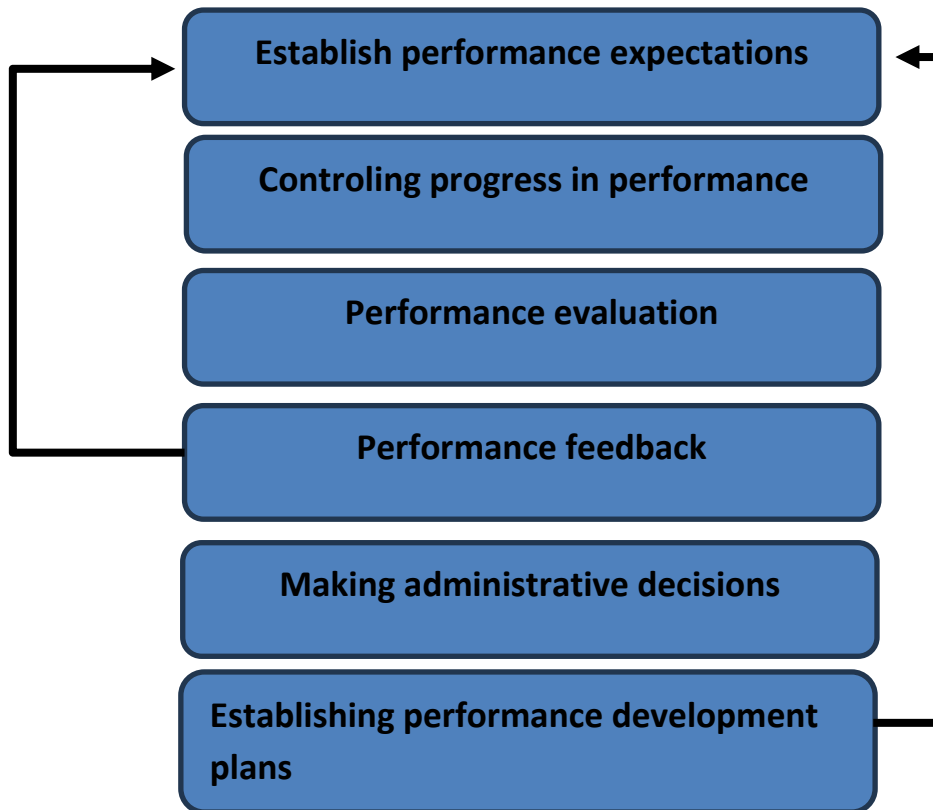
Source : Campoy et al, gestion des ressources humains, 2011, p105 .

2-5-6 feedback: Every employee has the right to know the results of his performance evaluation, to see his strengths and weaknesses, and to discuss them with his superiors completely freely, especially as studies have shown the great impact of discussing the evaluation results on the future performance of individuals and motivating them at work.

2-5-7 Decision-making: The performance evaluation process provides a source of information necessary to make several important administrative decisions related to salaries, promotion, career path, or employee movement (promotion, transfer, termination of their contract).

2-5-8 Developing a performance improvement plan: The results of performance evaluation can lead to discovering some cases in which performance is not up to the required level, and therefore intervention is required to improve performance elements; Increasing employee motivation; Attempting to link collective goals with personal goals; Determine the necessary tasks and try to fit them; Modified the situations that create problems for the employee.

Figure35: Performance Evaluation Process



Source : the researcher based on OPM, Performance Management and Incentive Awards Division, 2002,

2-6 Performance evaluation methods:

Performance evaluation methods can be divided into two groups that depend on the nature of activities, the size of the organization, and other factors: (Cascio, 1995)

2-6-1 Traditional evaluation methods:

These are the methods that rely more on the judgments of the evaluators, including:

- **Simple ranking method:**

This method is one of the oldest and simplest methods, as it relies on arranging the employees subject to evaluation in sequence according to their abilities, depending on a group of factors such as discipline, behavior, cooperation ... etc, so the best employees are placed at the top of the list and the worst ones are at the bottom.

One of the advantages of this method is its ease of use and clarity for employees, especially in small-sized organizations, while it is flawed by the possibility of bias of evaluators due to the absence of accurate evaluation criteria, in addition to the difficulty of applying it in organizations with a large number of employees.

- **Gradient Diagram Method:** This method is considered one of the most simple and common methods because it relies on specific characteristics and criteria in evaluating workers such as performance quality, performance quantities. . . etc.

Then grades and ratings are determined according to a three- or five scale as follows: very weak - weak - acceptable or average - good - very good or excellent.

Then a table is made that highlights the characteristics under evaluation, and the degrees of each individual's characteristics are collected to obtain the final evaluation score. (Dessler, 2005)

- **Gradation method:** It is done by setting classifications for employees, each classification representing a certain degree of performance, and these classifications may be as follows: unsatisfactory performance - satisfactory performance - outstanding performance. (Dessler, 2005)

Then the individuals are arranged according to the degree of performance granted.

- **Double comparison method:**

In this method, the evaluator compares each working individual with all the individuals subject to evaluation in the same group, according to pairs in which the best performers are determined each time.

For example, in a group of five individuals, an employee is compared with the second colleague, then the third, then the fourth, then the fifth, and the number of times each employee excels is recorded. (Mathis & Jackson 2000)

- **Selection and review lists method:** (Mathis & Jackson 2000) This method uses a set of qualities, behaviors, and specifications required for work, defined by the terms; The person in charge of the evaluation marks them with either yes or no, then gives the lists to a group responsible for analyzing them and determining the grades of each employee according to the degree of importance of the criteria.

The advantage of this method is that the evaluator does not know the importance and weight of each statement of work attribute.

- **Field review method:** (Mathis & Jackson, 2000) This method requires representatives of the human resources department to conduct field interviews with managers of operating departments in the organization to inquire about the performance of workers, discuss them, and take their detailed data and information, then arrange their performance according to this information.

One of the advantages of this method is ensuring impartiality in evaluating employees, and one of the disadvantages is that it takes a long time to conduct it.

- **Compulsory selection method:** (Mathis & Jackson, 2000)

the main objective of it is to reduce the factor of personal bias, by providing the evaluator with a set of factors that he is asked to rearrange according to their suitability with the administration, which are later collected and given grades and weights that are confidential and unknown to the evaluator.

- **The critical facts method:** (Mathis & Jackson 2000)

according to which the line manager keeps a notebook in which he writes down the essential facts and events, the employee's behavior, and how he deals with these events, and then translates them into strengths and weaknesses, which are written periodically as a prelude to providing an accurate and correct judgment on the employee's performance.

Written report method: (Mathis & Jackson 2000)

According to this method, the evaluator or the line manager writes detailed reports on the employees' achievements and performance in a constructive manner, showing the strengths and weaknesses of performance, the quantity and quality of production, and the possibility of career advancement for the employee.

2-6-2Modern evaluation Methods: (Mathis & Jackson 2000)

The importance of performance evaluation for the individual and the organization necessitated continuing efforts in developing new and accurate methods and techniques for performance evaluation, based on the shortcomings and drawbacks of traditional methods, including the following:

- **The confidential submission method:** (Mathis & Jackson 2000)

According to which each employee in the organization is evaluated by his direct supervisor, co-workers, or even his subordinates by designing forms that contain questions asked to be answered about his performance in secret without the knowledge of others, then the elements and characteristics to be evaluated are selected by specialists; Finally, each employee is informed of the results of his evaluation.

- **The method of management by objectives:** (Mathis & Jackson 2000) This method was proposed by the American thinker Peter Drucker in 1957 and is defined as the process of meeting the manager with subordinates at the beginning of the project, and agreeing on the results that should be achieved.

This method is based on a set of basic assumptions, the conclusion of which is that the employees of the organization tend to know and understand the things that are expected of them, and they want to participate in the decision-making process that affects their future, and also to constantly check their performance levels, and this is through:

- ✓ **Set measurable quantitative goals.**
- ✓ **The participation of both managers and employees in defining achievable goals.**
- ✓ **Develop an action plan.**
- ✓ **Determine appropriate performance measurement criteria.**

Among the advantages of this method, we list:

- ✓ **Provides for each employee a special and specific measure of performance based on the characteristics and nature of his job.**
- ✓ **Provides an opportunity for each employee to evaluate himself by measuring the results he achieves.**
- ✓ **Clarifying responsibilities and duties, organizing work, and coordinating efforts.**
- ✓ **Focusing on quantitative goals that are easy to measure more than descriptive goals that are difficult to measure.**
- ✓ **Shifting the focus of superiors from criticizing subordinates to examining how to help them.**

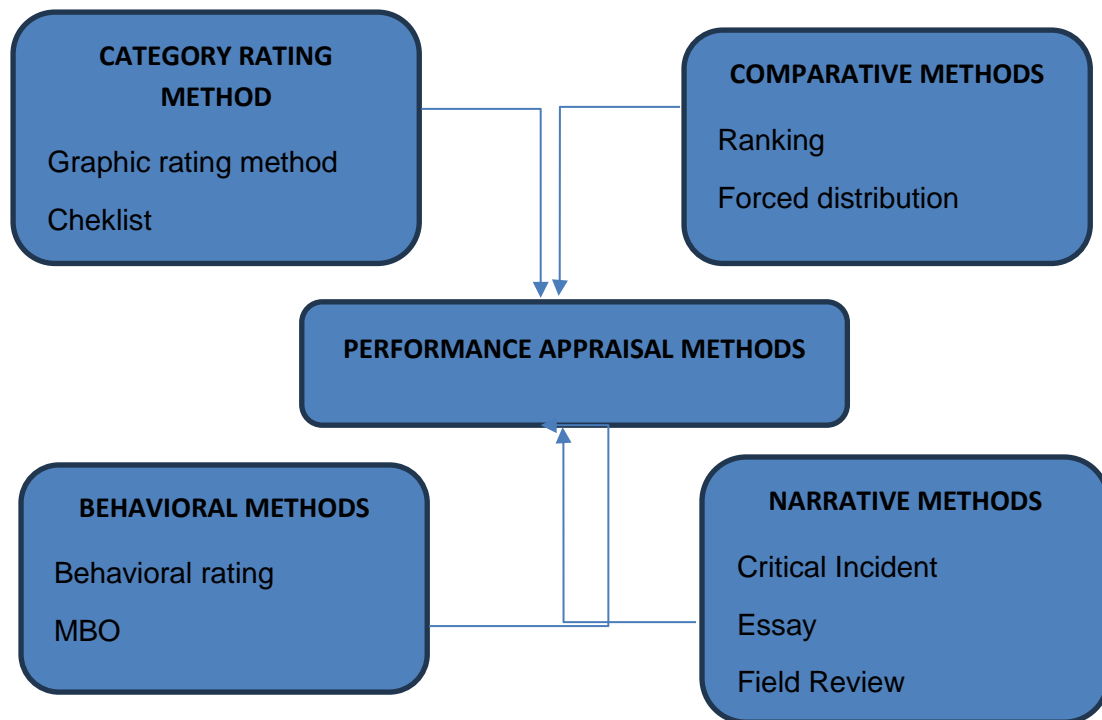
✓ **Developing the educational capacity of employees through project feedback.**

- **The graduated behavioral scale method:** (Mathis & Jackson 2000)

during which an evaluation is given for the specific behavioral characteristics on a graduated vertical scale, as each performance-related characteristic has specific degrees.

This scale mainly depends on the elements included in the Gradient Graph and Critical Situations methods.

Figure 36: Methods of performance appraisal



Mathis et al, « performance Management and appraisal » . Human Resource Management, 2000 . P393

2-7 Elements of performance evaluation: (Riggio, 2003)

The performance appraisal process, like other processes and systems, contains interconnected sub-systems that seek to achieve common goals.

These elements are as follows:

- Inputs of the performance appraisal system: It is represented in the employee who is the subject of the appraisal; the evaluator; and Various information about the evaluation process, such as its objectives and scopes; Evaluation Criteria; and behavior of the employee being evaluated.
- The process of the performance appraisal system: embodies the practices of the managers and evaluators in adopting evaluation methods and means.
- Outputs of the performance appraisal system: It is represented in the results, employee classifications, evaluation information, and decisions based on them in terms of human resources planning, career paths, and assessments of weaknesses.
- Feedback to the performance appraisal system: It is the retrieval of information about the outputs and their application after their evaluation. It is also the employees' impressions of what resulted from the process of evaluating their performance.

2-8 Performance evaluation standards: (Grobler & al., 2011) (van der Westhuizen & Wessels, 2011)

2-8-1 Types of performance standards:

The performance of employees is evaluated using specific criteria, on which the judgment is based on the quality of behavior and efficiency in the employee's performance. These criteria fall into two types: elements and performance rates (results).

2-8-1-1 Elements rates: They include the qualities that must be available in the employee while performing his work, to perform his task successfully and efficiently, such as sincerity and perseverance at work; We can deduce from this definition two types of elements:

- **Elements related to the employee's personality:** including his willingness, abilities, values , and skills; are difficult to measure, evaluate, and observe, and are also called intangible elements.
- **Elements related to the employee's behavior while carrying out his activity:** It is also called the tangible elements that can be observed and measured, such as the ability to set priorities, acquire administrative and communication skills,

the effectiveness of decision-making, problem-solving, delegation skills, as well as planning and leadership.

2-8-1-2 Performance rates: It is a scale used by the rater to measure the employee's productivity, efficiency, and quality in performing his work. Performance rates are evaluated by the following factors:

- **Quantitative results:** according to which a certain quantity of production units is determined that must be achieved within a specific period.
- **Qualitative results:** according to which the quality and mastery of the work are determined and determined by a certain percentage of errors and defects.
- **Time-related results:** that is, the time it takes to produce the required quantity with the required quality.
- **Cost-related results:** that is, the cost of achieving results and the deviation resulting from comparing the actual cost with the target cost.

2-8-2 Performance Measure Conditions: Effective performance standards are required to be accurate in expressing the targeted performance; Accordingly, the designer of performance measures must take care of a set of important conditions to achieve a high degree of accuracy and effectiveness during performance evaluation; Among these conditions:

- **Strategic compatibility:** that is, the extent to which the evaluation system can distinguish the consistency of performance with the goals, objectives, and culture of the organization.
- **Validity:** The extent to which the performance measurement system can evaluate the efficiency of the dimensions related to the good performance of the job.
- **Stability:** It means the stability and compatibility of the results obtained as a result of performance evaluation at different times, or by different evaluators.
- **Discrimination:** We mean by it the ability to clearly distinguish efforts and differences in performance rates that provide decision-makers with the opportunity to make correct decisions related to training, development, and motivation programs.

- **Acceptance:** It is the criterion that indicates the fairness of the performance measure, and reflects the reality of the employee's performance and level of quality.

2-9 Characteristics of performance evaluation measures:

Among the most important characteristics that must be available in individual performance measures, we mention the following:

Strategic alignment: This principle refers to the extent of the link between job performance and the organization's strategy, policy, objectives, and culture.

Honesty: That is, the performance measurement criteria are sufficient to measure the targeted elements and the aspects for which the scale was designed.

Consistency: It means that performance measures lead us to the same results if we use them more than once for the same situation.

The ability to distinguish: we mean by it the differentiation of standards from each other, and their non-overlap or treatment of the same aspect.

Acceptance is considered one of the most important characteristics necessary for the effectiveness of any performance measure, as the refusal to use any of the standards of the measure, whether by managers or employees, is sufficient to question the credibility of any measure.

Specificity: It means that performance standards reflect specific evidence, especially for employees, about what they expect from their performance, and how to meet those expectations.

2-10 Errors and obstacles of performance evaluation:

The performance appraisal process can identify several errors that affect its accuracy and credibility, and there are many possible sources of errors in the performance appraisal process, including:

- The evaluation process is affected by the most recent behavior of the evaluated employee, which overshadows other behaviors that are more common during the entire evaluation period.
- Giving evaluation judgments based on first impressions, as the initial impression can overshadow other fixed behaviors during the evaluation process.

- The "Hallow" effect: It is represented in the classification of an employee as excellent in one aspect of performance, which affects the evaluator, making him unjustly give a similar rating on other aspects of performance.
- Indirect influence: Allowing past ratings to influence current ratings unfairly.
- The evaluation was affected by the arrangement of the performance dimensions: two close dimensions can be evaluated similarly, while they can be evaluated differently if they are far from each other in the arrangement.
- Central classification: that is, giving average evaluations for all characteristics, to avoid giving false evaluations.
- Giving strict and harsh assessments by consistently awarding below-average marks.
- Giving undeserved ratings: that is, consistently giving above-average marks.
- Overestimating the employees holding higher positions is offset by underestimating the employees holding lower-level jobs.
- Giving an employee low ratings in a set of attributes is affected by the low grades of his other attributes, which is the opposite of the "hallow" effect.
- Giving the rater an evaluation less than what the employee deserves, because the employee possesses similar or better qualities and characteristics than those of the rater. (Henderson, 1988) (Hewitt, 1991) (Saravanja, 2011).

Conclusion

Workers in any organization perform duties and responsibilities to achieve a goal or set of goals that the organization's policy has settled on. Performance evaluation plays an important role in defining the amount and type of level of achievement and ensuring the validity of the employees' performance, behavior, and actions during work, and the improvement that has occurred in their performance, and in their treatment of their colleagues and subordinates.

Organizations are interested in influencing employees' cognitive skills and abilities to improve them. The rationale behind this is explained by the human capital theory which states that an organization can invest in the human resource system to improve human capital (skills and abilities) to obtain economic returns.

Human capital theory suggests that employees invest experience in themselves, which enhances their abilities and thus influences job performance.

Performance is defined as the outputs of the human resources system, in other words: employee behaviors, attitudes, and competencies.

Employee outcomes are measured by organizations as employee performance where employee behavior, attitudes, and competencies are judged based on managers' perceptions of employees.

It should also be noted that job performance changes over time because individuals accumulate job experience.

Since job experience leads to the accumulation of relevant knowledge, skills, and abilities, performance should improve.

On this basis, performance models assume that job experience has a positive impact on job performance, as job experience affects job knowledge and mastery of tasks, which in turn has a positive impact on job performance.

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Introduction

The goal of scientific research is to reach results about the studied phenomenon through which it can be understood and linked to the real reasons behind it, and it attempts to understand the nature of the relationship between the variables with each other.

In light of these results, it is later possible to predict the future of this studied phenomenon, as the presence of the same reasons leading to the occurrence of the phenomenon leads to the same results.

Since the subject of the current study is concerned with researching the relationship of knowledge sharing to individual performance and whether organizational memory has a mediating effect on this relationship within Algerian organizations, the researcher attempted to test the hypotheses on which the study was based in the field and apply them to the sample chosen for the research.

By collecting quantitative data produced by the field of study and analyzing them, the various results revealed by the study were addressed. Some results are related to previous studies that were presented in the research and some are related to the hypotheses from which the study began, and then the general results of the study as a whole.

What is noteworthy is that the topic of knowledge sharing and organizational memory still needs extensive studies, especially at the local level, because it is taking its first steps, despite the presence of some studies that have not yet revealed all their dimensions.

To answer the research problem and achieve the main objectives of the field study, which is to study the role of knowledge sharing in improving individual performance by improving the memory of organizations in Algeria, the methodological approach was relied upon in projecting and addressing the subject of the study on a sample of Algerian economic organizations, with a focus on structural modeling as a method of measuring the data obtained from distributing a questionnaire to many employees of these organizations, As they are the most appropriate to address the overall variables related to the subject of the study, we will also try to adopt the statistical tools included in the Partial Least Squares Structural Equation Modeling (PLS-SEM) technique.

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1- An overview of the organizations sampled for the study:

- **METGAV INDESTRY**

METGAV INDUSTRY is located in western Algeria, 15 kilometers from the state of Tlemcen in the municipality of Ain Fezza. It is a company active in the field of metal construction and hot galvanizing surface treatment, which wants to be innovative and long-term in its approach and whose main goal remains the complete and comprehensive satisfaction of its customers to provide them with a competitive advantage.

The company registers its presence in several locations at the national level, such as the central unit of Ain Fazza, located in the state of Tlemcen, and the unit of Boumdfa in the state of Ain Defla.

The Ghazaouat unit was recently opened in the state of Tlemcen, in addition to other units under construction in other places.

As part of the company's expansion and openness to the international market, a unit was recently established in Mauritania and plans are made to open units in other countries on the African level.

The company occupies a total area of 69, 305 square meters and directly employs 900 employees. It also provides indirect jobs estimated at 2, 000 jobs.

The number of its customers exceeds 1, 400 customers inside and outside Algeria, which enables it to gain very high competitiveness and makes it an important figure in the Algerian economy.

- **SONELGAZ**

Sonelgaz is the operator in the field of electricity and gas supply in Algeria. Created in 1969, and works to serve Algerian citizens by providing them with this energy source essential to daily life.

After the promulgation of the law on electricity and the distribution of gas by pipeline, Sonelgaz went from a vertically integrated company to a holding company managing a multi-company and multi-business industrial group.

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Sonelgaz has always played a major role in the economic and social development of the country. Its contribution to the implementation of the national energy policy is commensurate with the important programs carried out in terms of rural electrification and public gas distribution; which made it possible to raise the electricity coverage rate to 99% for 11, 461, 721 customers and a gas penetration rate to 65% for 7, 308, 462 customers. Sonelgaz group is made up of 12 subsidiary companies, managed directly by the holding company, and 13 joint venture companies. The Sonelgaz Group is considered one of the largest employers in the industrial landscape. In 2022, the Sonelgaz Group employs 82, 904 agents in all socio-professional categories, the majority of the workforce is concentrated at the level of the basic business subsidiaries and the works subsidiaries. Furthermore, as part of the national policy to promote female employment, it should be noted that significant efforts have been made in recruiting female staff. The latter represents 11% of the Group's overall workforce; Recruitment is mainly concentrated in the managerial and senior socio-professional groups. The restructuring carried out in recent years, to comply in particular with the provisions of Law No. 02-01 of February 5, 2002, relating to electricity and the distribution of gas by pipelines aimed at the transformation of vertically integrated Sonelgaz, into a group of companies, would not have been completed without taking into account the human factor as an important axis in the new strategic vision of development. Therefore, the Group's companies had to strengthen their workforce and develop their skills to achieve their strategic development objectives. The implementation of major recruitment plans and the establishment of the employment exchange as a new process for detecting managerial skills favored the emergence of new resources that were associated with the construction process of the Sonelgaz Group.

- **SOGERHWIT**

SOGERHWIT (Société Générale for the study and implementation of Hydraulic Works Wilaya de Tlemcen), was a Local Public Enterprise, called “SOGERHWIT”, created in 1973 by interministerial decree. Its Share Capital was set at 1, 000, 000. 00 DA. After it transitions to autonomy and in accordance with the provisions of the decision of the Intersectoral Committee (C. I. S) dated 13/12/1995,

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SOGERHWIT has been transformed into a Public Economic Enterprise (E. P. E) in the legal form of a joint stock company (S. P. A.).

SOGERHWIT specializes in Urban Hydraulic works; Agricultural Hydraulics; Aux processing; Water purification; Prefabrication; Manufacturing of small parts; Hydraulic Study; and Remote management.

- **GROUPE KHARBOUCHE**

The Kherbouche group, specialized in agro-industry, water engineering, and hydraulic projects. Created in 1976. The Kherbouche economic group is made up of eight subsidiaries which operate throughout the national territory:

-INTER ENTERPRISE: created in 1976, to date has 40 years of activity, and expertise in carrying out building, public works, and hydraulic projects.

-AQUATEC: Biotechnology, It mainly intervenes in water treatment, remote management, measuring equipment, water pumping, etc.

-AGRODEEL: was created in 1999 to meet the needs of centrifugal pumps. Both in agriculture, in industry, and for purification systems.

-AGRO-INDUSTRY: Created in 1985. Since its creation, it has always been the first for the introduction of new processes in terms of Pivot, Reel, Drip, Parks and Gardens.

..

-CANAL PLAST: Created in 2005, it is the result of the desire to integrate the group's capabilities in the field of hydraulics.

- EL ALF: Created in 1993: Compound feed for animals (cattle, sheep, poultry, horses, rabbits). With a capacity of 100, 000T/year, it is equipped with an analysis and control laboratory.

-ARBOR ACRES ALGERIA: reproduction and breeding center for grandparents.

-ATLAS CHIMIE: Created in 1987, manufactures and distributes table oils and olive oil.

With proven complementarity and interoperability, the group's subsidiaries, each in their specialties, have been able, thanks to the strategic vision adopted by the group's management and its reputation, to carry out large-scale operations.

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This has enabled the subsidiaries to acquire significant experience and establish lasting relationships with internationally renowned partners, allowing its customers to benefit from the most recent technology while ensuring quality of service that meets international standards.

- **URBAT**

This is a company resulting from the organizational restructuring of the National Center for Urban Studies and Achievements (formerly the National Urban Planning Fund) created by Resolution No. 83166 of 05/03/1983.

On 05/05/1991, the organization was legally transformed into an autonomous limited company with a capital of 1 million Algerian dinars, which currently stands at 191 million dinars.

The Organization includes four large units spread across 4 states: Tlemcen, Saïda, Sidi Bel Abbès, and Béchar. Each unit covers and supervises other neighboring regions and states and also includes four agencies in Ain Temouchent, Ghardaïa, Tindouf, and Saïda.

The Foundation's activities include studies covering many areas

- Urban studies
- Architectural studies
- Study of roads and water networks
- Geotechnical studies

Its human staff also includes administrators, architects, engineers, senior technicians, technicians, in addition to computer and electronic equipment, topographic equipment, excavation equipment, architectural equipment, construction equipment, and means of transport.

The organization strives to achieve numerous goals to achieve greater market share and geographic expansion through business competition.

In addition to developing the skills and knowledge acquired through continuing education and more effective development of the management and management system and knowledge management.

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- **SOITEX**

SOITEX is a textile products production and marketing company located in the industrial zone of Chetouan, Tlemcen

This textile industrial complex, which employs more than 400 workers, specializes in the manufacture of military uniforms and other accessories and the production of technical fabrics, bags, joggers, and medical fabrics.

The company's production reached 4 million square meters of fabric in 2014, and its sales exceeded 1.12 billion dinars during the same year, a performance that has never been achieved in the textile industry sector. It should be noted that Soitex is currently part of the Algerian Company of Industrial and Technical Textiles (EATIT), 60% owned by the Clothing and Shoes Foundation, placed under the supervision of the Military Industrialization Directorate of the Ministry of National Defence.

2- Exploratory and confirmatory study using SMARTPLS

In conducting statistical studies and analyzing their results, researchers rely on the partial least squares structural equation modeling (PLS-SEM) technique for several reasons, which are as follows:

- PLS-SEM deals with complex models that contain many latent variables (constructs) and many paths.
- PLS-SEM Modeling does not require a large sample size as is the case with some other techniques.
- PLS-SEM Modeling does not require that the trend of the sample be subject to a normal distribution.
- PLS-SEM Modeling can easily deal with reflective and formative measurement models or with buildings that have a single measurement index without a problem.
- SEM-PLS Modeling focuses on prediction and exploration, as it does not require prior assumptions.

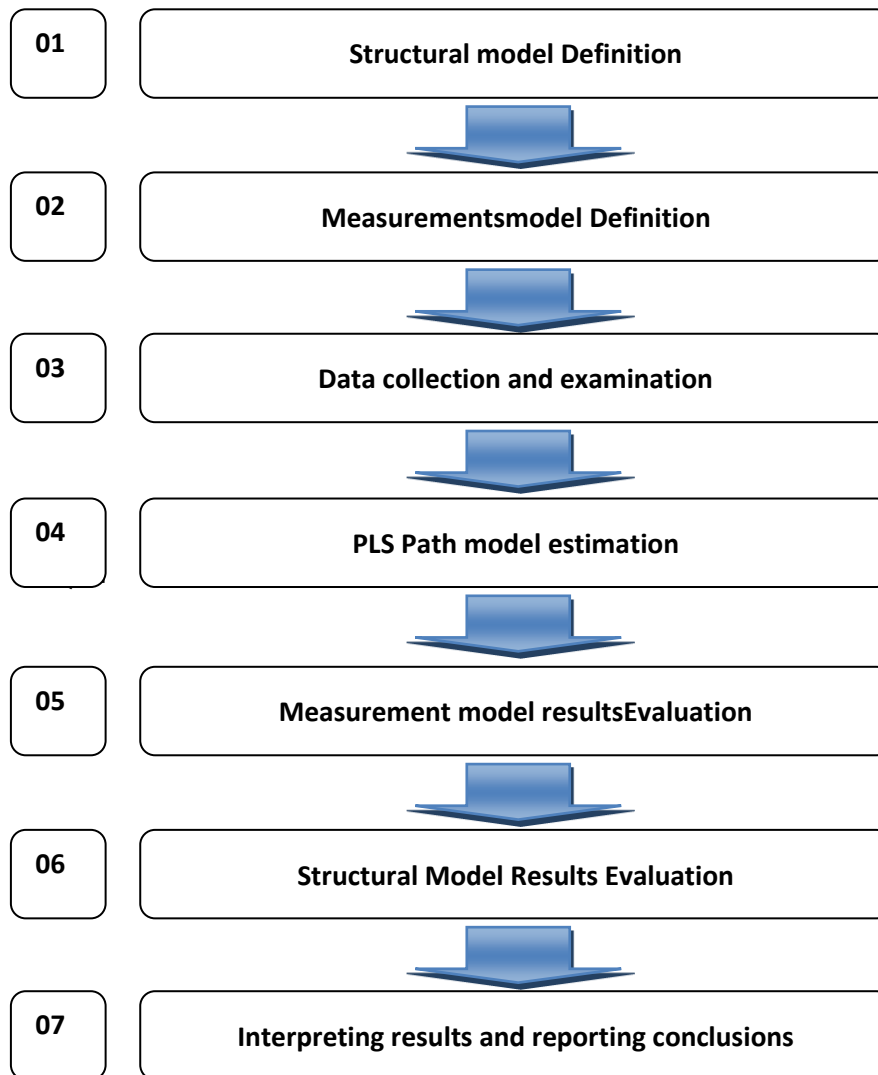
2-1 methodological procedures in applying sem-pls modeling

After the researcher presented the most important reasons for choosing the SMART PLS (SEM-PLS) program as one of the techniques for extracting and

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analyzing the results of second-generation behavioral and social studies and defined all the terms related to it, then he clarified the steps followed to extract the results using this program, and the following figure shows those steps: (Hair & Sarstedt, 2017)

Figure 37: Methodological steps in applying SEM-PLS



Source: The Researcher

From the figure we note that modeling according to SEM-PLS goes through seven sequential stages, starting with defining the structural model until interpreting the results and reporting the conclusion. They can be mentioned in detail as follows:

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-**First stage:** defining the structural model. During this stage, a model for the study is determined according to theoretical data, especially previous studies.

- **Second stage: Determine the measurement model:** determine the indicators for measuring each construct from the structural model, as the measurement indicators are represented by the statements that make up the questionnaire while determining whether the measurement models are reflective or formative.

- **Third stage: Collecting and examining data:** by distributing questionnaires to the sample under study, then collecting and examining them by deleting questionnaires that contain incomplete data and that do not reflect an objective answer for the study sample members.

- **Fourth stage: Estimating the PLS path model:** by running the SEM-PLS algorithm and drawing the structural model in (SMART PLS4) program.

In this stage, the external loadings and external weights for the measurement models, the path coefficients for the structural model relationships are extracted, then the 2R values for the internal buildings as well as the f2 values.

- **Fifth stage: Evaluation of SEM-PLS results for measurement model:** According to this stage, scientific measurement models for the relationships between indicators and constructs and between the constructs between them are evaluated. These measures enable theoretically proven measurement models and structural models to be compared with reality as represented by the sample data.

-**Sixth stage: Structural Model Results Evaluation:** Evaluating the SEM-PLS results of the structural model to extract relationships between constructs (latent variables) and study predictive capabilities, by extracting some results from running the SEM-PLS algorithm, which are:

- Variance Inflation Factor **VIF**
- Path coefficients and statistical significance **P, T**
- Coefficient of determination **R²**

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- Coefficient of determination R^2 adjusted
- Effect size F^2
- Predictive fit Q
- Goodness of fit Gof

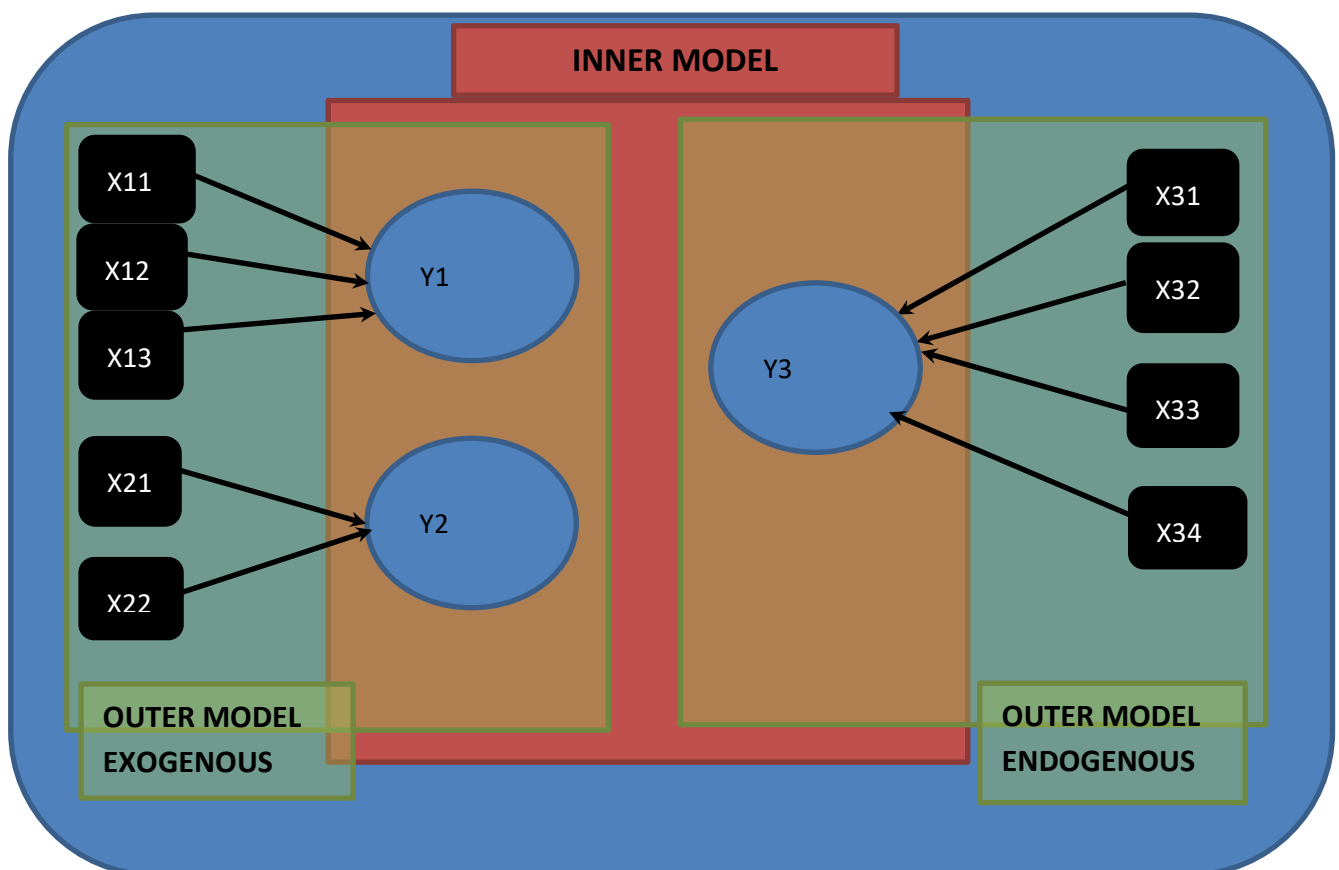
-Seventh stage: Interpreting results and reporting conclusions:

The results are extracted, interpreted, and their conformity with the assumptions that were formulated in building the study model.

2-2 Building a model according to structural equations:

Building a study model according to the SEM-PLS methodology requires identifying the standard model with all its components, as shown in the figure below

Figure38: Standard path model (example)



Source: The Researcher

The figure above shows an example of the components of a standard model that we can rely on to build our study model, as it consists of:

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- Latent variables: These are variables that are not measured directly and are called constructs, which are unobserved variables.

- Indicators: They are also called items (or manifest variables). They are variables measured directly with data and are represented in path models by rectangles.

The relationships between constructs and their indicators are represented by arrows, which in structural equation modeling always have one head, as they represent a one-way relationship.

- Path models: These are graphical charts used to display hypotheses and relationships between the variables to be examined when using structural equation modeling.

- Structural model: also called the internal model (Inner model) represents constructs (circles and ovals) and displays the relationships (paths) between them.

- Measurement models: also called external models or (outer models) display the relationships between the construct and its indicators. It is represented by:

-Exogenous latent variables model: These are the premises that explain the other components of the model.

-Latent Endogenous Variables Model: These are the constructs that are interpreted within the model.

3- Define The Model And Estimate The Results

After we chose structural equation modeling with partial least squares (SEM-PLS) as one of the techniques to extract and analyze the results of second-generation behavioral and social studies, through these sections we will clarify the steps followed to extract the results; Define the structural model and determining measurement model:

3- 1: Define the structural model

The study model is built according to what has been collected and extracted from the theoretical literature regarding the study variables and the relationships that will be discovered.

The conceptual model of the study is based on three basic variables:

The first variable (independent variable) is knowledge sharing,

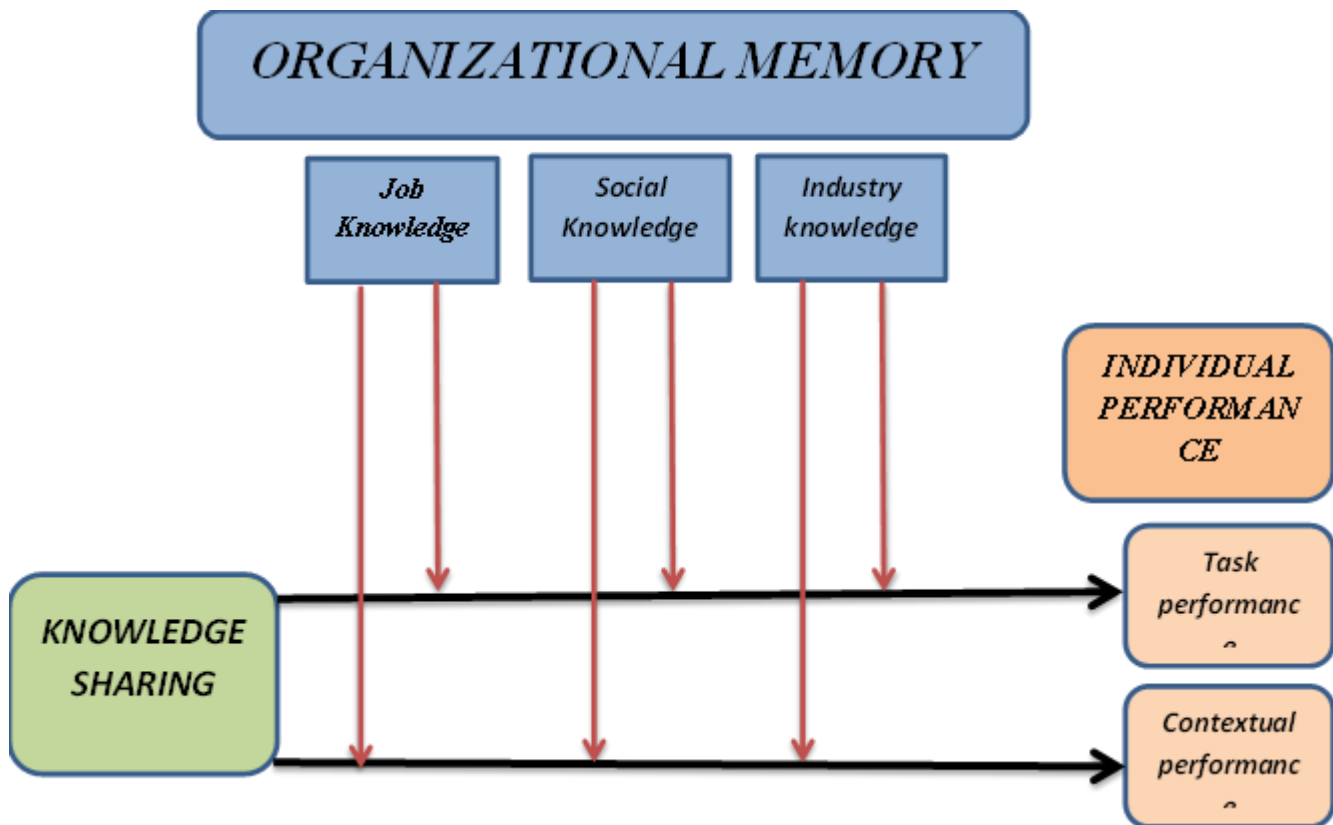
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The second variable (the dependent variable) is individual performance with the dimensions of task performance and contextual performance.

As for the third variable (the mediating variable), organizational memory, its dimensions were work knowledge, social knowledge, and industrial knowledge.

The following figure represents the general conceptual model of the study, which we will adopt in the quantitative research:

Figure39: proposed model for the study



Source: The researcher

Based on the conceptual model of the study and according to the structural modeling methodology in studying the conceptual structure of the model and the relationships between them, we will attempt to address several hypotheses by studying the relationship between variables using structural modeling with partial least squares that focus on path analysis.

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We tried to put forward hypotheses based on the number of perceived relationships that make up the structural model, and the field study hypotheses can be extracted through the model as follows:

The main hypothesis: There is a statistically significant effect of knowledge sharing on individual performance, with organizational memory mediating the relationship for employees of economic organizations in Algeria.

The first sub-hypothesis relates to the relationship between knowledge sharing and organizational memory dimensions and can be detailed as follows

H1_a: There is a statistically significant effect of knowledge sharing on Job Knowledge

H1_b: There is a statistically significant effect of knowledge sharing on Social Knowledge

H1_c: There is a statistically significant effect of knowledge sharing on industry knowledge

The second sub-hypothesis is related to the nature of the relationship between the dimensions of organizational memory and the dimensions of individual performance, and it can be detailed as follows

H2_a: There is a statistically significant effect of Job Knowledge on Task performance

H2_b: There is a statistically significant effect of Social Knowledge on Task performance

H2_c: There is a statistically significant effect of Industry knowledge on Task performance

H2_d: There is a statistically significant effect of Job Knowledge on Contextual performance

H2_e: There is a statistically significant effect of Social Knowledge on Contextual performance

H2_f: There is a statistically significant effect of Industry knowledge on Contextual performance

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The third sub-hypothesis is related to the nature of the relationship between the dimensions of knowledge sharing and the dimensions of individual performance, and it can be detailed as follows

H3_a: There is a statistically significant effect of knowledge sharing on contextual performance

H3_b: There is a statistically significant effect of knowledge sharing on task performance

The fourth sub-hypothesis is related to the nature of the mediating relationship of organizational memory between knowledge sharing and individual performance.

H4: organizational memory mediates the relationship between knowledge sharing and individual performance

3-2 Define measurement models:

During this stage, the researcher formulates and prepares the questionnaire and presents it to specialists for arbitration, because this stage is considered the most important stage of scientific research, which contributes to extracting credible and statistically significant facts.

Within the scope of this study, a questionnaire was designed and directed to employees of a group of Algerian economic organizations.

Whereas, before starting to formulate the items of the questionnaire, an explanatory preamble was drawn up highlighting the aim of the study and that it is directed to the purposes of scientific research.

The questionnaire items were determined based on the theoretical literature for all variables: knowledge sharing, individual performance, organizational memory, and previous studies on the same topic as the current study.

The questionnaire consisted of 23 statements divided into three axes and was designed as follows:

The first axis includes 4 questions related to knowledge sharing, based on the study of (Fong and Choi, 2009)

The second axis is related to organizational memory, which the researcher built based on a study of (Dunham & Burt, 2014) And (Chao et al., 1994).

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- ✓ The first dimension (Job Knowledge) includes 6 items;
- ✓ The second dimension (Social Knowledge) includes 5 items;
- ✓ The third dimension (Industry knowledge) includes 6 items;

The third axis is related to individual performance and was designed based on a study by Koopmans (2014, 2016)

- ✓ The first dimension (Contextual performance) includes 5 items:
- ✓ The second dimension (Task performance) includes 6 items,

Before adopting the questionnaire, which was designed with the help of a group of previous studies that dealt with the variables and dimensions of our study, it was presented to a group of university professors and researchers specialized in management sciences to review it, correct its statements, and adapt it to suit the specificities of the study population. Below is a list of the names of the refereeing professors.

Table. 09: List of refereeing professors for the study questionnaire

Professor	University
Pr. TABETI Habib	Mascara university
Pr. CHENINI Moussa	Higher School of management –Tlemcen
Dr. KERMAS Mokhtar	Mascara university
Dr. LACHACHI Abdelhak	Tlemcen university
Dr. FEROUJ Ramzi	Higher School in computer science- Sidi Bel Abbes

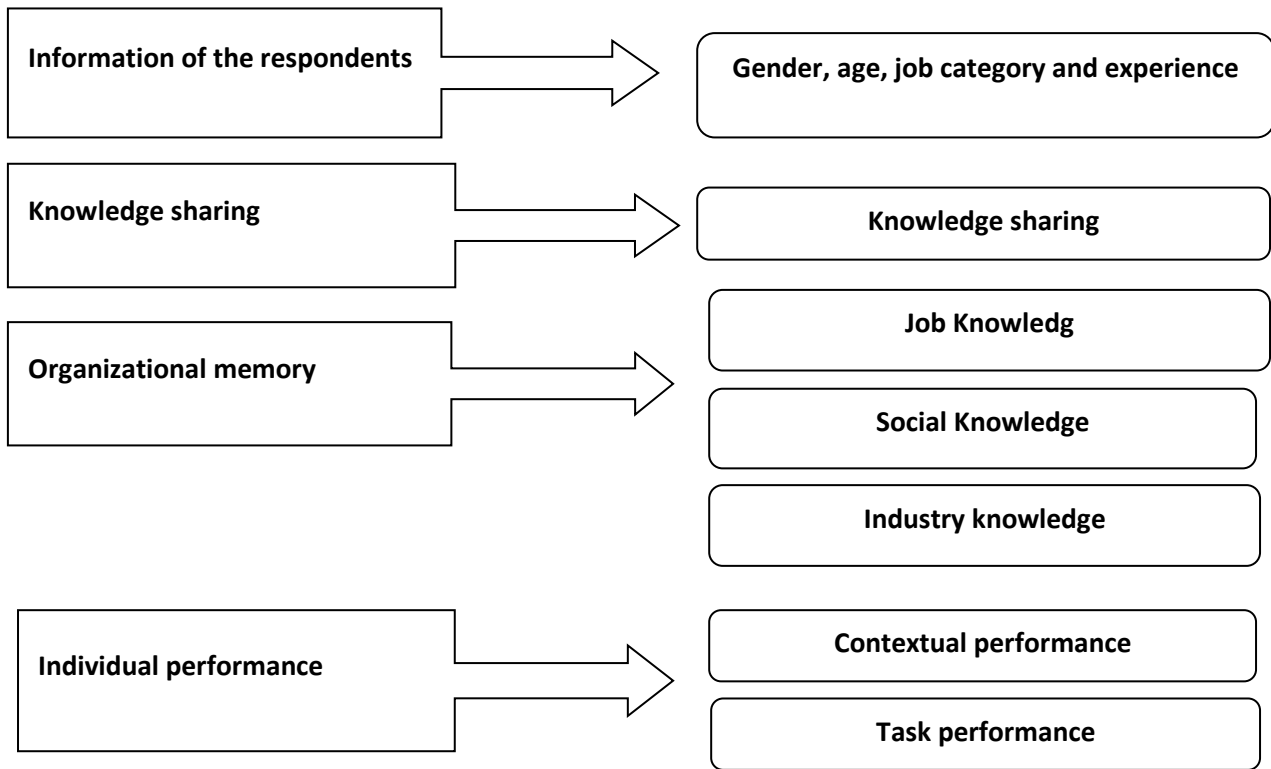
Source: The Researcher

After presenting the questionnaire to the arbitration and doing what was necessary, the current form, the subject of this study, was settled on.

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The following figure accurately explains the contents of the questionnaire:

Figure40: The General Form Of The Study Questionnaire



Source: The researcher

Likert scale was relied upon in this study to measure the respondents' answers to the questionnaire items, to save time and effort, and to measure the behavioral states of the respondents. The five-point scale was chosen as shown in the table:

Table. 10: Likert scale scores (five-point scale)

Pointes	1	2	3	4	5
Answer	Strongly disagree	Disagree	Neutral	Agree	Strongly Agree

Source: The Researcher

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After that, the questionnaire statements were coded as shown in the table below to facilitate and simplify the analysis process using partial least squares (SEM-PLS)

Table. 11: Questionnaire Dimension Codes

variables	Dimensions	Codes
Knowledge sharing	Ks	Ks
Organizational memory	Job Knowledge	Om1
	Social Knowledge	Om2
	Industry knowledge	Om3
Individual performance	Contextual performance	Ip1
	Task performance	Ip2

Source: The Researcher

3-3 Data collection and examination:

Conducting any field study, whether qualitative or quantitative, and concluding statistically significant and credible results to express the phenomenon under study, depends on the credibility of the information collected by the researcher, whether during his field study known as direct sources,

Information derived from his study, documents, and reports, or information about the community under study, or from previous research or studies, or audio-visual interviews of scientific and official bodies, known as indirect sources, so researchers must carefully consider these sources to achieve the desired scientific facts.

Through the table below, we can deduce the number of questionnaires distributed, how many of them are valid for the study, and how many questionnaires were canceled due to their answers being incomplete or the answers being extreme, distorted, or missing, explained as follows:

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Table. 12: Data examination

Organization	Nbr of questionnaires distributed	Distorted questionnaire	Missing questionnaire	Valid questionnaire
Metgav	200	27	0	173
Sonalgas	100	4	4	92
Sogerhwit	55	0	2	53
Group Kharbouch	160	4	3	153
Urbat	55	0	0	55
Soitex	100	5	0	95
Total	670	40	9	621

Source: The Researcher

4- Descriptive Study:

4-1 Description of the study sample according to the age variable:

Table. 13: Distribution Of Respondents According To Their Age

Age	Frequency	Percentage
Under 30 y	151	24 %
30-40 y	352	57 %
40-50 y	74	12 %
50-60 y	44	7 %
Total	621	100 %

Source: The researcher

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From the previous table relating to the distribution of sample members by age, it was found that (352) individuals, or (57%), are between (30 and 40) years old, While the number of those under the age of (30 years) reached (151) individuals, or (24%). Taking the above two percentages shows that the majority of the sample members are under the age of forty, which confirms that the majority of the sample members are from the younger generation.

As for the category (from 40 to 50) years, its number reached (74) individuals, or a percentage of (12%), while (44) individuals were in the category (from 50 to less than 60), with a percentage of (7%).

Through the percentages presented, it becomes clear, firstly, that organizations rely on a rejuvenation policy to give a new breath. This policy was imposed by the changes on the organizations, which now need human resources capable of adapting to the requirements of the new stage, especially the organizations' application of modern international quality standards.

In addition, organizations have witnessed, in recent periods, an increase in requests for retirement, whether from workers or even executives, which exposes organizational memory to a severe drain, which would also reduce the amount of tacit knowledge, especially that which goes with executives leaving the organization.

The second thing that we can determine from the results of the table and the percentages it contains is that the organizations under study have the advantage of having more effective workers and, more importantly, the ability to learn and benefit from new knowledge and old experiences.

The age factor would also give a clear idea of the scientific and cognitive level possessed by the sample under study, as through this variable it can be determined that the newly recruited cadres joining the organizations under study are supposed to have sufficient academic qualifications to obtain this rank, unlike the old cadres, and may not possess these qualifications as a result of obtaining the position by seniority.

In addition to the development witnessed by all sciences, including those concerned with administration and management, many issues and developments have begun to present themselves sharply, such as the topic of knowledge management, which is considered young in the field of administrative studies. It is also considered a field

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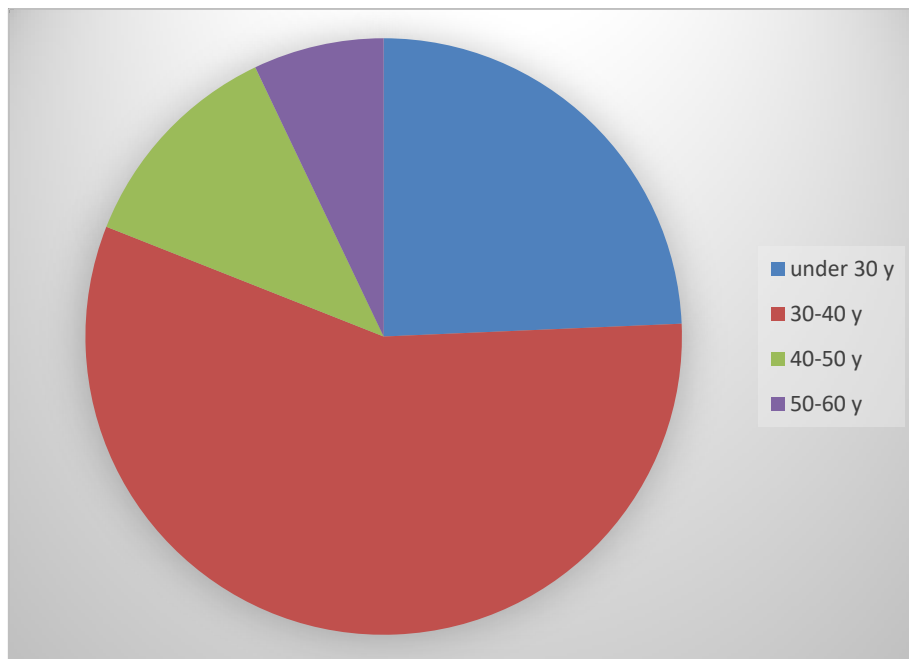
that is still a virgin in Algerian organizations that have witnessed many management models.

For businesses to compete successfully in this century, they will need this brain power.

This is how companies can exploit the knowledge represented in the workforce.

The following chart can provide further clarification regarding the age of the sample under study:

Figure41: Distribution Of Respondents According To Their Age



Source: The research based on Excel outputs

4-2 Description of the study sample according to the gender variable:

Table. 14: Distribution of respondents according to their gender

Gender	Frequency	Percentage
Male	422	68%
Female	199	32%
Total	621	100%

Source: The researcher

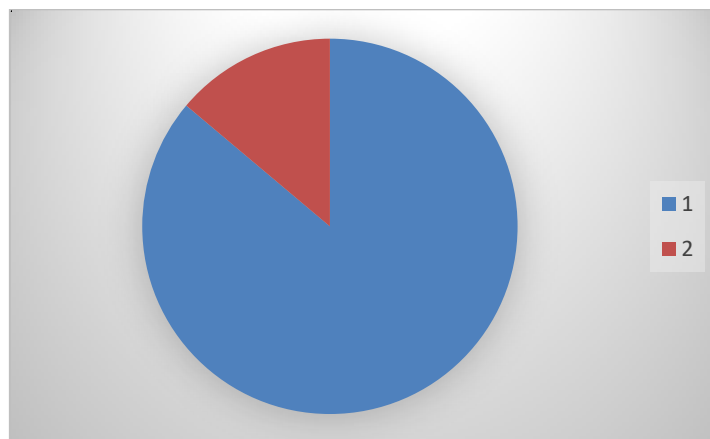
From the previous table, it can be seen that the male gender predominates over the female gender, with a high percentage, as the percentage of males represented 68% (422) and the percentage of females was estimated at 32% (199). This is justified by

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the nature of the tasks and work assigned to employees in these organizations, which depend on the field nature, this can be easily observed in the gender of the employees assigned orders for tasks related to field and technical work of a manual nature.

This is also what was proven by our observation during our field study, where we noticed that females were directed to administrative and office work despite their specializations related to engineering work. While field and technical work is assigned to the male element, this can be attributed to a cultural factor and a gender vision in our perception, which also extends to economic organizations as a social system that recognizes these sexual divisions and consequently determines those functional divisions. The following chart can give further clarification regarding the sample under research in terms of sex:

Figure 42: Distribution of respondents according to their gender



Source: The researcher, based on Excel outputs

4-3 Description of the study sample according to the job category variable:

Table. 15: Distribution of respondents according to their Job category

Job category	Frequency	Percentage
Manual workers	218	35%
Administrative assistants	170	27%
Executives	130	21%
Senior executives	103	17%
Total	621	100%

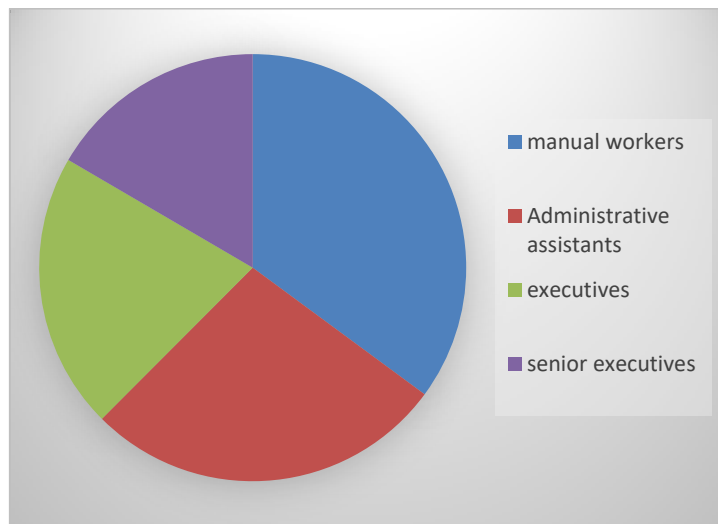
Source: The researcher

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In terms of job level: manual workers constituted the highest percentage (35%), followed by second and third place with somewhat close percentages of (27%), and (21%) related respectively to Administrative assistants and executives, while the percentage of senior executives reached about Its percentage (17%).

This proves the diversity of the research sample, which included all functional levels of the organizations under study, especially since the topics of knowledge sharing, organizational memory, and individual performance affect and concern all employees regardless of their categories.

Figure 43: Distribution of respondents according to their job category



Source: The researcher based on Excel outputs

4-4 Description of the study sample according to the education level variable:

Table. 16: Distribution Of Respondents According To Their Education level

Educational level	Frequency	Percentage
Bachelor's degree	165	27%
Master	122	20%
PhD	14	2%
Secondary level	139	22%
Baccalaureate degree	98	16%
Vocational qualification	83	13%
Total	621	100%

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Source: The researcher

The study sample included different and similar academic qualifications, as the number of sample members who held a bachelor's degree was (165), and the number of people who held a master's degree was (122) employees, while the number of individuals holding a PhD was (14) employees.

This indicates the high educational level of the study sample members as a result of the study sample organizations attracting qualified people in high proportions. It is also an indication of the tendency of these organizations towards developing their cadres by attracting educated competencies capable of absorbing developments in the business environment.

It is also clear from the previous table that the sample studied includes educational levels lower than the university level, including the secondary level, in which the number of holders reached (139) employees, and the number of holders of a baccalaureate degree reached (98) employees, and (83) employees for those who hold the vocational qualification level.

The study sample also included: At other levels of educational attainment that were not included in the division adopted in the study according to the scientific level, most of them were related to engineers, and their number reached (45) employees.

These results show a great reliance of organizations on the university population, which is supposed to have the capabilities and competencies that possess new and updated knowledge, and deal seriously and well with various issues and master them.

The high levels of the organizations under study also require them to rely on a distinctive quality of human resources that carry a large amount of knowledge in their field of specialization and even in other fields related to their performance of their professional responsibilities and obligations by using this knowledge and being prepared to share and pass it on to new generations and colleagues with less experience.

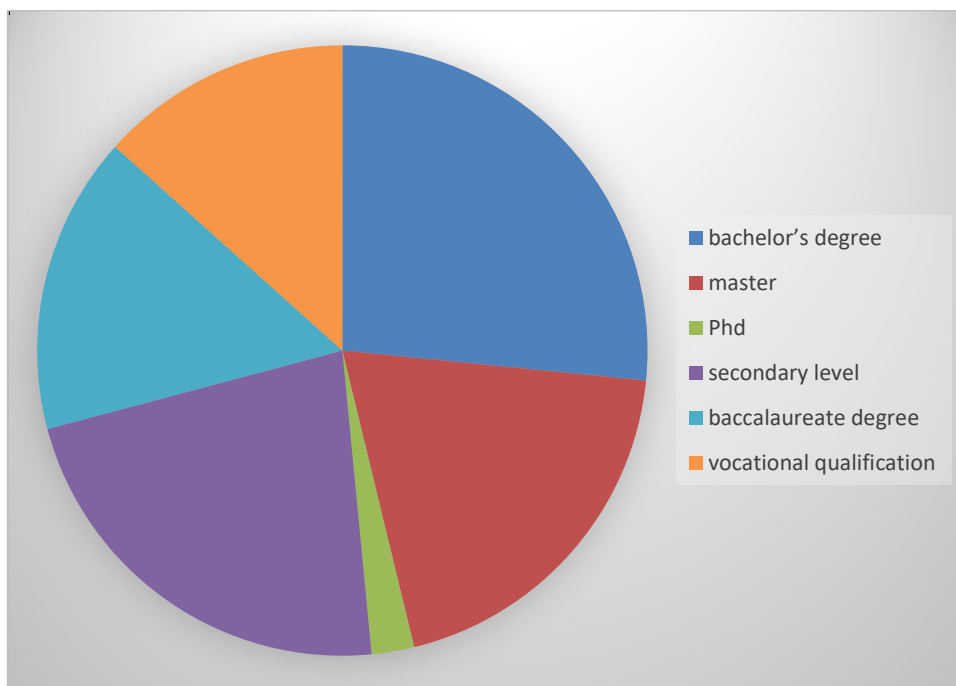
The educational level of individuals within the organization gives a clear picture of possessing the capabilities of using technological means that store knowledge and various communication tools that help exchange knowledge and experiences and access them easily when needed.

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Through these components, any individual can increase the volume of his knowledge and acquire new knowledge because he possesses the qualifications that allow him to do so.

Also, the scientific level can represent to us a type of knowledge that the organization possesses, which relates to the apparent and explicit knowledge that is embodied in various procedures and systems, in addition to the knowledge that exists among the human element, as this knowledge is added to the implicit knowledge that exists in the minds of the human resources that existed before. To increase the knowledge base and its stock of knowledge. As the minds of individuals are considered the starting point for ideas that contribute to constructing and building the knowledge system, and bring the view closer, one can rely on the following chart:

Figure 44: Distribution Of Respondents According To Their Education level



Source: The researcher based on Excel outputs

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4-5 Description of the study sample according to the age variable:

Table. 17: Distribution Of Respondents According To Their Experience

Experience	Frequency	Percentage
Less than 5 years	207	33%
5 to Less than 10 years	128	21%
10 to Less than 15	145	23%
15 to Less than 20	81	13%
20 And more	60	10%
Total	621	100%

Source: The Researcher

The number of sample members with less than five years of experience was (207) employees, with a percentage of (33%). This large percentage of employees with little experience represents an indicator of the hiring of new workers.

It also indicates that there is a wide scope for the organizations under study to adopt an effective development strategy for managing and sharing knowledge and building organizational memory to prepare the necessary numbers of highly experienced employees to exercise their roles with high efficiency in these organizations.

The number of sample members whose length of service was (from 5 to less than 10 years) was (128) employees. As for the number of sample members whose years of experience are limited to (from 10 to less than 15 years), it was (145) employees.

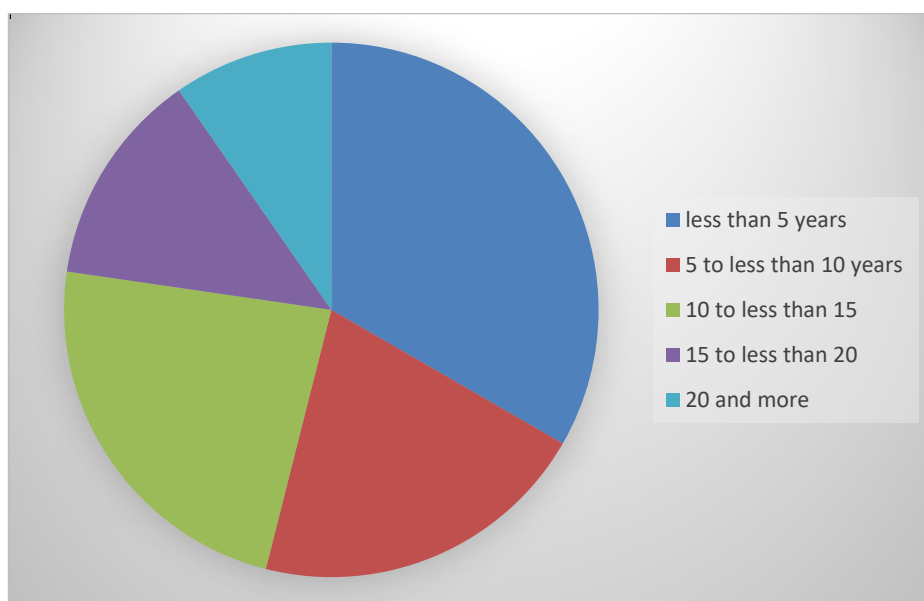
Thus, the second and third categories, respectively, constituted (44%), which is an indication that approximately half of the sample has very good experiences that qualify them to interact with potential changes in the business environment and also qualify them to be a source of tacit knowledge and a repository of it and that there are indications of job stability.,

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The number of employees whose years of experience were (from 15 to less than 20 years), and the sample category (20 years or more) was (23%). This is an indication of the accumulated experience of the employees.

This indicates the tendency of organizations to have the necessary numbers of highly experienced employees to carry out their roles with high efficiency to achieve their goals.

Figure 45: Distribution Of Respondents According To Their Experience



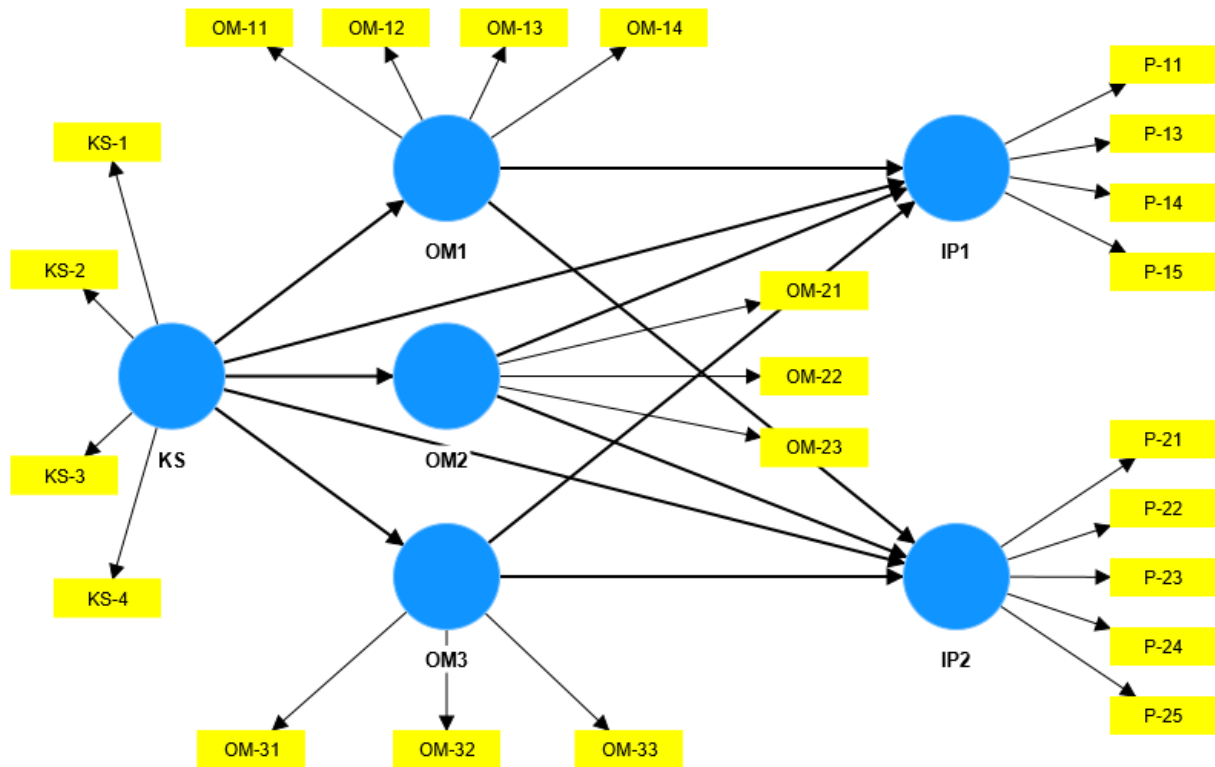
Source: The researcher based on Excel outputs

5- PLS path model estimation and Evaluation

At this stage, we estimate the PLS path model by running the SEM-PLS algorithm, and the initial results of the estimation are shown in the following figure:

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Figure46: Initial Estimated Model of the Study



Source: SmartPLS Outputs

This stage is divided into two stages, the first is to evaluate the results of the PLS-SEM of the measurement model, while the second is to evaluate the results of the PLS-SEM of the structural model, based on its measurement tools, and to extract and interpret the results and the extent of their conformity with the hypotheses that were formulated in building the study model.

Analysis via the smart PLS program is an approach that requires going through two main steps:

The first section is dedicated to measuring the validity of the measurement tool, or what is called the measurement model or outer model, and it is specific to the questions or items that we used to measure the variables.

The second section is the structural model or inner model, which is the relationship between the variables themselves, and by that, we mean the independent variable (exogenous) or the dependent variable (endogenous).

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These measures enable theoretically proven measurement models and structural models to be compared with reality as represented by the sample data.

5-1 Assessment of the Measurement Model (Outer Model):

Before measuring the relationship and results, we must ensure the validity of the measurement tool, as reliability and validity are the most important issues and measurement procedures, building measurement tools, and codifying standards and tests. It is divided into two main parts: Convergent Validity and Discriminant Validity.

They are used together to confirm the validity of the questionnaire. In research, they are evaluated together to prove validity. Neither of them alone is sufficient, but it is important to remember that they are not the same thing. You must first establish convergent validity before testing discriminant validity. (Hair & al, 2010) Together, these two tests allow you to evaluate construct validity. Investigating relationships between constructs helps you ensure a high correlation for convergent validity and a low (or nonexistent) correlation for discriminant validity. (Hair & al, 2010)

In short, while Convergence Validity focuses on similarities, discriminant reliability focuses on differences. Convergent Validity shows you whether two tests that should be highly correlated with each other are.

Discrimination Reliability shows you whether two tests that should not be highly correlated with each other are uncorrelated.

The idea here is that a test should not only correlate with a similar test, but it should also not correlate with dissimilar or unrelated tests to say that the test has high discriminant validity. This means that it only measures the construct it is supposed to measure, and not other constructs.

When both conditions are met (convergent and divergent validity), you can conclude that the test shows evidence of construct validity. It is also worth noting that you must first establish convergent validity before testing discriminant validity. Together, these two tests allow you to evaluate construct validity. (Hair & al, 2010)

5-1-1: Convergent Validity:

a – Individual Item reliability (Item-Factor Loading):

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The test score is constructed of item scores, meaning that all the items in a test contribute to the test-score reliability.

Therefore, individual item-score reliability may be relevant when constructing a test, because an item having low reliability may not contribute much to the test-score reliability and may be a candidate for removal from the test (Hair & al, 2010) .

Currently, instead of item-score reliability researchers use several other item indices to assess item quality, Well-known item-quality indices used in test construction are

(a) the item-rest correlation, also known as the corrected item-total correlation (Lord & Novick, 1968, p. 330); (Nunnally, 1978, p. 281),

(B) the item discrimination parameter (Baker & Kim, 2004, p. 4; Hambleton & Swaminathan, 1985, p. 36).

(c) the item scalability (Mokken, 1971, pp. 148-153);

(d) the loading of an item on the factor which it co-defines (Harman, 1976, p. 15), in this study, is called the item-factor loading; This is the criterion on which our study was based.

For each of these four indices, rules of thumb are available in the psychometric literature that the researcher may use to interpret the values found in empirical data and make decisions about which items to maintain in the test.

High outer loadings on a construct indicate the associated indicators have much in common, which is captured by the construct.

The size of the outer loading is also commonly called indicator reliability.

At a minimum, the outer loadings of all indicators should be statistically significant. Because a significant outer loading could still be fairly weak, a common rule of thumb is that the standardized outer loadings should be 0.708 or higher.

The rationale behind this rule can be understood in the context of the square of a standardized indicator's outer loading, referred to as the commonality of an item.

The square of a standardized indicator's outer loading represents how much of the variation in an item is explained by the construct and is described as the variance extracted from the item.

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An established rule of thumb is that a latent variable should explain a substantial part of each indicator's variance, usually at least 50%. This also implies that the variance shared between the construct and its indicator is larger than the measurement error variance.

This means that an indicator's outer loading should be above 0.708 since that number squared (0.708²) equals 0.50. Note that in most instances, 0.70 is considered close enough to 0.708 to be acceptable.

Researchers frequently obtain weaker outer loadings (< 0.70) in social science studies, especially when newly developed scales are used (Hulland, 1999).

Rather than automatically eliminating indicators when their outer loading is below 0.70, researchers should carefully examine the effects of item removal on the composite reliability, as well as on the content validity of the construct.

Generally, indicators with outer loadings between 0.40 and 0.70 should be considered for removal from the scale only when deleting the indicator leads to an increase in the composite reliability (or the average variance extracted; see next section) above the suggested threshold value.

Another consideration in the decision of whether to delete an indicator is the extent to which its removal affects content validity. Indicators with weaker outer loadings are sometimes retained based on their contribution to content validity.

Indicators with very low outer loadings (below 0.40) should, however, always be eliminated from the construct (Bagozzi, Yi, & Philipps, 1991; Hair et al., 2011).

Table. 18: OUTER LOADING RELEVANCE TESTING

CONSTRUCT	ITEMS	LOADING
KS	KS1	0.895
	KS2	0.804
	KS3	0.837
	KS4	0.932
OM1	OM11	0.868

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	OM12	0.831
	OM13	0.848
	OM14	0.837
OM2	OM21	0.804
	OM22	0.918
	OM23	0.896
OM3	OM31	0.918
	OM32	0.906
	OM33	0.896
IP1	IP11	0.895
	IP12	0.804
	IP13	0.946
	IP14	0.932
IP2	IP21	0.800
	IP22	0.922
	IP23	0.949
	IP24	0.896
	IP25	0.960

Source: The researcher based on smart Pls 4 outputs

Based on the results obtained in the table above and After removing the loading coefficients that did not obtain sufficient results, all the loading indicators (coefficients) for knowledge sharing, individual performance, and organizational memory that make up the measurement model had a value greater than the threshold of 0.50 set by Nunally 1978 and Haïr et al 2010; and Even greater than the 0.70 thresholds set by Hanseler 2009 and Kock 2013.

b- Composite reliability

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▪ Alpha Cronbach

Item reliability is the consistency of a set of items (variables); That is, the extent to which they measure the same thing. When a group of items is consistent, it can create a measurement scale such as a sum scale.

Cronbach's alpha is the most common measure of item reliability; It is the average correlation between items in a measurement scale. If items have variances that vary significantly, standard alpha will be preferred.

When all items are consistent and measure the same thing, the alpha coefficient equals 1. A high value of alpha does not mean that the scale is unidimensional. To prove that a scale is unidimensional, you can use factor analysis to check the dimensions.

It is possible to see the effect of an individual item on the overall alpha value by recalculating Cronbach's alpha excluding that item. If alpha increases when an item is excluded, then that item is not significantly related to the other items in the scale. If alpha decreases, this item correlates with other items in the scale.

The results of data analysis revealed that Cronbach's alpha coefficient for the independent variable knowledge sharing, which is 0.734, was greater than (0.70), and therefore it is acceptable from a statistical standpoint.

This is also the case with the dependent variable, individual performance, in its dimensions (task performance, contextual performance), for which the Cronbach's alpha coefficients, respectively, were (0.900, 0.915) and were greater than (0.70), so they are acceptable from a statistical standpoint.

This is also the case with the mediating variable, organizational memory, with its dimensions (work knowledge, social knowledge, industrial knowledge), for which the Cronbach's alpha coefficients, respectively, were (0.868, 0.746, 0.892) and were greater than (0.70), so they are statistically acceptable.

From what was mentioned above, it is clear that all Cronbach's alpha coefficients for reliability exceeded 0.70, which is an acceptable indication.

▪ Composite reliability rho_a and rho_c

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Two composite reliability measures, coefficient alpha and coefficient omega with unit weights (otherwise known as construct reliability), are commonly used in structural equation modeling.

Composite reliability (sometimes called construct reliability) is a measure of internal consistency in scale items, much like Cronbach's alpha (Netemeyer, 2003). value ranges between 1 and 0, with higher values indicating higher levels of reliability

“C” also known as composite reliability) which can be used to evaluate the reliability of measurement models. This is another way a researcher can measure the internal consistency of his items. It is recommended that the reliability of a construct is at least 0. 70. High composite reliability is a very good indication that all your items constantly measure the same construct.

Reliability values from 0. 60 to 0. 70 are acceptable in exploratory research, while in the advanced stages of research, values considered from 0. 70 and 0. 90 are satisfactory.

Values greater than 0. 90 are not desirable because they indicate that all indicator variables measure the same phenomenon and are likely not valid for measuring the building.

From the results showing the composite Reliability RHOa and RHOc) values for the variables (knowledge sharing), (individual performance), and (organizational memory), we note that all values were limited to between 0. 79 and 0. 95, where the lowest value was (RHOa: 0793). (RHOc: 0. 806) and the largest value (RHOa: 0. 930) and RHOc: 0. 938) This is the range allowed to judge Composite Reliability as being achieved according to each (Peter, 1979) (Nunally & Bernstein, 1994) (Haie et al 2010) (Dijkstra &Hensler, 2015)

This enables us to say that the study's measurement model is characterized by high reliability that allows it to be used.

c- Average Variance Extracted AVE

Convergent validity is a subtype of construct validity and is an indicator that means that the questions or items with which we built the questionnaire can measure variables.

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Using the domain sampling model, indicators of a reflective construct are treated as different (alternative) approaches to measure the same construct.

Convergent validity measures whether constructs that should be related to each other in theory, are related to each other. In other words, it indicates the extent to which the test relates to other tests that measure the same variables indicating a behavior, situation, or concept, especially those that cannot be directly observed.

Ideally, there should be moderate to high convergence and correlation between two tests measuring the same variable. A high correlation is evidence of convergent validity, which in turn is an indicator of construct validity.

To evaluate the convergent validity of reflective constructs, researchers consider the average variance extracted (AVE) proposed by (Fornell & Larcker, 1981).

This criterion is defined as the grand mean value of the squared loadings of the indicators associated with the construct (i. e., the sum of the squared loadings divided by the number of indicators).

In statistics (classical test theory), average variance extracted (AVE) is a measure of the amount of variance that is captured by a construct about the amount of variance due to measurement error.

Using the same logic as that used with the individual indicators, an AVE value of 0. 50 or higher indicates that, on average, the construct explains more than half of the variance of its indicators.

Conversely, an AVE of less than 0. 50 indicates that, on average, more variance remains in the error of the items than in the variance explained by the construct.

So we can say that when a researcher finds the average variance extracted for a construct, he is interested in knowing, on average, how much variations in his items can be explained by the construct or latent variable.

As a rule of thumb and for adequate convergent, an AVE of at least 0. 50 is highly recommended. An AVE less than 0. 50 means that items explain more errors than the variance in the constructs. For any measurement model, an AVE must be calculated for each construct and must be at least 0. 50

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Through the results obtained, we noticed that the value of the average variance extracted (AVE) for knowledge sharing, individual performance, and organizational memory was

All of them are greater than the threshold of 0.50 set by each (Bagozzi 1988), (Barclay, Thompson, and Higgins 1995), (Hair et al. 2010), and (Urbach and Ahleman 2010); Where its value was (0.754) for the independent variable, knowledge sharing, while for the dimensions of the dependent variable, individual performance, it was (0.803) for contextual performance and 0.823 for task performance. As for the mediating variable, organizational memory, it was 0.716 for job knowledge, 0.764 for social knowledge, and 0.822 for industrial knowledge, all of which are statistically acceptable. This means that each latent variable explains more than half of the variances of its indicators.

The following table summarizes all the construct reliability and validity results:

Table. 19: Construct Reliability And Validity

	Cronbach alpha	Composite reliability rho a	Composite reliability rho C	Average variance extractedAve
Ks	0.734	0.793	0.806	0.754
Om1	0.868	0.869	0.910	0.716
Om2	0.746	0.804	0.830	0.764
Om3	0.892	0.895	0.933	0.822
Ip1	0.900	0.916	0.932	0.803
Ip2	0.915	0.930	0.938	0.823

Source: The researcher based on smartpls 4 outputs

5-1-2 Discriminant Validity.

According to (Gefen and Straub, 2005), “discriminant validity is shown when each measurement item correlates weakly with another construct except for the ones to

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which it is theoretically associated”. this means that the extent to which a construct is truly distinct from other constructs by empirical standards.

Thus, establishing discriminant validity implies that a construct is unique and captures phenomena not represented by other constructs in the model.

Traditionally, researchers have relied on two measures of discriminant validity, Cross-loading and the root square of average variance extracted . (Voorhees& al, 2015)

a- Cross loadings

A criterion is a test to determine whether the question belongs to the variable and not to another variable and a popular approach for establishing discriminant validity is the assessment of cross-loadings, which is also called “item-level discriminant validity. ”

The cross-loadings are typically the first approach to assess the discriminant validity of the indicators.

Specifically, an indicator’s outer loading on the associated construct should be greater than any of its cross-loadings (i. e., its correlation) on other constructs, where the researcher examines the various items to identify those that have high loadings on the same construct and those that load highly on multiple constructs.

Thus, to establish discriminant validity at the item level means there is a high correlation between items of the same construct and a very weak correlation between items of a different construct.

In the case of PLS, (Barclay et al, 1995), as well as (Chin, 1998) were the first to propose that each indicator loading should be greater than all of its cross-loadings.

The following table shows the results:

Table. 20: Variation between questions (Cross Loadings)

	KS	OM1	OM2	OM3	P1	92
KS-1	0. 895	0. 187	0. 114	0. 129	-0. 083	-0. 044
KS-2	0. 804	0. 175	0. 097	0. 124	-0. 083	-0. 042
KS-3	0. 837	0. 415	0. 086	0. 527	-0. 617	-0. 558

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KS-4	0.932	0.340	-0.015	0.377	-0.566	-0.539
OM-11	0.432	0.868	0.426	0.549	-0.520	-0.481
OM-12	0.336	0.831	0.329	0.552	-0.538	-0.474
OM-13	0.306	0.848	0.271	0.508	-0.555	-0.513
OM-14	0.401	0.837	0.312	0.441	-0.494	-0.425
OM-21	0.076	0.305	0.804	0.159	-0.014	-0.057
OM-22	0.003	0.314	0.918	0.190	-0.018	-0.030
OM-23	0.075	0.352	0.896	0.240	-0.089	-0.074
OM-31	0.520	0.511	0.175	0.918	-0.677	-0.634
OM-32	0.420	0.518	0.158	0.906	-0.640	-0.602
OM-33	0.391	0.627	0.347	0.896	-0.625	-0.579
IP-11	-0.562	-0.566	-0.079	-0.661	0.895	0.438
IP-12	-0.392	-0.455	-0.097	-0.512	0.804	0.514
IP-13	-0.581	-0.598	-0.068	-0.679	0.946	0.542
IP-14	-0.570	-0.564	-0.012	-0.654	0.932	0.617
IP-21	-0.557	-0.508	-0.069	-0.644	0.578	0.800
IP-22	-0.527	-0.522	-0.079	-0.626	0.771	0.922
IP-23	-0.448	-0.494	-0.071	-0.577	0.546	0.949
IP-24	-0.230	-0.289	-0.029	-0.352	0.478	0.896
IP-25	-0.520	-0.555	-0.067	-0.632	0.689	0.960

Source: The researcher based on smartpls 4 outputs

It is clear from the table above that the loading values of the measurement indicators in their constructs, which are shaded in a different color, are greater than their loadings in the other constructs of the same measurement model.

We illustrate with an example that we find that the loading values of the KS measurement indicator in its dimension knowledge sharing were greater than its loading value in the other constructs of the model.

Its loading values are estimated at 0.895, 0.804, 0.837, 0.932. As for the dimensions of functional knowledge, social knowledge, industrial knowledge, contextual

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performance, and task completion, they are either negative values or values less than the lowest value of the values mentioned.

The same is true for the relationship between the rest of the latent variables and their questions, and therefore it can be said that all measurement indicators in their constructs are better than their presence in any other construct.

b- Fornell-Larcker Criterion

The Fornell-Larcker criterion is the second approach to assessing discriminant validity; it's based on the following "rule of thumb"

It compares the square root of the AVE values with the latent variable correlations.

The AVE values are obtained by squaring each outer loading, obtaining the sum of the three squared outer loadings, and then calculating the average value. (Chin, 2010) (Fornell& Larcker, 1981) .

the positive square root of the AVE for each of the latent variables should be greater than the highest correlation with any other latent variable.

An alternative approach to evaluating the results of the Fornell-Larcker criterion is to determine whether the AVE is larger than the squared correlation with any other construct.

However, in simulation models, this criterion did not prove reliable for composite-based structural equation models but indeed proved to be reliable for factor-based structural equation models. (Fornell& Larcker, 1981) (Chin, 2010)

Some recent research that examined cross-loadings and the Fornell-Larcker criterion found that both criteria do not reveal discriminant validity reliably. To address these shortcomings in the criteria for measuring discriminant validity, the heterogeneity-trait-heterotrait ratio (HTMT) (monotrait-heterotrait) was proposed.

The results of this criterion are shown in the table below:

Table. 21: Fornell-Larcker Criterion

	KS	OM1	OM2	OM3	P1	P2
KS	0. 868					
OM1	0. 436	0. 846				

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OM2	0.080	0.397	0.874			
OM3	0.493	0.607	0.247	0.906		
IP1	-0.604	-0.623	-0.066	-0.715	0.896	
IP2	-0.546	-0.560	-0.075	-0.669	0.637	0.907

Source: The researcher based on smart Pls 4 outputs

The table above shows us a matrix of all dimensions of the study, showing the correlation values of each building in the model with the rest of the other buildings in the same model to be compared with the value of the square root of the average variance of the building itself.

From the results shown, we note that the value of the square root of the average variance extracted (AVE) for social knowledge is equal to 0.874, which is greater than its correlation values with other buildings in the same column and the same line, where we find it 0.397, 0.080, 0.247, -0.066, -0.075,

If we compare all of these values with the square root of the average variance extracted (AVE) for the social knowledge dimension, we notice that they are less than it. The same goes for the values of the square root of the average variance extracted (AVE) for the rest of the dimensions, along with their correlation values among themselves. Accordingly, we say that the latent variables are independent and that there is no interference between the constructs of the measurement model (Fornell & Larcker, 1981).

c- Heterotrait Monotrait (HTMT)

Based on prior research and their study results (Henseler et al., 2015) suggest a threshold value of 0.90 if the path model includes constructs that are conceptually very similar (e. g., affective satisfaction, cognitive satisfaction, and loyalty).

In other words, an HTMT value above 0.90 suggests a lack of discriminant validity.

When the constructs in the path model are conceptually more distinct, a lower and thus more conservative threshold value of 0.85 seems warranted (Henseler et al., 2015).

Furthermore, the HTMT can serve as the basis of a statistical discriminant validity test.

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The confidence interval is the range into which the true HTMT population value will fall, assuming a certain level of confidence (e. g., 95%).

A confidence interval containing the value 1 indicates a lack of discriminant validity.

Also (Henseler et al., 2015) propose assessing the heterotrait-monotrait ratio (HTMT) of the correlations. In short, HTMT is the ratio of the between-trait correlations to the within-trait correlations.

Technically, the HTMT approach is an estimate of what the true correlation between two constructs would be if they were perfectly measured (i. e. if they were perfectly reliable). This true correlation is also referred to as disattenuated correlation.

A disattenuated correlation between two constructs close to 1 indicates a lack of discriminant validity.

In other words, an HTMT value above 0. 90 suggests a lack of discriminant validity.

The results were as shown in the table below:

Table. 22: Heterotrait Monotrait (HTMT)

	Ks	Om1	Om2	Om3	IP1	IP2
Ks						
Om1	0. 470					
Om2	0. 135	0. 493				
Om3	0. 476	0. 691	0. 300			
IP1	0. 551	0. 704	0. 068	0. 795		
IP2	0. 481	0. 615	0. 090	0. 724	0. 491	

Source: The researcher based on smart pls outputs

It is clear to us from the table above that all estimates of the true correlation between each of the two constructs of the measurement model (HTMT) are less than 0. 90, which indicates that there is no overlap between the constructs of the measurement model, which indicates the presence of discriminant validity.

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For example, the true correlation between knowledge sharing and contextual performance is estimated at 0.481, which is a value much lower than 0.9, and therefore there is no overlap between the two constructs (Hensler et al, 2015).

The previous three criteria were explained to us. (Cross Loadings), (Heterotrait montrait), (Fornell and Larcker) that the measurement model has acceptable discriminant validity.

5-2 Assessment of Structural Model (inner Model):

After it has been confirmed that the measurement model under study is reliable and credible in terms of the level of measurement indicators or at the level of buildings, this is evidence that the questionnaire statements are valid for measurement, the SEM-PLS results of the structural model must then be evaluated to extract relationships between the buildings and evaluate predictive capabilities.

This is done by drawing some results based on:

- ✓ **VARIANCE INFLATION FACTOR VIF**
- ✓ **PATH COEFFICIENTS AND STATISTICAL SIGNIFICANCEP; T**
- ✓ **COEFFICIENT OF DETERMINATION R²**
- ✓ **COEFFICIENT OF DETERMINATION R² ADJUSTED**
- ✓ **EFFECT SIZE F²**
- ✓ **PREDICTIVE FIT Q²**
- ✓ **GOODNES OF FIT GOF**

5-2-1 VARIANCE INFLATION FACTOR (VIF):

The Variance Inflation Factor (VIF) measures the severity of multicollinearity in regression analysis. It is a statistical concept that indicates the increase in the variance of a regression coefficient as a result of collinearity.

In regression analysis, multicollinearity exists when two or more of the independent variables demonstrate a linear relationship between them.

With multicollinearity, the regression coefficients are still consistent but are no longer reliable since the standard errors are inflated. It means that the model's predictive

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power is not reduced, but the coefficients may not be statistically significant with a an error.

VIF is another commonly used tool to highlight whether multicollinearity exists in a regression model. It measures how much the variance (or standard error) of the estimated regression coefficient is inflated due to collinearity.

Generally, a VIF above 4 or tolerance below 0. 25 indicates that multicollinearity might exist, and further investigation is required.

When VIF is higher than 10 or tolerance is lower than 0. 1, there is significant multicollinearity that needs to be corrected. Since multicollinearity inflates the variance of coefficients and causes type II errors, it is essential to detect and correct it.

There are two simple and commonly used ways to correct multicollinearity, as listed below:

- The first one is to remove one (or more) of the highly correlated variables. Since the information provided by the variables is redundant, the coefficient of determination will not be greatly impaired by the removal.
- The second method is to use principal components analysis (PCA) or partial least square regression (PLS) instead of OLS regression. PLS regression can reduce the variables to a smaller set with no correlation among them. In PCA, new uncorrelated variables are created. It minimizes information loss and improves the predictability of a model.

A variance inflation factor (VIF) provides a measure of multicollinearity among the independent variables in a multiple regression model.

Detecting multicollinearity is important because while multicollinearity does not reduce the explanatory power of the model, it does reduce the statistical significance of the independent variables.

A large VIF on an independent variable indicates a highly collinear relationship to the other variables that should be considered or adjusted for in the structure of the model and selection of independent variables. A variance inflation factor is a tool to help identify the degree of multicollinearity. Multiple regression is used when a person wants to test the effect of multiple variables on a particular outcome.

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The dependent variable is the outcome that is being acted upon by the independent variables—the inputs into the model.

Multicollinearity exists when there is a linear relationship, or correlation, between one or more of the independent variables or inputs.

Multicollinearity creates a problem in the multiple regression model because the inputs are all influencing each other.

Therefore, they are not independent, and it is difficult to test how much the combination of the independent variables affects the dependent variable, or outcome, within the regression model. While multicollinearity does not reduce a model's overall predictive power, it can produce estimates of the regression coefficients that are not statistically significant.

In a sense, it can be thought of as a kind of double-counting in the model. In statistical terms, a multiple regression model where there is high multicollinearity will make it more difficult to estimate the relationship between each of the independent variables and the dependent variable.

In other words, when two or more independent variables are closely related or measure almost the same thing, then the underlying effect that they measure is accounted for twice (or more) across the variables.

When the independent variables are closely related, it becomes difficult to say which variable is influencing the dependent variables.

Small changes in the data used or in the structure of the model, equation can produce large and erratic changes in the estimated coefficients of the independent variables. This is a problem because the goal of many econometric models is to test exactly this sort of statistical relationship between the independent variables and the dependent variable.

The Variance Inflation Factor (VIF) measures the severity of multicollinearity in regression analysis and it is a tool to help identify the degree of multicollinearity. It is a statistical concept that indicates the increase in the variance of a regression coefficient as a result of collinearity.

In regression analysis, multicollinearity exists when two or more of the independent variables demonstrate a linear relationship between them. With multicollinearity, the

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regression coefficients are still consistent but are no longer reliable since the standard errors are inflated. It means that the model's predictive power is not reduced, but the coefficients may not be statistically significant with an error.

Generally, a VIF above 4 or tolerance below 0.25 indicates that multicollinearity might exist, and further investigation is required. When VIF is higher than 10 or tolerance is lower than 0.1, there is significant multicollinearity that needs to be corrected.

Since multicollinearity inflates the variance of coefficients and causes type II errors, it is essential to detect and correct it. A variance inflation factor (VIF) provides a measure of multicollinearity among the independent variables in a multiple regression model.

Detecting multicollinearity is important because while multicollinearity does not reduce the explanatory power of the model, it does reduce the statistical significance of the independent variables. Multiple regression is used when a person wants to test the effect of multiple variables on a particular outcome.

Multicollinearity exists when there is a linear relationship, or correlation, between one or more of the independent variables or inputs. and it creates a problem in the multiple regression model because the inputs are all influencing each other. Therefore, they are not independent, and it is difficult to test how much the combination of the independent variables affects the dependent variable, or outcome, within the regression model. In statistical terms, a multiple regression model where there is high multicollinearity will make it more difficult to estimate the relationship between each of the independent variables and the dependent variable.

In other words, when two or more independent variables are closely related or measure almost the same thing, then the underlying effect that they measure is accounted for twice (or more) across the variables.

When the independent variables are closely related, it becomes difficult to say which variable is influencing the dependent variables. Small changes in the data used or in the structure of the model, equation can produce large and erratic changes in the estimated coefficients of the independent variables.

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This is a problem because the goal of many econometric models is to test exactly this sort of statistical relationship between the independent variables and the dependent variable.

In general terms,

VIF equal to 1 = variables are not correlated

VIF between 1 and 5 = variables are moderately correlated

VIF greater than 5 = variables are highly correlated

When VIF is higher than 10, there is significant multicollinearity that needs to be corrected. (Hair et al, 1995) (Kennedy, 1992). In this step, each set of prediction constructs will be examined separately for each subpart of the structural model.

Therefore, collinearity should be addressed, especially if there are no critical levels between the predictor variables. All building tolerance values must be greater than 0.20 (VIF value less than 5), otherwise the buildings must be removed or combined into one building.

Table. 23: VARIANCE INFLATION FACTOR VIF

Relationship	Vif Value	Judgements
KS – IP1	1. 458	Moderately correlated
KS – IP2	1. 458	Moderately correlated
KS – OM1	1. 000	Not correlated
KS – OM2	1. 000	Not correlated
KS – OM3	1. 000	Not correlated
OM1- IP1	1. 870	Moderately correlated
OM1- IP2	1. 870	Moderately correlated
OM2- IP1	1. 808	Moderately correlated
OM2- IP2	1. 808	Moderately correlated
OM3- IP1	1. 217	Moderately correlated
OM3- IP2	1. 217	Moderately correlated

Source: The researcher Based OnSmart Pls Outputs

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From the table above, we note that the value of the variance inflation factor (VIF) for the relationship of the knowledge-sharing variable to the work performance variable is equal to 1.458.

As for the relationship of the knowledge-sharing variable to the contextual performance variable, it is equal to 1.458

As for the relationship of the knowledge-sharing variable with the variables of work knowledge, social knowledge, and industrial knowledge, they are all equal to 1.000, and therefore the VIF values for the relationship of the knowledge-sharing variable with the other variables that make up the model are values much less than 5.

Likewise, the VIF values for the relationship with the other variables of the model were less than equal to or less than 1.808. This means that there are no critical levels of linear overlap for the constructs explaining the variables. (Hair et al 2010) (Kock& Lynn2012)

5-2-2 Hypothesis Testing Path Coefficient P Value

The path coefficients represent the hypothesized relationships among the constructs.

The path coefficients have standardized values approximately between -1 and $+1$ (values can be smaller/larger but usually fall in between these bounds).

Estimated path coefficients close to $+1$ represent strong positive relationships (and vice versa for negative values) that are usually statistically significant (i. e., different from zero in the population). The closer the estimated coefficients are to 0, the weaker the relationships. Very low values close to 0 are usually not significantly different from zero.

Whether a coefficient is significant ultimately depends on its standard error that is obtained through bootstrapping. The bootstrap standard error enables computing the empirical t values and p values for all structural path coefficients.

P-value is a measurement that assumes the null hypothesis is correct, meaning that if the value is small, then you can reject the null hypothesis in favor of the alternative hypothesis.

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A large p-value typically means that the data point or set you measured aligns with the null hypothesis, making it the more likely outcome. The p-value is widely used in statistical hypothesis testing, specifically in null hypothesis significance testing. In this method, before conducting the study, one first chooses a model (the null hypothesis) and the alpha level α (most commonly 0.05). When an empirical t value is larger than the critical value, we conclude that the coefficient is statistically significant at a certain error probability (i. e., significance level).

Commonly used critical values for two-tailed tests are 1.65 (significance level = 10%), 1.96 (significance level = 5%), and 2.57 (significance level = 1%).

Critical values for one-tailed tests are 1.28 (significance level = 10%), 1.65 (significance level = 5%), and 2.33 (significance level = 1%). In marketing, researchers usually assume a significance level of 5%.

Ultimately, the choice of the significance level and type of test (one or two tails) depends on the field of study and the study's objective. P-value is the probability of erroneously rejecting a true null hypothesis (i. e., assuming a significant path coefficient when in fact it is not significant). When assuming a significance level of 5%, the p-value must be smaller than 0.05 to conclude that the relationship under consideration is significant at a 5% level.

The bootstrap confidence interval also allows testing whether a path coefficient is significantly different from zero, and provides information on the stability of the estimated coefficient by offering a range of plausible population values for the parameter dependent on the variation in the data and the sample size. When interpreting the results of a path model, we need to test the significance of all structural model relationships using t values, p values, and the bootstrap confidence intervals.

After examining the significance of relationships, it is important to assess the relevance of significant relationships.

The path coefficients in the structural model may be significant, but their size may be very small. Such situations often occur with large sample sizes.

An analysis of the relative importance of relationships is crucial for interpreting the results and drawing conclusions since such small coefficients, even though significant, may not warrant managerial attention. The structural model path coefficients can be

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interpreted relative to one another. If one path coefficient is larger than another, its effect on the endogenous latent variable is greater.

If the path coefficient is statistically significant, its value indicates the extent to which the exogenous construct is associated with the endogenous construct.

Researchers are often interested in evaluating not only one construct's direct effect on another but also its indirect effects via one or more mediating constructs.

The sum of direct and indirect effects is referred to as the total effect.

The interpretation of total effects is particularly useful in studies aimed at exploring the differential impact of several driver constructs on a criterion construct via one or more mediating variables.

Hypothesis testing is a vital process in inferential statistics where the goal is to use sample data to conclude an entire population. In the testing process, you use significance levels and p-values to determine whether the test results are statistically significant. The results of the path coefficients for the model under study were as shown in the table below:

Table. 24: Path Coefficient

	Original sample	Sample mean	Stdev	T statistics	P value	Statistical significance
KS-IP1	318 .0	319 .0	029 .0	044 .11	000 .0	Significant
KS-IP2	491 .0	491 .0	034 .0	240 .14	000 .0	Significant
KS-OM1	449 .0	451 .0	036 .0	615 .12	000 .0	Significant
KS-OM2	520 .0	521 .0	036 .0	597 .14	000 .0	Significant
KS-OM3	464 .0	468 .0	041 .0	280 .11	000 .0	Significant
OM1-IP1	302 .0	298 .0	026 .0	670 .11	000 .0	Significant
OM1-IP2	389 .0	389 .0	031 .0	318 .12	000 .0	Significant
OM2-IP1	411 .0	411 .0	030 .0	501 .13	000 .0	Significant
OM2-IP2	409 .0	410 .0	035 .0	698 .11	000 .0	Significant
OM3-IP1	378 .0	372 .0	031 .0	985 .11	000 .0	Significant
OM3-IP2	340 .0	340 .0	029 .0	604 .11	000 .0	Significant

Source: The researcher based on Smartpls 4 Outputs

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We note from the previous table that the structural model paths adopted in our study have error levels of less than 5%.

First path: KS --> OM1:

We note that the value of statistical significance (P value = 0. 000), which is less than 0. 05, meaning that there is a statistically significant relationship between KS and OM1, with a value (T value) for this path equal to 12. 615, which is greater than the critical value of 1. 96.

Also, the value of (Original Sample=0. 449) is a positive value, which means that the relationship between KS and OM1 is positive and statistically significant and that a change in KS by one unit results in a change in OM1 of 0. 449.

(Hair et al 2010) (Chin1998).

Second path: KS-->OM2

We note that the value of statistical significance (Pvalue = 0. 000) is less than 0. 05, meaning that there is a statistically significant relationship between KS and OM2, and the value (Tvalue) for this path is equal to 14. 597, which is greater than the critical value of 1. 96.

Also, the value (Original Sample = 0. 520) is a positive value, which means that the relationship between KS and OM2 is positive and statistically significant and that a change in KS by one unit results in a change in OM2 of ((520 .0 (Hair et al 2010) (Chin1998)

Third path: KS-- > OM3

We note that the value of statistical significance (Pvalue = 0. 000), which is less than 0. 05, meaning that there is a statistically significant relationship between KS and OM3, with the value (Tvalue) for this path equal to 11. 280, which is greater than the critical value of 1. 96.

Also, the value of (Original Sample = 0. 464) is a positive value, which means that the relationship between KS and OM3 is positive and statistically significant and that a change in KS by one unit results in a change in OM3 of 0. 464 (Hair et al 2010) (Chin1998).

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Fourth path: KS ---> IP1

We note that the value of statistical significance (P-value = 0. 000), which is less than 0. 05, meaning that there is a statistically significant relationship between KS and IP1, with the value (Tvalue) for this path equal to 11. 044, which is greater than the critical value of 1. 96.

Also, the value of (Original Sample = 0. 318) is a positive value, which means that the relationship between KS and IP1 is positive and statistically significant and that a change in KS by one unit results in a change in IP1 of 0.318 (Hair et al 2010) (Chin1998).

Fifth path: KS--->IP2

We note that the value of statistical significance (P-value = 0. 000), which is less than 0. 05, meaning that there is a statistically significant relationship between KS and IP2, with the value (Tvalue) for this path equal to 14. 240, which is greater than the critical value of 1. 96.

Also, the value of (Original Sample =0. 491) is a positive value, which means that the relationship between KS and IP2 is positive and statistically significant and that a change in KS by one unit results in a change in IP2 of 0. 491 (Hair et al 2010) (Chin1998).

Sixth path: OM1--->IP1

We note that the value of statistical significance (P-value = 0. 000), which is less than 0. 05, meaning that there is a statistically significant relationship between OM1 and IP1, with the value (Tvalue) for this path equal to 11. 670, which is greater than the critical value of 1. 96.

Also, the value of (Original Sample = 0. 302) is a positive value, which means that the relationship between OM and IP1 is statistically significant and that a change in OM1 by one unit results in a change in IP1 of 0.302 .0 . (Hair et al 2010) (Chin1998).

Seventh path: OM1-->IP2

We note that the value of statistical significance (P-value = 0. 000), which is less than 0. 05, meaning that there is a statistically significant relationship between OM1 and IP2, with the value (Tvalue) for this path equal to 12. 318, which is greater than the critical value of 1. 96.

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Also, the value of (Original Sample (0)=. . . 0. 389. . . .) is a directed value, which means that the relationship between OM1 and IP2 is statistically significantly positive and that a change in OM1 by one unit results in a change in IP2 of 389 .0 (Hair et al 2010) (Chin1998)

Eighth path: OM2 --->IP1

We note that the value of statistical significance (P-value = 0. 000), which is less than 0. 05, meaning that there is a statistically significant relationship between OM2 and IP1, with the value (Tvalue) for this path equal to. . . . 13. 501. . . which is greater than the critical value of 1. 96.

Also, the value of (Original Sample=. . . 0. 411. . . .) is a directed value, which means that the relationship between OM2 and IP1 is statistically significantly positive and that a change in OM2 by one unit results in a change in IP1 of 411 .0 (Hair et al 2010) (Chin1998)

Ninth path: OM2--->IP2

We note that the value of statistical significance (P-value = 0. 000) is less than 0. 05, meaning that there is a statistically significant relationship between OM2 and IP2 with the value (Tvalue) for this path equal to. . . . 11. 698. . . which is greater than the critical value of 1. 96.

Also, the value of (Original Sample =. 0. 409.) is a directed value, which means that the relationship between OM2 and IP2 is positive and statistically significant and that a change in OM2 by one unit results in a change in IP2 of 0. 409 (Hair et al 2010) (Chin1998)

Tenth path: OM3--->IP1

We note that the value of statistical significance (P-value = 0. 000) is less than 0. 05, meaning that there is a statistically significant relationship between OM3 and IP1 with the value (Tvalue) for this path equal to. 11. 985. . . which is greater than the critical value of 1. 96.

Also, the value of (Original Sample =0. 378) is a directed value, which means that the relationship between OM3 and IP1 is positive and statistically significant and that a change in OM3 by one unit results in a change in IP1 of 0. 378 (Hair et al 2010) (Chin1998)

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eleventh Path: OM3---> IP2

We note that the value of statistical significance (P-value = 0.000), which is less than 0.05, meaning that there is a statistically significant relationship between OM3 and IP2, with the value (Tvalue) for this path equal to 11.604 which is greater than the critical value of 1.96.

Also, the value of Original Sample = 0.340 is a directed value, which means that the relationship between OM3 and IP2 is positive and statistically significant and that a change in KS by one unit results in a change in IP2 of 0.340 (Hair et al 2010) (Chin 1998).

5-2-3 Coefficient Of Determination R^2

When it comes to data analysis, understanding variance is a key concept.

Variance refers to the amount of dispersion or spread of data points around the mean.

In other words, variance measures how far a set of observations are from the mean. By understanding variance, we can gain insights into the level of variance within a data set, which can be useful in making predictions or drawing conclusions about the data.

The coefficient of determination is a statistical measurement that examines how differences in one variable can be explained by the difference in a second variable when predicting the outcome of a given event.

In other words, this coefficient, more commonly known as r-squared (or r^2), assesses how strong the linear relationship is between two variables and is heavily relied on by investors when conducting trend analysis.

The coefficient of determination is used to explain the relationship between an independent and dependent variable.

This measure is represented as a value between 0.0 and 1.0, where a value of 1.0 indicates a perfect correlation. This indicates that there is a way to know that correlation, namely the correlation coefficient, which can be considered an indicator of that correlation in determining the nature and strength of the relationship according to the forms of positive, negative, and moderate correlation, as each of them has a form of spread in the relationship. (Falk & Miller, 1992)

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What is meant by the correlation coefficient in statistics is a statistical numerical measure of the strength of the linear relationship between two variables. Thus, it is a reliable model for future forecasts, while a value of 0.0 suggests that asset prices are not a function of dependency on the index.

The value of the correlation coefficient ranges from (-1) to (1) between the two variables. (Falk & Miller, 1992)

Where the first coefficient (-1) describes a perfect negative or inverse correlation.

The coefficient (1) is the perfect positive correlation or direct relationship.

While the coefficient 0 indicates that there is no linear relationship between the two variables.

When the coefficient is close to (-1) or (+1), this means that the correlation is strong.

Because the R^2 is the squared correlation of actual and predicted values and, as such, includes all the data that have been used for model estimation to judge the model's predictive power, it represents a measure of in-sample predictive power (Rigdon, 2012) (Sarstedt & Hair, 2014).

It is difficult to provide rules of thumb for acceptable R^2 values as this depends on the model complexity and the research discipline.

In scholarly research that focuses on management and administrative issues, R^2 values of 0.75, 0.50, or 0.25 for endogenous latent variables can, as a rule of thumb, be respectively described as substantial, moderate, or weak (Hair et al., 2011; Henseler et al., 2009).

- **Adjusted R^2**

Assuming we need a higher R square value, we can simply increase the number of independent variables in your model. R square increases with an increase in the number of independent variables. To curb this situation, an adjusted R square was introduced.

Adjusted R square, as the name implies, adjusts the number of independent variables in the model and only improves when the new variable added improves the model; decreases when the new variable does not affect the model. Most often, adjusted r square is reported for a sufficiently complex model with a lot of predictors.

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The following table shows the **R-square & R-square adjust** values obtained by the researcher.

Table25: R²& R²adjust

	R²	R² adjusted
Om1	501 .0	500 .0
Om2	570 .0	569 .0
Om3	504 .0	503 .0
Ip1	679 .0	677 .0
Ip2	572 .0	570 .0

Source: The Researcher Based OnSmartpls 4 Outputs

Through the table shown above, we note that the values of the coefficient of determination R² and the adjusted coefficient of determination R² Adjusted for all variables all indicated (moderate predictive power), as the KS variable explains 50% of the job knowledge variable, and in the same proportion it explains industrial knowledge, while it explains an amount of 57% of social knowledge.

All of them are ratios that indicate moderate predictive power.

While the three dimensions of organizational memory together represent an amount of 0. 679, which is 68% of the work performance variable and 57% of the contextual performance variable, It also indicates moderate predictive power according to (Hair et al 2010) (Chin 1998).

5-2-4 Effect Size F2

In a multiple regression model where both independent and dependent variables are sustainable, one of the most common methods for calculating the effect size of each of the variables or construct is Cohen's f².

Cohen categorized effect size as small, medium, or large. Effect size indicates how meaningful the relationship between variables or the difference between groups is. and indicates the practical significance of a research result.

A large effect size means that a research finding has practical significance, while a small effect size indicates limited practical applications. While statistical significance

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shows that an effect exists in a study, practical significance shows that the effect is large enough to be meaningful in the real world.

Statistical significance is denoted by p values, whereas practical significance is represented by effect sizes. Statistical significance alone can be misleading because it's influenced by the sample size (Cohen, 1988).

Increasing the sample size always makes it more likely to find a statistically significant effect, no matter how small the effect truly is in the real world.

That's why it's necessary to report effect sizes in research papers to indicate the practical significance of a finding.

Broadly speaking, an effect size is "anything that might be of interest"; Identifying the effect size (s) of interest also allows the researcher to turn a vague research question into a precise, quantitative question (Cumming, 2014).

For the reader to appreciate the magnitude or importance of a study's findings, it is almost always necessary to include some measure of effect size in the Results section. (American Psychological Association, 2001). One relatively uncommon, but very informative, standardized measure of effect size is Cohen's f^2 , which allows an evaluation of local effect size, i. e., one variable's effect size within the context of a multivariate regression model. (Cohen, 1988)

Effect sizes are an important complement to null hypothesis significance testing, in that they offer a measure of practical significance in terms of the magnitude of the effect, and are independent of sample size.

Guidelines for assessing f^2 are that values of 0. 02, 0. 15, and 0. 35, respectively, represent small, medium, and large effects (Cohen, 1988) of the exogenous latent variable. The following table shows the results obtained by the researcher in his study

Table. 26: Effect size F2

	Ip1	Ip2	Ks	Om1	Om2	Om3
Ip1						
Ip2						
Ks	0. 216	0. 286		0. 252	0. 370	0. 357
Om1	0. 152	0. 171				

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Om2	0. 291	0. 217				
Om3	0. 191	0. 170				

Source: The researcher based on Smartpls 4 Outputs

It is clear from the results of the table above that there are medium values and large values, as the values for the effect of **KS** on **IP2 - IP1 - OM3 - OM2 - OM1** were: Respectively **(0. 370); (0. 252); (0. 357); (0. 216); ((286 .0.**

These values express the average effect of knowledge sharing on task performance, contextual performance, and work knowledge and the significant impact of knowledge sharing on social knowledge and industrial knowledge.

As for the effect of OM1 on IP1 and IP2, the values were as follows:

OM1 ----- >IP1= 0. 152

OM1 ----- >IP2= 0. 171

These are values that express an average effect.

As for the effect of OM2 on IP1 and IP2, the values were as follows:

OM2 ----- > IP1 = 0. 291

OM2 ----- > IP2 = 0. 217

These are values that express an average effect.

As for the effect of OM3 on IP1 and IP2, the values were as follows:

OM3 ----- >IP1= 0. 191

OM3 ----- >IP2= 0. 170

These are values that express an average effect.

These results indicate that each variable has a different effect on the model.

5-2-5 Predictive Relevance Q²-Blindfolding

To judge the model's quality researchers using PLS-SEM rely on alternative measures that assess the model's predictive capabilities (Shmueli et al, 2016); (Shmueli et al., 2019), both in-sample and out-of-sample (Hair, 2020).

In addition to evaluating the magnitude of the R² values as a criterion of predictive accuracy, researchers should also examine Stone-Geisser's Q² value (Geisser, 1974; Stone, 1974). This measure is an indicator of the model's out-of-sample predictive power or predictive relevance.

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When a PLS path model exhibits predictive relevance, it accurately predicts data not used in the model estimation. In the structural model, Q^2 values larger than zero for a specific reflective endogenous latent variable indicate the path model's predictive relevance for a particular dependent construct.

The Q^2 values estimated by innervation represent a measure of how well the path model predicts the originally observed values. Where a value of 0.02 indicates that an exterior building has a small predictive fit for a particular indoor building, a value of 0.15 indicates a moderate predictive fit, while a value of 0.35 indicates a large predictive fit. The Q^2 value is obtained by using the blindfolding procedure for a specified omission distance D .

Blindfolding is a sample reuse technique that omits every D^{th} data point in the endogenous construct's indicators and estimates the parameters with the remaining data points (Chin, 1998) (Henseler et al., 2009); (Tenenhaus et al., 2005).

A Q^2 value greater than 0 for an endogenous latent variable indicates a good predictive fit of the path model for a given dependent construct. In contrast, values of 0 and below indicate a lack of predictive relevance.

Blindfolding is a sample reuse technique. It allows for calculating Stone-Geisser's Q^2 value (Stone, 1974) (Geisser, 1974) which represents an evaluation criterion for the cross-validated predictive relevance of the PLS path model.

Besides evaluating the magnitude of the R^2 values as a criterion of predictive accuracy, researchers may desire to also examine Stone-Geisser's Q^2 value (Stone, 1974) (Geisser, 1974) as a criterion of predictive relevance.

We summarized the results obtained in the following table:

Table. 27: Predictive Relevance Q^2

	$Q^2 = (1-sse/sso)$	Result
Ip1	0.504	Large predictive fit
Ip2	0.384	Large predictive fit
Om1	0.355	Large predictive fit
Om2	0.400	Large predictive fit

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Om3	0. 190	Moderate predictive fit
-----	--------	-------------------------

Source: The researcher based on Smartpls 4 Outputs

From the results of the table above, we find that all predictive units are completely greater than zero, which indicates, according to (Stone 1975) and (Geisser 1975), that all internal variables of the model have acceptable predictive ability.

5-2-6 Goodness of Fit

The goodness of Fit (GOF) of a statistical model describes how well it fits into a set of observations.

Measures of goodness of fit typically summarize the discrepancy between observed values and the values expected under the model in question.

GOF statistics are GOF indices with known sampling distributions, usually obtained using asymptotic methods, that are used in statistical hypothesis testing.

As large sample approximations may behave poorly in small samples, a great deal of research using simulation studies has been devoted to investigating under which conditions the asymptotic p-values of GOF statistics are accurate (i. e., how large the sample size must be for models of different sizes). (Henseler &Sarstedt, 2013)

When more than one substantive model is under consideration, researchers are also interested in a relative model fit (Yuan& Bentler, 2004) (Maydeu& Cai, 2006).

Goodness-of-fit tests are statistical tests to determine whether a set of actual observed values match those predicted by the model.

Amato recently proposed the Goodness of Fit (GoF) index. This remains the only available measure to evaluate the global model fitting in a PLS-PM model.

Such an index has been developed to take into account the model performance in both the measurement and the structural model. (Henseler &Sarstedt, 2013)

The GoF can be useful to assess how well a PLS path model can explain different sets of data. (Tenenhaus et al. 2005)and it has been developed as an overall measure of model fit for PLS-SEM.

In brief, we can say that the criteria ofGofto determine whether Gof values are no fit, small, medium, or large to be considered as a global valid PLS model have been given by (Wetzels et al, 2009) table below presents these criteria:

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Table. 28: GOF criteria

GOF less than 0. 1	No fit
Gof between 0. 1 to 0. 25	Small
Gof between 0. 25to 0. 36	Medium
Gof greater than 0. 36	Large

Source: The researcher based on Wetzels et al, Using PLS Path Modeling for Assessing Hierarchical Construct Models, 2009

Table. 29: R²& Ave results

Variable	R²	AVE
Ks	/	0. 754
Om1	0. 501	0. 716
Om2	0. 570	0. 764
Om3	0. 504	0. 822
Ip1	0. 679	0. 803
Ip2	0. 572	0. 823
Average	0. 565	0. 780

Source: The researcher based on smart Pls4 outputs

$$\text{Gof} = \text{Root Square (average R}^2 \times \text{Average AVE)}$$

$$\text{Gof} = \text{Root Square (0. 565} \times \text{0. 780)}$$

$$\text{Gof} = \text{Root Square (0. 4407)}$$

$$\underline{\text{Gof} = \text{0. 664}}$$

According to the above table and the value of the Gof **0. 664**, it can be concluded that the Gof model of this study is large enough to be considered sufficient for global PLS validity.

5-2-7 THE MEDIATOR (Explanatory variable)

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Structural model relationships in PLS-SEM imply that exogenous constructs directly affect endogenous constructs without any systematic influences of other variables. In many instances, however, this assumption does not hold. Specifically, a third variable in the analysis can change our understanding of the nature of the direct relationships under consideration. The two most prominent examples of such extensions include mediation and moderation.

Ignoring mediating effects can introduce significant bias in the interpretation of results when a variable does not have a direct effect because its effect is mediated by another variable. Thus, the mediation model has become “almost obligatory” in contemporary literature and research endeavors, as mediation is considered one of how the researcher can explain the processor the mechanism by which one variable affects another” (MacKinnon et al., 2007). Mediation is typically the standard technique and procedure to test theories to understand the causal relationship and helps to go beyond studying a simple relationship between two variables for a fuller picture of the real world. (Baron & Kenny, 1986) (MacKinnon, 2008) (Preacher & Hayes, 2004) (Shrout & Bolger, 2002).

Using Indirect Effects to Test Mediation Unlike the classic approach for assessing mediation presented by (Baron & Kenny, 1986), which does not rely on standard errors, the new approach for testing mediation introduced by (Kock, 2014) builds on (Preacher & Hayes, 2004; 2010) is more efficient and less fallible. Mediation occurs when a mediator construct intervenes between two other directly related constructs, in other words, a change in the exogenous construct results in a change of the mediator construct, which, in turn, changes the endogenous construct, that's why analyzing the strength of the mediator construct's relationships with the other constructs enables researchers to substantiate the mechanisms that underlie the cause-effect relationship between an exogenous construct and an endogenous construct and the path model can include several mediator constructs. (Memon& al, 2018)

More precisely, a change in the exogenous construct causes a change in the mediator variable, which, in turn, results in a change in the endogenous construct in the PLS path model, where a mediating variable (or mediator) explains the process through which two variables are related, it is a way in which an independent variable impacts a

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dependent variable. (Sarstedt & al, 2020) It's part of the causal pathway of an effect, and it tells you how or why an effect takes place. So a mediator is caused by the independent variable and influences the dependent variable, When we say that the impact of IV on DV is not direct, and it is through another variable (s), that third variable is the mediator. Simply mean the IV affects the MV and that leads to the DV. What we are in simple terms saying is that IV does not affect the DV directly, but it is the IV affecting the MV, and that in turn affects the DV.

When Testing for Mediation

Total Effect refers to the effect of the Independent Variable on the Dependent Variable without the presence of Mediating Variable.

Direct Effect refers to the effect of an Independent Variable on the Dependent Variable in the presence of a Mediating Variable in the Model.

Indirect Effect refers to the effect of the Independent variable on the dependent variable through the mediator variable. (Nitzel& al, 2016)

Preacher and Hayes (2008) summarized the mediator approach as follows:

Variable M has a mediating effect

If X has a significant impact on Y

If X has a significant impact on M,

M significantly accounts for variability in Y, and

The effect of X on Y decreases substantially when M is entered simultaneously with X as a predictor of Y. ”

Notwithstanding a single inferential test of the indirect effect is all that is needed, which means that what matters in mediation analysis is an indirect effect (Hayes & Rockwood, 2016). According to Preacher and Hayes (2004; 2008), the mediation method is called “bootstrapping the indirect effect. ”

The mediation approach includes two steps that reflect the recommendations for mediation analysis.

Step 1. Determining the significance of indirect effects

Step 2. Determining the type of effect and/or mediation

In Step 1, the indirect effect is tested for significance.

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Step 2 involves defining the type of effect and/or mediation. A mediating effect always exists when the indirect effect $a \times b$ in Step 1 is significant.

the researcher decides with regards to the indirect effect, if mediation and what kind of mediation occurs.

The current mediation literature discusses two different types of mediation, full and partial mediation.

Contemporary literature on mediation advocates that complete (also called full) and partial mediation concepts have little value and should be abandoned.

Partial mediation can be divided again into complementary and competitive partial mediation.

✓ **Full Mediation**

In full mediation, a mediator fully explains the relationship between the independent and dependent variable: without the mediator in the model, there is no relationship.

A full mediation is indicated in the case where the direct effect c' is not significant whereas the indirect effect $a \times b$ is significant, which means only the indirect effect via the mediator exists. (Cepeda& al, 2018)

✓ **Partial Mediation**

In partial mediation, there is still a statistical relationship between the independent and dependent variable even when the mediator is taken out of a model: the mediator only partially explains the relationship. (Cepeda& al, 2018)

All other situations under the condition that both the direct effect c' and the indirect effect $a \times b$ are significant represent partial mediation. Two types of partial mediations can be distinguished:

✓ **Complementary Partial Mediation.**

In a complementary partial mediation, the direct effect c' and indirect effect $a \times b$ point in the same (positive or negative) direction (Baron & Kenny, 1986).

✓ **Competitive Partial Mediation.**

In a competitive partial mediation, the direct effect c' and indirect effect $a \times b$ point in a different direction (One is Positive while the other is negative).

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As mentioned above, this indicates that a portion of the effect of X on Y is mediated through M, whereas X still explains a portion of Y that is independent of M.

In the competitive partial mediation hypothesis, it is assumed that the intermediate variable will reduce the magnitude of the relationship between the independent and dependent variables. However, it's possible that the intermediate variable could increase the magnitude of the relationship between the independent and dependent variables.

✓ Only Direct Effect

If the indirect effect $a \times b$ is not significant whereas the direct path c' is, the mediator variable has no impact; this indicates that a direct, non-mediating effect is present. In this case, the study was perhaps searching for a wrong mediation relationship.

✓ No Effect

There is no effect if neither the indirect effect $a \times b$ nor the direct effect c' is significant. The total effect can still be significant. First of all, in this case, the researcher should determine whether the sample size has enough power to show an effect when there is an effect (Roldán & Sánchez, 2012).

Table. 30: TOTAL INDIRECT EFFECTS

	Original sample O	Sample mean M	STDEV	T statistics
KS --> IP1	0. 337	0. 337	0. 026	12. 971
KS --> IP1	0. 311	0. 311	0. 029	10. 761

Source: The Researcher Based On Smartpls 4 Outputs

Table. 31: TOTAL EFFECT

	Original sample	Sample mean	Stdev	T statistics	P value	Statistical significance
KS->IP1	0. 655	0. 656	0 .025	26. 726	000 .0	Significant
KS->IP2	0. 802	0. 802	0 .027	29. 468	000 .0	Significant
KS->OM1	449 .0	451 .0	036 .0	14. 240	000 .0	Significant

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KS->OM2	520 .0	521 .0	036 .0	597 .14	000 .0	Significant
KS->OM3	464 .0	468 .0	041 .0	280 .11	000 .0	Significant
OM1->IP1	302 .0	298 .0	026 .0	670 .11	000 .0	Significant
OM1->IP2	389 .0	389 .0	031 .0	318 .12	000 .0	Significant
OM2->IP1	411 .0	411 .0	030 .0	501 .13	000 .0	Significant
OM2->IP2	409 .0	410 .0	035 .0	698 .11	000 .0	Significant
OM3->IP1	378 .0	372 .0	031 .0	985 .11	000 .0	Significant
OM3->IP2	340 .0	340 .0	029 .0	604 .11	000 .0	Significant

Source: The Researcher Based On Smart Pls 4 Outputs

Table. 32: Mediation Type

	Direct effects	CI 95 %	T value	P value	Indirect effects	CI 95 %	T value	P value	Mediation Type
KS->IP1	0.318	LL = 0.26 UL = 0.38	11.044	0.00	0.337	LL = 0.29 UL = 0.38	12.971	0.00	Partial Mediation (complementary)
KS->IP2	0.491	LL = 0.42 UL = 0.58	14.240	0.00	0.311	LL = 0.25 UL = 0.37	10.761	0.00	
LL = Original Sample – (1.96 * STDEV) UL = Original Sample + (1.96 * STDEV)									
Mediation	Occurs when a mediator variable				Indirect -Only Mediation: A Situation				

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	<p>partially explains the relationship between an exogenous and an endogenous construct, partialmediation can come in the form of complementary and competitive mediation, depending on the relationship between the direct and indirect effects,</p>		<p>In Mediation Analysis That Occurs When The Indirect Effect Is Significant But Not The Direct Effect, Hence The Mediator Variable Fully Explains The Relationship Between An Exogenous And An Endogenous Latent Variable, Also Referred To As Full Mediation,</p>
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Source: The Researcher Based OnSmartpls 4 Outputs

Through what was deduced from the previous tables, we notice that the direct path between knowledge sharing and work performance proved the existence of a statistically significant relationship with a (T value = 11. 044)and an (O value = 0. 318).

The same applies to the indirect path between these two variables, as it proved the existence of a statistically significant relationship with a (T value = 12. 971) and a (O value = 0. 337).

Therefore, the dimensions of organizational memory partially explain the relationship between knowledge sharing and work performance, and since the direction of this relationship is positive, we can judge that the type of mediation is partial and complementary.

As for the direct path between knowledge sharing and contextual performance, it was proven that there was a statistically significant relationship with a (T value = 14. 240) and a (O value = 0. 491), the same goes for the indirect path between these two variables, where it was proven that there was a statistically significant relationship with a (T value = 10. 761) and a (O value = 0. 311).

Therefore, the dimensions of organizational memory partially explained the relationship between knowledge sharing and contextual performance, and since the direction of this relationship was positive, we can judge that the type of mediation is partial and complementary.

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Accordingly, we conclude that there is a mediating role of a partial, complementary type for the dimensions of organizational memory in the relationship between knowledge sharing and the dimensions of individual performance.

5-2-8 Testing the validity of hypotheses

The main hypothesis: There is a statistically significant effect of knowledge sharing on individual performance, with organizational memory mediating the relationship for employees of economic organizations in Algeria.

The first sub-hypothesis relates to the relationship between knowledge sharing and organizational memory dimensions and can be detailed as follows

H1_a: There is a statistically significant effect of knowledge sharing on Job Knowledge

H1_b: There is a statistically significant effect of knowledge sharing on Social Knowledge

H1_c: There is a statistically significant effect of knowledge sharing on industry knowledge

The following table shows the results obtained

Table. 33: hypotheses validity

	Relationship	Original sample (o)	Sample mean	Stdev	T statistic	P value	Decision
H1_a	KS → OM1	449 .0	0. 451	0. 036	615 .12	.000	Fulfilled
H1_b	KS → OM2	520 .0	0. 521	0. 036	597 .14	.000	Fulfilled
H1_c	KS → OM3	464 .0	0. 468	0. 041	280 .11	.000	Fulfilled

Source: The Researcher based on smartpls4 outputs

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From the results of the table above we find that:

***There is a statistically significant effect of knowledge sharing on Job Knowledge**

The path coefficient between knowledge sharing on Job Knowledge was 0.449, the significance value was (P value = 0.000), which is less than 0.05, and the T value was 12.615

Therefore, hypothesis H1a is fulfilled, meaning that a dimension of knowledge sharing affects Job Knowledge.

It is clear from the table above that the dimension of knowledge sharing has an impact on job knowledge, as the result of the relationship was found to be achieved,

The explanation for this result is that practices related to knowledge sharing have an impact on job knowledge from the point of view of employees of the organizations under study, by encouraging experienced employees to guide new employees who are less experienced than them, where the extent of their contribution to knowledge transfer and sharing is approved during the evaluation of their performance.

The organization also ensures that access to the organization's database is provided, and sharing takes place through daily interaction in the workplace during the performance of tasks or through access to databases remotely, which allows the transfer of theoretical and operational knowledge that helps new employees update their information and knowledge about the basics of the tasks assigned to them and the best way to perform their tasks, in addition to acquiring knowledge and experience that enables them to make appropriate decisions and effective solutions to the daily problems that they face. So that completing their tasks becomes a normal thing.

***There is a statistically significant effect of knowledge sharing on Social Knowledge**

We find that the path coefficient between knowledge sharing on Social knowledge reached 0.520, the significance value (Pvalue = 0.000) was less than 0.05, and the T value was 14.597. Therefore, hypothesis H1b is fulfilled, meaning that the dimension of knowledge sharing affects Social Knowledge.

It is clear from the table above that the knowledge-sharing dimension has an impact on social knowledge, as the result of the relationship was found to be achieved. The

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explanation for this result is that the practices related to knowledge sharing have an impact on social knowledge from the point of view of employees of the organizations under study.

This is done by encouraging experienced employees to guide new employees who are less experienced than them so that the extent of their contribution to transferring and sharing knowledge is approved during the evaluation of their performance.

The organization also ensures that access to the organization's database is provided, and sharing occurs through daily interaction in the workplace while performing tasks or through formal and informal gatherings such as occasional side conversations or during breaks and lunch.

Also during social events that allow interaction between members of organizations and their families and lead to the acquisition of knowledge about employees who are willing and able to share their experience and tacit knowledge, from which the employee becomes aware of the strengths and weaknesses of his co-workers and the aspects that he can turn to them about.,

In addition, through these meetings and interactions, employees develop a unified terminology base, which makes the communication process more streamlined.

***There is a statistically significant effect of knowledge sharing on industry knowledge**

We find that the path coefficient between knowledge sharing on Industry knowledge reached 0.464, the significance value (Pvalue = 0.000), which is less than 0.05, and the T value was 11.280

Therefore, hypothesis H1_c is fulfilled, meaning that the dimension of knowledge sharing affects industry knowledge

It is clear from the table above that the knowledge-sharing dimension has an impact on industrial knowledge, as the result of the relationship was found to be achieved,

The explanation for this result is that practices related to knowledge sharing have an impact on industrial knowledge from the point of view of employees of the organizations under study.

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This is done by encouraging experienced employees to guide new employees who are less experienced than them so that the extent of their contribution to transferring and sharing knowledge is approved during the evaluation of their performance.

The organization also ensures to provide access to the organization's database, and sharing takes place through daily interaction in the workplace while performing tasks or through formal gatherings such as meetings and informal gatherings such as side conversations and internal and external developments that allow the individual to form a network to exchange information related to his organization's field of work and knowledge about organizations that operate in the same field and how they carry out activities as they constitute competition and a threat in the market to know the level of performance compared to them. .

The second sub-hypothesis is related to the nature of the relationship between the dimensions of organizational memory and the dimensions of individual performance, and it can be detailed as follows

H2_a: There is a statistically significant effect of Job Knowledge on Task performance

H2_b: There is a statistically significant effect of Social Knowledge on Task performance

H2_c: There is a statistically significant effect of Industry knowledge on Task performance

H2_d: There is a statistically significant effect of Job Knowledge on Contextual performance

H2_e: There is a statistically significant effect of Social Knowledge on Contextual performance

H2_f: There is a statistically significant effect of Industry knowledge on Contextual performance

Table. 34: hypotheses validity

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	Relationship	Original sample (o)	Sample mean	Stdev	T statistics	P value	Decision
H2 _a	OM1-->IP1	0.302	0.298	0.026	11.670	000.0	Fulfilled
H2 _b	OM2-->IP1	0.411	0.411	0.030	13.501	000.0	Fulfilled
H2 _c	OM3-->IP1	0.378	0.372	0.031	11.985	000.0	Fulfilled
H2 _d	OM1—>IP2	0.389	0.389	0.031	12.318	000.0	Fulfilled
H2 _e	OM2—>IP2	0.409	0.410	0.035	11.698	000.0	Fulfilled
H2 _f	OM2—>IP2	0.340	0.340	0.029	11.604	000.0	Fulfilled

Source: The researcher based on smartpls 4 outputs

***There is a statistically significant effect of Job Knowledge on Task performance**

The path coefficient between work knowledge and task performance was 0.302, the significance value (Pvalue = 0.000), which is less than 0.05, and the T value was 11.670

Therefore, hypothesis H2_a is fulfilled, meaning that the Job Knowledge dimension affects Task performance.

It is clear from the table above that the dimension of work knowledge has an impact on the performance of tasks, as the result of the relationship was found to be valid. The explanation for this result is that the components of work knowledge have an impact on the performance of tasks from the point of view of employees of the organizations under study.

Knowing the basics of the job and effective methods for completing tasks makes the employee able to plan his work and complete it within the specified deadlines, and the employee's understanding of the requirements of his job duties enables him to carry out his tasks with the least time and the least effort. In addition, the experience that

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the individual gains while dealing with daily problems enables him to set goals and results and consider them.

***There is a statistically significant effect of Social Knowledge on Task performance**

The path coefficient between Social Knowledge and Task performance was 0.411, the significance value (Pvalue = 0.000) was less than 0.05, and the T value was 13.501

Therefore, hypothesis H2_b is fulfilled, meaning that social knowledge affects task performance.

It is clear from the table above that the social knowledge dimension has an impact on task performance, as the result of the relationship was found to be achieved,

The explanation for this result is that the components of social knowledge have an impact on the performance of tasks from the point of view of employees of the organizations under study, as knowing the strengths of colleagues makes the employee able to distinguish the job requirements that enable him to carry out his tasks with the least time and effort.

In addition, knowing the desired achievements in the organization enables him to define goals and results, keep them in mind, and plan work optimally. Also, understanding the terminology circulating within the organization enables the employee to distinguish the main and side issues of his work.

***There is a statistically significant effect of Industry knowledge on Task performance**

The path coefficient between Industry knowledge and Task performance was 0.378, the significance value (Pvalue = 0.000) was less than 0.05, and the T value was 11.985

Therefore, hypothesis H2_c is fulfilled, meaning that the Industry knowledge dimension affects task performance.

It is clear from the table above that the dimension of industrial knowledge has an impact on the performance of tasks, as the result of the relationship was found to be

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achieved, and the explanation for this result is that the components of industrial knowledge have an impact on the performance of tasks from the point of view of employees of the organizations under study, as the presence of a network of colleagues to exchange work-related information makes the employee able to define goals and results, put them into consideration, and optimally plan the work.

In addition, knowing the quality of competing organizations enables the employee to improve his level of performance to improve collective and organizational performance.

***There is a statistically significant effect of Job Knowledge on Contextual performance**

The path coefficient between Job Knowledge and Contextual performance was 0.389, the significance value (P value = 0.000), which is less than 0.05, and the T value was 12.318

Therefore, hypothesis H_{2d} is fulfilled, meaning that Job Knowledge affects Contextual Performance.

It is clear from the table above that the dimension of work knowledge has an impact on contextual performance, and therefore the result of the relationship was found to be achieved.

The explanation for this result is that the components of work knowledge have an impact on contextual performance from the point of view of employees of the organizations under study, as knowing the basics of the job and effective methods for completing tasks makes the employee able to modernize and update work skills and avoid their obsolescence, and the employee's understanding of the requirements of his job duties enables him to take responsibilities upon himself and participate in decision-making.

In addition, the experience that an individual gains while dealing with daily problems enables him to discover new and more effective innovative solutions. Job knowledge also affects contextual performance in that understanding the job requirements allows the employee to participate in the activities, meetings, and consultations that take place in the organization.

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***There is a statistically significant effect of Social Knowledge on Contextual performance**

The path coefficient of Social Knowledge and Contextual performance was 0.409, the significance value (Pvalue = 0.000) was less than 0.05, and the T value was 11.698

Therefore, hypothesis H2_e is fulfilled, meaning that the Social Knowledge dimension affects Contextual performance.

It is clear from the table above that the social knowledge dimension has an impact on contextual performance, as the result of the relationship was found to be achieved,

The explanation for this result is that the components of social knowledge have an impact on contextual performance from the point of view of employees of the organizations under study, as knowing and understanding the common terminology used in the organization enables the employee to participate in the activities, meetings, and consultations that take place in the organization.

Knowing the strengths of colleagues makes the employee able to emulate them to update and modernize work skills, avoid their obsolescence, and discover new and more effective innovative solutions. In addition, knowing the desired practices and achievements required in the organization makes the employee take responsibility upon himself to accomplish them.

***There is a statistically significant effect of Industry knowledge on Contextual performance**

The path coefficient between Industry knowledge and Contextual performance was 0.340, the significance value (Pvalue = 0.000) was less than 0.05, and the T value was 11.604

Therefore, hypothesis H2_f is fulfilled, meaning that the Industry knowledge dimension affects Contextual performance.

It is clear from the table above that the industrial knowledge dimension has an impact on contextual performance, as the result of the relationship was found to be achieved,

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The explanation for this result is that the components of industrial knowledge have an impact on contextual performance from the point of view of employees of the organizations under study, as participation in information exchange networks about work works to update work-related knowledge for the employee and makes him seek to accomplish new tasks.

Also, knowing how other competing organizations work makes the employee devise solutions to the problems he faces.

The third sub-hypothesis is related to the nature of the relationship between the dimensions of knowledge sharing and the dimensions of individual performance, and it can be detailed as follows

***There is a statistically significant effect of knowledge sharing on task performance**

***There is a statistically significant effect of knowledge sharing on contextual performance**

Table. 35: hypotheses validity

	Relationship	Original sample	Sample mean	Stdev	T statistics	P value	Decision
H3_a	KS → IP1	0.318	0.319	0.029	11.044	000 .0	Fulfilled
H3_b	KS → IP2	0.491	0.491	0.034	14.240	000 .0	Fulfilled

Source: the researcher based on smart pls 4 outputs

***There is a statistically significant effect of knowledge sharing on task performance**

The path coefficient between knowledge sharing and task performance was 0.318, the significance value (Pvalue = 0.000), which is less than 0.05, and the T value was 11.044

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Therefore, hypothesis H3_a is fulfilled, meaning that the dimension of knowledge sharing affects task performance

It is clear from the table above that the knowledge-sharing dimension has an impact on the performance of tasks, as the result of the relationship was found to be achieved, and the explanation for this result is that practices related to knowledge-sharing have an impact on the performance of tasks from the point of view of employees of the organizations under study.

This is done by encouraging experienced employees to guide new employees who are less experienced than them, as the extent of their contribution to transferring and sharing knowledge is approved during the evaluation of their performance. The organization also ensures that access to the organization's database is provided, and sharing occurs through daily interaction in the workplace while performing tasks or during official gatherings. Such as informal meetings, such as side conversations and internal and external developments that allow the individual to acquire information and knowledge that make the employee able to plan his work and finish it on time.

Also, the effective sharing of the new knowledge acquired makes the employee acquire skills that help him carry out his work well and with the least time and effort. The employee's benefit from the experiences of his colleagues enables him to distinguish the main issues of his organization and consider them while planning his work.

***There is a statistically significant effect of knowledge sharing on contextual performance**

The path coefficient between knowledge sharing and contextual performance was 0.491, the significance value (Pvalue = 0.000) was less than 0.05, and the T value was 14.240

Therefore, hypothesis H3_b is fulfilled, meaning that a dimension of knowledge sharing affects contextual performance.

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It is clear from the table above that the knowledge-sharing dimension has an impact on contextual performance, as the result of the relationship was found to be achieved.

The explanation for this result is that practices related to knowledge sharing have an impact on contextual performance from the point of view of employees of the organizations under study.

This is done by encouraging experienced employees to guide new employees who are less experienced than them, as the extent of their contribution to transferring and sharing knowledge is approved during the evaluation of their performance. The organization also ensures that access to the organization's database is provided, and sharing occurs through daily interaction in the workplace while performing tasks or through official meetings. Such as informal meetings, such as side conversations, and internal and external developments that allow the individual to update information related to his job and the field of work of his organization,

Also, the effective sharing of newly acquired knowledge makes the employee acquire innovative solutions to his problems and gain the initiative to complete new tasks when his old tasks are completed.

The fourth sub-hypothesis is related to the nature of the mediating relationship of organizational memory between knowledge sharing and individual performance.

Table. 36: hypotheses validity

	Relationship	Original sample (o)	Sample mean	Stdev	T statistics	P value	Decision
H4_a	KS--OM--IP1	0.337	0.337	0.026	12.971	000 .0	Fulfilled
H4_b	KS--OM--IP2	0.311	0.311	0.029	10.761	000 .0	Fulfilled

Source: The Researcher based on smartpls 4 outputs

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The path coefficient between knowledge sharing and individual performance mediated by organizational memory in the first path was 0.337, the significance value was 0.000, which is less than 0.05, and the T value was 12.971

In the second path, it reached 0.311, and the significance value reached 0.000, which is less than 0.05, and the T value was 10.761

Therefore, hypothesis H is fulfilled, meaning that the organizational memory dimension mediates the relationship between knowledge sharing and individual performance and that the mediation is of a partial, complementary type.

It is clear from the table above that the organizational memory dimension has a mediating role in the effect of knowledge sharing on individual performance, as the result of the relationship was found to be achieved,

The explanation for this result is that the dimensions of organizational memory are affected by knowledge-sharing practices and in turn affect the dimensions of individual performance from the point of view of employees of the organizations under study, as providing access to the organization's database and facilitating sharing through daily interaction in the workplace while performing tasks or through official meetings such as meetings And informal ones, such as side conversations and internal and external developments

All of these are practices that translate organizations' interest in facilitating the flow of knowledge among their employees, which leads to employees being empowered with the basics of carrying out their tasks to the fullest extent and their knowledge of how to solve daily problems in effective ways, which develops their experiences and knowledge databases, whether in decision trees or paper memories and records. And also in their minds, what makes every employee aware of the strengths of his colleagues and who can help him in the event of a need for assistance. He is also aware of the desired practices and achievements of the people with power and those responsible for making major decisions within the organization.

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On the external level, the employee has a clear view of his organization's position in the market among competitors how business is performed in competing organizations, and the extent of their quality compared to his organization's performance.

All of this knowledge stored in the organization leads its members to raise their levels of individual and collective performance through the ability to plan well and properly for work and complete tasks on time and then compare them with the goals that the employee has taken into consideration to compare, evaluate and then correct.

The valuable knowledge present in the organization's memory also allows employees to distinguish well between important and main issues and unimportant or secondary and side issues to properly manage time and effort.

Which leads to doing the work in an ideal and effective way and with the least effort and time possible. It is the level of performance that makes the employee feel confident and comfortable in his work environment and makes him take the initiative to complete new tasks before he is asked to do so and take the initiative to develop himself and update his knowledge and work skills to innovate new solutions and take on additional responsibilities.

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Chapter conclusion:

In this chapter, we touched on the field study related to the topic of knowledge sharing, individual performance, and the role of organizational memory as a mediator at the level of economic organizations in Algeria.

A general overview of the organizations under study was presented, as well as a discussion of the methodological framework of the study (choosing the study population, the studied sample, choosing a model that suits our study, presenting the statistical tools, programs, and methods used, in addition to studying the structural model and testing hypotheses using the 4PLS Smart program). Despite the difficulty of this field, which is related to behavioral studies and has multiple levels.

After testing the hypotheses, we concluded that there is a statistically significant effect of knowledge sharing on individual performance in its dimensions (task performance, contextual performance) with the mediation of organizational memory in its dimensions (job knowledge, social knowledge, industrial knowledge) for employees of economic organizations in Algeria.

General conclusion

General conclusion:

Knowledge management and facilitating its sharing is considered one of the most important contemporary developments in administrative thought. Although it was initially presented in the form of new frameworks and approaches for studying and understanding the activities of business organizations, it quickly turned into an effective practical practice in responding to the rapid changes imposed by today's world, This is due to the impressive results it can achieve at various levels and levels, starting with individual, group and organizational performance and enhancing productivity.

More important than all of this is the added value achieved at all levels, to ensure that organizations remain in the imposed competitive context, which prompted those interested in the field of knowledge management to address it from a strategic perspective to build different models to deal with it and expand work with it to include all organizations with different activities in a framework that combines the importance of sharing knowledge as an effective mechanism in developing and improving the performance of the organizations' employees., Algerian organizations are repositories of cognitive capital stored in the minds of their employees and as entities that influence and are affected by society.

Accordingly, it has become clear in the light of this study, specifically in its theoretical aspect, that the broad meaning of organizational memory depends specifically on the availability of a set of requirements related to an organizational culture that encourages the exchange of knowledge and experiences among employees and is consistent with the principle of continuing learning, transferring knowledge, and encouraging organizational learning, And organizational leadership, whose role revolves around creating an organizational framework for knowledge management and simplifying and facilitating access to knowledge, in addition to a technological infrastructure that ensures the storage of knowledge and experiences and allows access to them when needed and also their access to subsequent generations. The technological factor and its applications in the knowledge management system seek to raise the ability of

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individuals to communicate with each other and neutralize all barriers, whether related to space, time, or job level.

This study addressed a topic that constitutes a major challenge for organizations, represented by the importance of sharing knowledge at their level and what leads to ineffective organizational memory and then to good performance. This can be achieved through efforts to provide the requirements of a supportive organizational culture and supportive administrative leadership, as well as a flexible organizational structure and advanced technological structures originating from it, and providing the necessary environment for the success of the knowledge-sharing process in the Algerian organization.

The Algerian organization, like other organizations, needs a strong and rich organizational memory that positively affects the performance of its employees to achieve the desired goals to the fullest extent. This led us in this study to the necessity of researching the extent to which knowledge sharing among employees contributes to building a strong memory for Algerian organizations and whether this has an impact on the excellence of the performance of individuals.,

The first chapters of the study allowed us to analyze each of the concepts of knowledge sharing, organizational memory, and individual performance, before addressing the analysis of the importance of facilitating access to knowledge at the level of Algerian organizations, which required us to use field research in our study that would direct us to answer the problem raised through statistical research on the relationship of knowledge sharing to organizational memory and individual performance, and to present some proposals that arise from the advancement of the level of organizations in Algeria. .

The field study adopted the descriptive analytical approach, and its research tools included a questionnaire. The analysis of data collected in the field was based on statistical methods in which the individual was the basic unit of analysis. The field study was conducted in six companies, (METGAV INDUSTRY -SONALGAZ - SOGERHWIT -GROUPE KHARBOUCHE – URBAT – SOITEX) which was chosen due to the nature of the economic activity it engages in, as well as the nature of its

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outputs, which depend on a high degree and utmost necessity of knowledge, as the study sample was a random sample consisting of 670 employees. Their choice was linked to the possibility of them benefiting from smooth access to knowledge.

The data was collected and entered into the computer using both Excel and Smartpls and after ensuring the validity and stability of the tool used in the study, the researcher analyzed the data to ensure the validity of the study hypotheses.

Through this study, both its theoretical and field parts, an important set of results was reached, in addition to a set of suggestions that can help decision-makers in this field to develop an interest in building the memory of organizations and facilitating access to and sharing knowledge to improve employee performance.

The study concluded with a set of results and recommendations as shown below:

❖ **RESULTS:**

➤ **Theoretical aspect Results:**

Through the theoretical study, the following results were reached:

- a. Through reviewing the content of knowledge sharing, it becomes clear to us that most researchers agree that it is the cornerstone of building the organization's memory and the only way to collect implicit and explicit knowledge in various media, whether inside the minds of employees or in other physical media.
- b. Knowledge sharing appears to be of great importance to organizations in general by helping workers confront the challenges and changes they face and how to adapt to them or get rid of them, and acquire central, distinct, and continuous characteristics that help achieve the organization's goals.
- c. Individual performance is the completion of the employee's tasks, activities, and work with the optimal use of resources according to the responsibilities specified by the entities to which his job is related, to achieve the results and objectives of the organization.
- d. Individual performance is of great importance as it is the basic element in the stability and continuity of the organization and the benefits it achieves for it.

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e. The most important dimensions of organizational memory adopted in this study are (work knowledge, social knowledge, and industrial knowledge), and the rest of the dimensions were excluded due to research necessity.

f. To improve the employee's performance, we must focus on empowering him with the knowledge on which he can build his competence.

➤ Hypothesis testing results:

By studying the variables related to the field study hypotheses, we find the following

1. The main general hypothesis was accepted, which states: There is a statistically significant effect of knowledge sharing on individual performance, with a mediating role for organizational memory in Algerian organizations.
2. The first sub-hypothesis was accepted, which states: There is a statistically significant effect of knowledge sharing on work knowledge in Algerian organizations.
3. The second sub-hypothesis was accepted, which states: There is a statistically significant effect of knowledge sharing on the social knowledge of Algerian organizations.
4. The third sub-hypothesis was accepted, which states: There is a statistically significant effect of knowledge sharing on industrial knowledge in Algerian organizations.
5. The fourth sub-hypothesis was accepted, which states: There is a statistically significant effect of work knowledge on the performance of tasks in Algerian organizations.
6. The fifth sub-hypothesis was accepted, which states: There is a statistically significant effect of social knowledge on task performance in Algerian organizations.
7. The sixth sub-hypothesis was accepted, which states: There is a statistically significant effect of industrial knowledge on task performance in Algerian organizations.
8. The seventh sub-hypothesis was accepted, which states: There is a statistically significant effect of work knowledge on contextual performance in Algerian organizations.

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10. The eighth sub-hypothesis was accepted, which states: There is a statistically significant effect of social knowledge on contextual performance in Algerian organizations.

11- The ninth sub-hypothesis was accepted, which states: There is a statistically significant effect of industrial knowledge on contextual performance in Algerian organizations.

❖ **Suggestions and recommendations:**

Strengthening the organizational memory of Algerian organizations is achieved through spreading the values of knowledge sharing, transfer of experiences, and cooperation among employees.

The success of any organization and its good position among competitors depends on the distinguished job performance of its individuals to achieve its goals.

Improving employee performance depends on reducing the organizational knowledge gap.

- To encourage employees, the Organizations should focus on providing new knowledge and skills. This helps to motivate employees and make them feel more committed to the organization and eventually contribute to their performance.

Strong rich organizational memory should be conducted regularly to give knowledge to employees on how they should work.

❖ **Limitations:**

Although this thesis focuses on an in-depth study of knowledge-sharing, organizational memory, and individual performance, there are still some limitations.

In this paper research, we tried to conduct an in-depth study of some Algerian organizations and we sent out 670 questionnaires.

From a time point of view, the process of issuing and retrieving the 640 questionnaires is a long one.

We cannot recover all the questionnaires within the expected time. Therefore, the study time after retrieving all the questionnaires becomes very tense.

This led us to make compromises on the research. Our data classification when sorting out data is relatively simple, which is lower than our expectations.

General conclusion

We hope to conduct an in-depth study of companies at the initial stage of research and design, and the data obtained can make a new contribution to this type of research.

However, the final study is may not universally adaptable. It is only suitable for these companies. Therefore, this has led to the limitation of the relationship between organizational memory and individual performance explained by the data of only five companies.

It is worth noting that despite the fulfillment of the hypotheses of this research, regarding the existence of a positive relationship between knowledge sharing and dimensions of organizational memory and between dimensions of organizational memory and dimensions of individual performance, and thus the existence of a direct relationship between knowledge sharing and individual performance, and an indirect relationship mediated by organizational memory in Algerian society, these results remain specific to the organizations that were subject to the study, which are considered pioneers in their field of activity, and which the researcher targeted because they contain the minimum level of knowledge sharing culture, and at least the minimum level of attempts to build organizational memory.

However, the researcher believes that the majority of Algerian organizations in their various fields of work and types of organizations are still in a recent stage of dealing with building a good organizational memory, as a result of their employees sharing their knowledge and exchanging it among themselves, which leads to improving their individual performance and its reflection on their decision-making and facing daily problems, in fact, most employees in Algerian society still do not have sufficient knowledge of these terms and what they mean, and what is required to apply them, which is a kind of apparent contradiction between our lived reality and the results that the researcher reached during his analysis of the questionnaire outputs, which could give a false impression that Algerian society organizations have reached an advanced stage of building a strong organizational memory, which consolidates knowledge sharing practices, accordingly, confirming or denying these results remains the responsibility of researchers who will address this topic in the future.

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Appendixes:

Appendixes:

Appendix. 01

CONSTRUCT'S ITEMS

<i>KNOWLEDGE SHARING</i>		
<i>KS1</i>	Experienced staff in my workplace is encouraged to mentor new or less experienced staff.	Fong and Choi (2009)
<i>KS2</i>	Knowledge is shared by daily interaction with colleagues in the workplace, e. g. in the corridor, during lunch, in the pantry, at social functions.	
<i>KS3</i>	Knowledge sharing is a measure of employees' performance in my workplace.	
<i>KS4</i>	Remote access to the workplace's database is provided	
<i>ORGANIZATIONAL MEMORY</i>		
<i>Job Knowledge</i>		
<i>OM11</i>	I learned all the basics of my job.	Dunham & Burt (2014)
<i>OM12</i>	I have learned how to operate in my job in an efficient manner.	
<i>OM13</i>	I have mastered the required tasks of my job.	
<i>OM14</i>	I have little experience to draw upon when solving problems in my work tasks.	
<i>OM15</i>	I understand what the duties of my job entail.	
<i>OM16</i>	Accomplishing my work tasks seems like second nature to me.	
<i>Social Knowledge</i>		
<i>OM21</i>	I have a good understanding of the work strengths of my co-workers.	And Chao et al. (1994).
<i>OM22</i>	I have a good idea of “who knows what” in this organization.	
<i>OM23</i>	I know which of my co-workers have expertise you can rely on.	
<i>OM24</i>	I don't have any difficulty understanding the jargon used in this organization.	
<i>OM25</i>	I know which co-workers are likely to share their knowledge when asked to do so.	

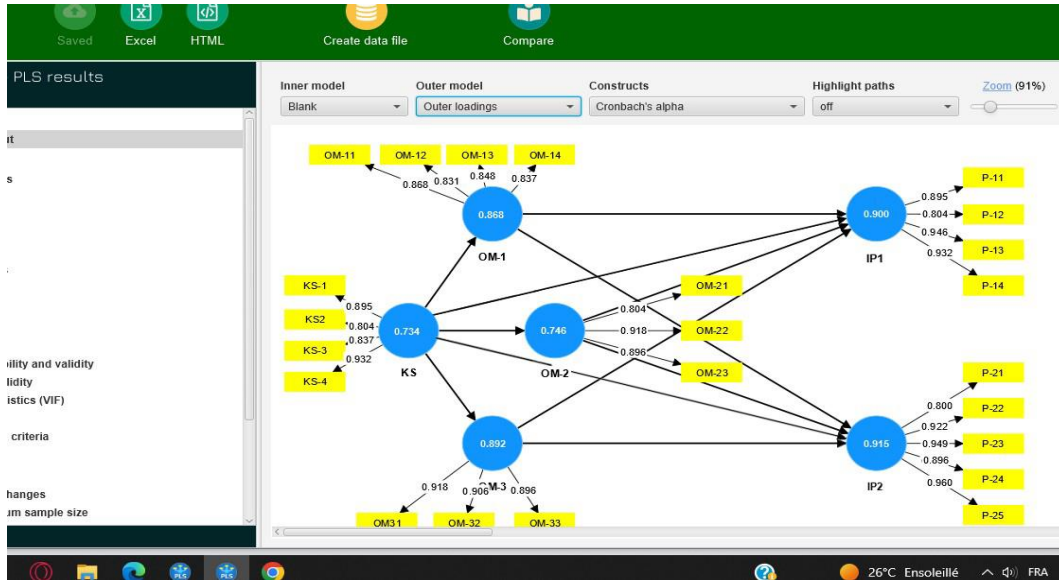
Appendixes:

<i>Industry knowledge</i>		
OM31	I know how similar organizations in this industry are performing.	
OM32	I know what represents this organization's major threat in this industry.	
OM33	I know how well this organization has performed compared with others.	
OM34	I know how other organizations in this industry operate.	
OM35	I have a network of associates for the mutual sharing of work-related information.	
OM36	I know the reputation this organization has in the industry.	
INDIVIDUAL PERFORMANCE		
<i>Task performance (TP)</i> In the past 3 months. . .		
IP11	I was able to plan my work so that I finished it on time.	
IP12	I kept in mind the work result I needed to achieve.	
IP13	I was able to distinguish main issues from side issues.	
IP14	I was able to carry out my work well with minimal time and effort.	
IP15	I planned my work optimally.	
<i>Contextual performance (CP)</i> In the past 3 months. . .		
IP21	On my own initiative, I started new tasks when my old tasks were completed.	
IP22	I worked on keeping my job-related knowledge up-to-date.	
IP23	I worked on keeping my work skills up-to-date.	
IP24	I came up with creative solutions for new problems.	
IP25	I took on extra responsibilities.	
IP26	I actively participated in meetings and/or consultations.	

***Koopmans
(2014,
2016)***

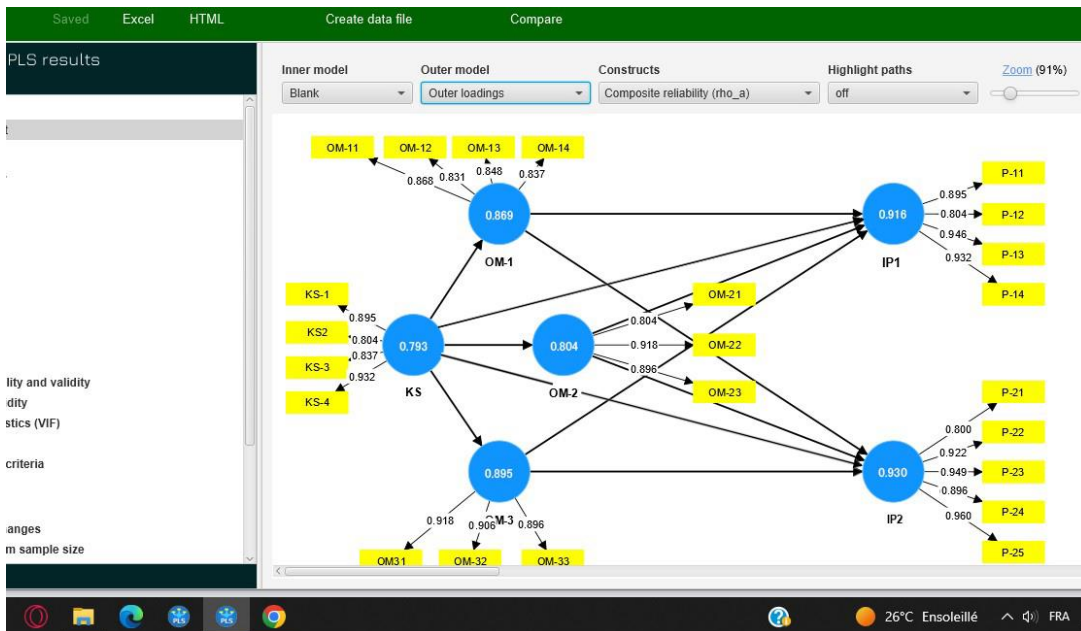
Appendixes:

Appendixe02 : MODEL - ALPHA CROMBACH VALUES



SOURCE : SMARTPLS. 4 OUTPUTS

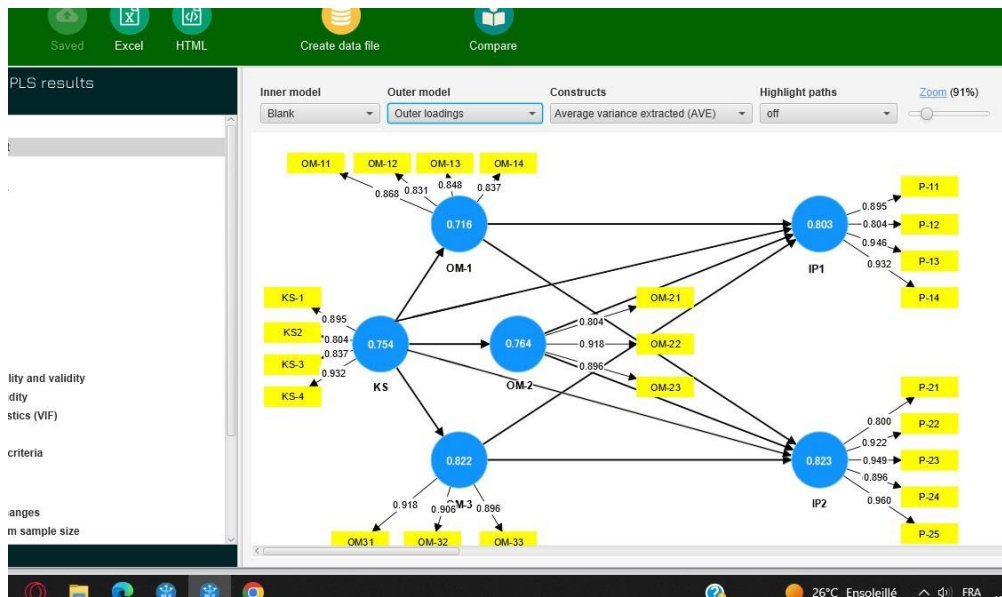
Appendixe 03 : MODEL - RHO A VALUES



SOURCE : SMARTPLS. 4 OUTPUTS

Appendixes:

Appendix 04 : MODEL - AVE VALUES



SOURCE : SMARTPLS. 4 OUTPUTS

Appendix 05 : CONSTRUCT VALIDITY AND RELIABILITY - TABLE

Construct reliability and validity				
	Cronbach's alpha	Composite reliability (rho_a)	Composite reliability (rho_c)	Average variance extracted (AVE)
KS	0.734	0.793	0.806	0.754
OM-1	0.868	0.869	0.910	0.716
OM-2	0.746	0.804	0.830	0.764
OM-3	0.892	0.895	0.933	0.822
IP1	0.900	0.916	0.932	0.803
IP2	0.915	0.930	0.938	0.823

SOURCE : SMARTPLS. 4 OUTPUTS

Appendix 06 : DISCRIMINANT VALIDITY - CROSS LOADING - MATRIX

Appendixes:

The screenshot displays the 'Discriminant validity - Cross loadings' table in SmartPLS 4. The table lists various latent variables (KS, OM-1 to OM-3, P1, P2) and their cross-loadings on other latent variables. The values range from -0.632 to 0.932.

	KS	OM-1	OM-2	OM-3	P1	P2
KS-1	0.895	0.187	0.114	0.129	-0.083	-0.044
KS-2	0.804	0.175	0.097	0.124	-0.083	-0.042
KS-3	0.837	0.415	0.086	0.527	-0.617	-0.558
KS-4	0.932	0.340	-0.015	0.377	-0.566	-0.539
OM-11	0.432	0.868	0.426	0.549	-0.520	-0.481
OM-12	0.336	0.831	0.329	0.552	-0.538	-0.474
OM-13	0.306	0.848	0.271	0.508	-0.555	-0.513
OM-14	0.401	0.837	0.312	0.441	-0.494	-0.425
OM-21	0.076	0.305	0.804	0.159	-0.014	-0.057
OM-22	0.003	0.314	0.918	0.190	-0.018	-0.030
OM-23	0.075	0.352	0.896	0.240	-0.089	-0.074
OM-31	0.520	0.511	0.175	0.918	-0.677	-0.634
OM-32	0.420	0.518	0.158	0.906	-0.640	-0.602
OM-33	0.391	0.627	0.347	0.896	-0.625	-0.579
P-11	-0.562	-0.566	-0.079	-0.661	0.895	0.438
P-12	-0.392	-0.455	-0.079	-0.512	0.804	0.514
P-13	-0.581	-0.598	-0.068	-0.679	0.946	0.542
P-14	-0.570	-0.564	-0.012	-0.654	0.932	0.617
P-21	-0.557	-0.508	-0.069	-0.644	0.578	0.800
P-22	-0.527	-0.522	-0.079	-0.626	0.771	0.922
P-23	-0.448	-0.494	-0.071	-0.577	0.546	0.949
P-24	-0.230	-0.289	-0.029	-0.352	0.478	0.896
P-25	-0.520	-0.555	-0.067	-0.632	0.689	0.960

SOURCE : SMARTPLS. 4 OUTPUTS

Appendix 07 : DISCRIMINANT VALIDITY - FORNEL LARCKER - MATRIX

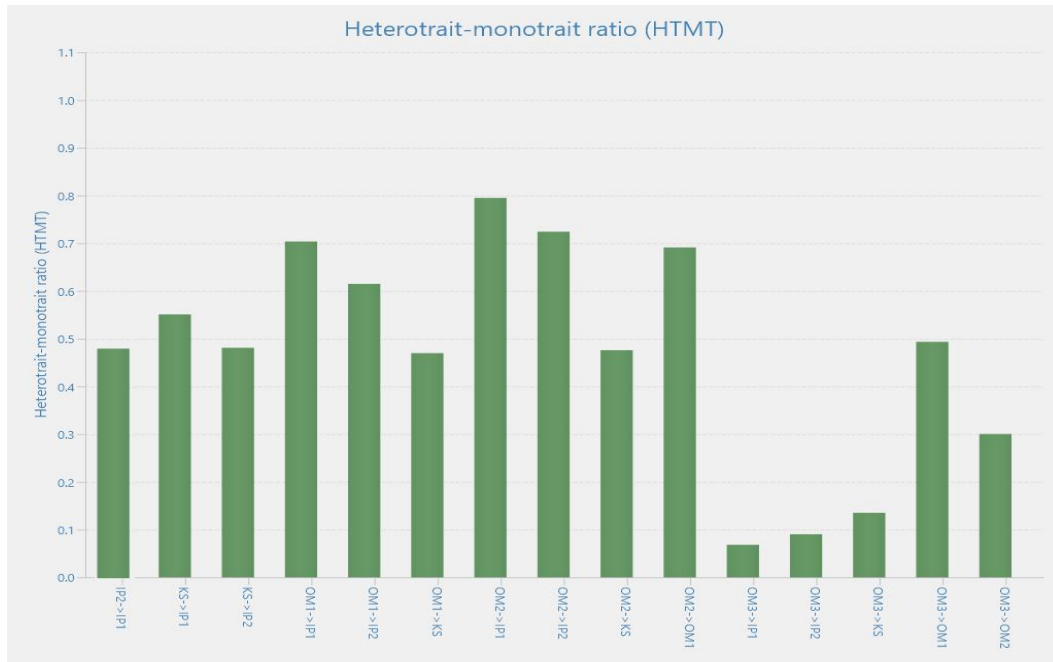
The screenshot displays the 'Discriminant validity - Fornell-Larcker criterion' table in SmartPLS 4. The table shows the squared multiple correlations (R-squared) for each latent variable (KS, OM-1, OM-2, OM-3, P1, P2) on the diagonal and the squared correlations between latent variables in the lower triangle.

	KS	OM-1	OM-2	OM-3	P1	P2
KS	0.868					
OM-1	0.436	0.846				
OM-2	0.080	0.397	0.874			
OM-3	0.493	0.607	0.247	0.906		
P1	-0.604	-0.623	-0.066	-0.715	0.896	
P2	-0.546	-0.560	-0.075	-0.669	0.637	0.907

SOURCE : SMARTPLS. 4 OUTPUTS

Appendixes:

Appendix 08 : DISCRIMINANT VALIDITY - HETEROTRAIT MONOTRAIT RATIO - CHART



SOURCE : SMARTPLS. 4 OUTPUTS

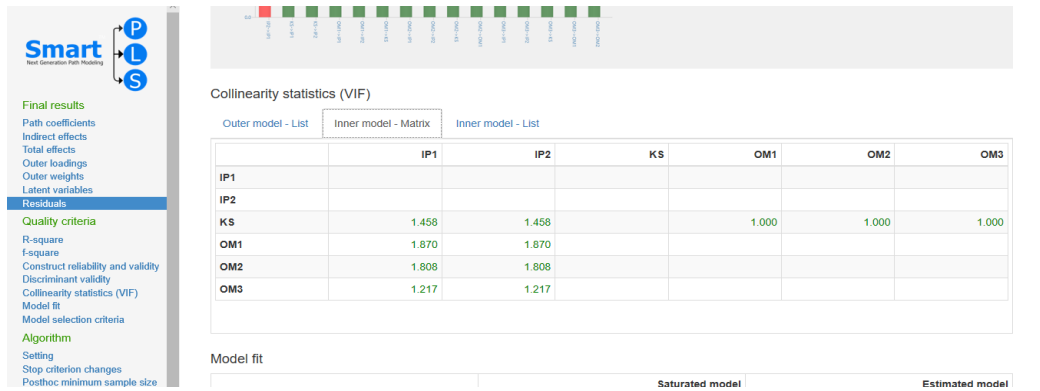
Appendix 09: HETEROTRAIT MONOTRAIT RATIO – LIST

Heterotrait-monotrait ratio (HTMT) - Matrix	Heterotrait-monotrait ratio (HTMT) - List	Fornell-Larcker criterion	Cross loadings
Heterotrait-monotrait ratio (HTMT)			
IP2 <-> IP1			0.491
KS <-> IP1			0.551
KS <-> IP2			0.481
OM1 <-> IP1			0.704
OM1 <-> IP2			0.615
OM1 <-> KS			0.470
OM2 <-> IP1			0.795
OM2 <-> IP2			0.724
OM2 <-> KS			0.476
OM2 <-> OM1			0.691
OM3 <-> IP1			0.068
OM3 <-> IP2			0.050
OM3 <-> KS			0.135
OM3 <-> OM1			0.493
OM3 <-> OM2			0.300

SOURCE : SMARTPLS. 4 OUTPUTS

Appendix 10 : COLLINEARITY STATISTICS VIF - MATRIX

Appendixes:



SOURCE : SMARTPLS. 4 OUTPUTS

Appendix 11 : PATH COEFFICIENTS - TABLE



SOURCE : SMARTPLS. 4 OUTPUTS

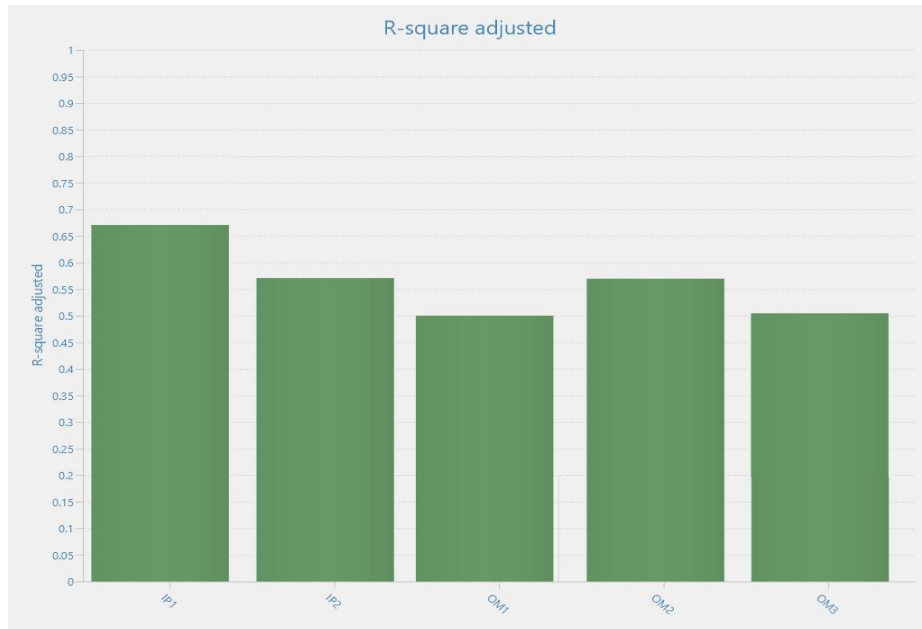
Appendix 12 : R² - CHART



Appendixes:

SOURCE : SMARTPLS. 4 OUTPUTS

Appendix 13 : R²ADJUSTED - CHART



SOURCE : SMARTPLS. 4 OUTPUTS

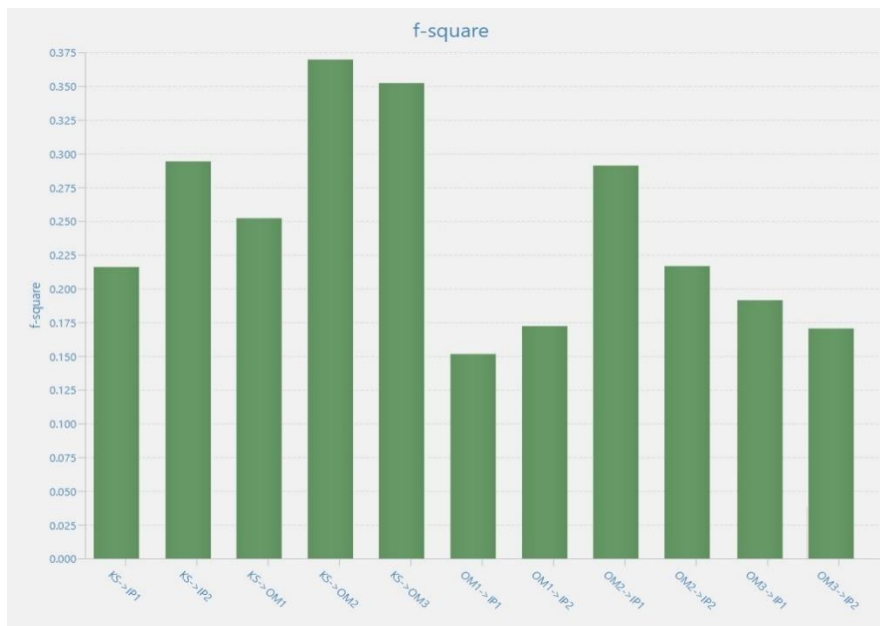
Appendix 14 : R² + R² ADJUSTED - TABLE

	R-square	R-square adjusted
IP1	0.679	0.677
IP2	0.572	0.570
OM1	0.501	0.500
OM2	0.570	0.569
OM3	0.504	0.503

SOURCE : SMARTPLS. 4 OUTPUTS

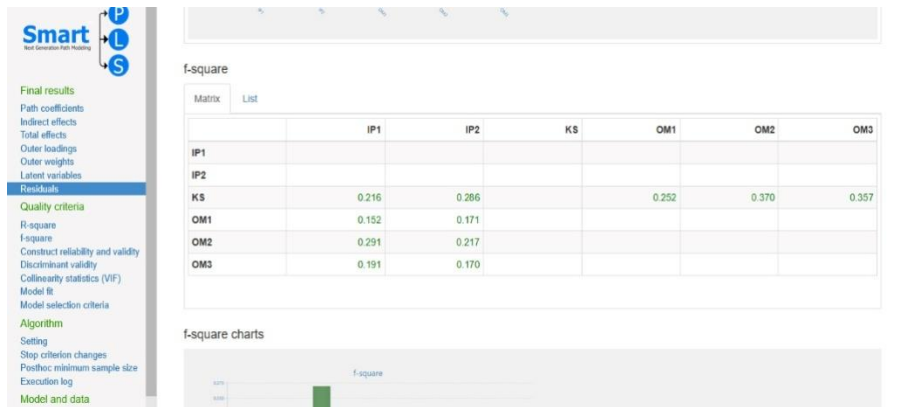
Appendixes:

Appendix 15 : EFFECT SIZE F²- CHART



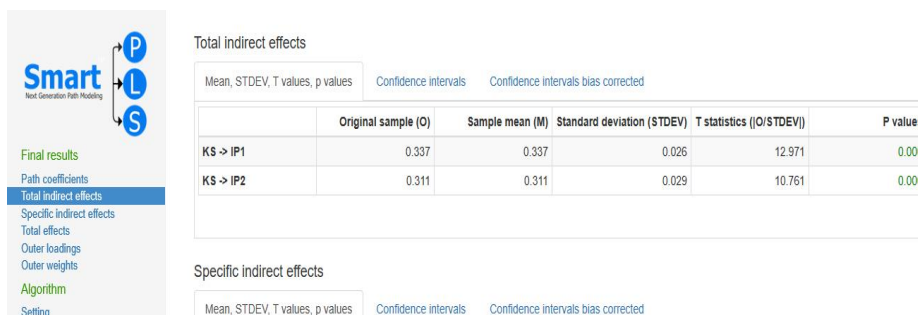
SOURCE : SMARTPLS. 4 OUTPUTS

Appendix 16 : EFFECT SIZE F² - MATRIX



SOURCE : SMARTPLS. 4 OUTPUTS

Appendix 17 : TOTAL INDIRECT EFFECT - TABLE



Appendixes:

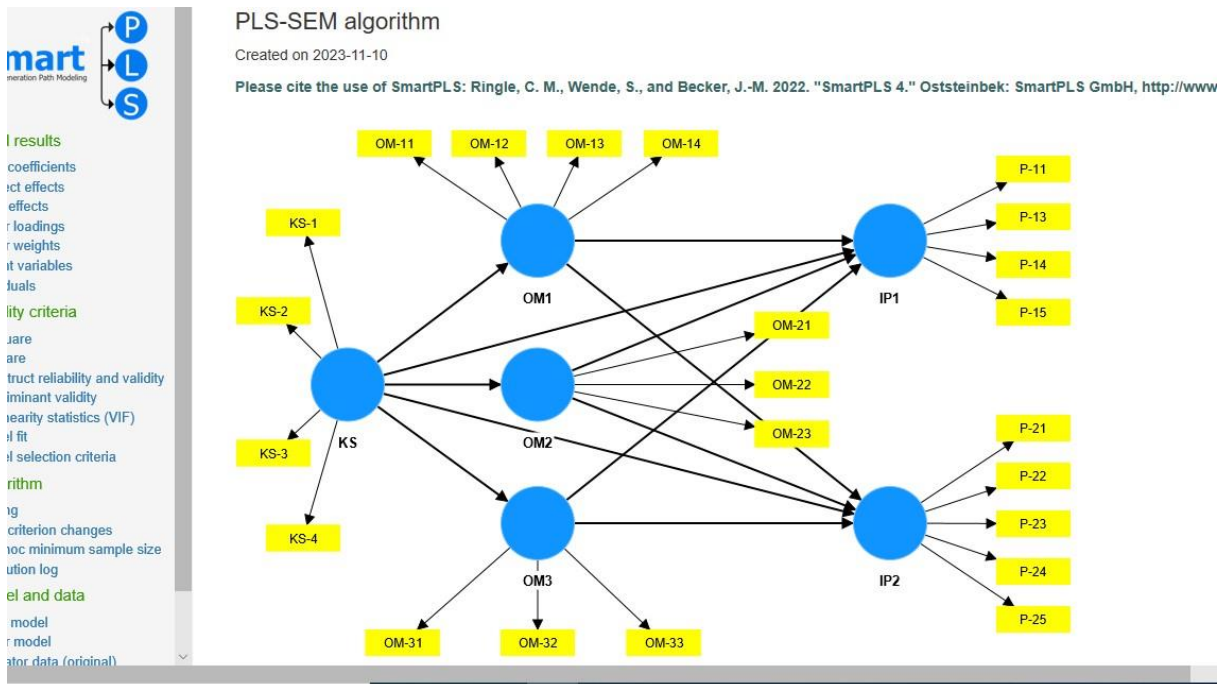
SOURCE : SMARTPLS. 4 OUTPUTS

Appendixe 18 : TOTAL EFFECT - TABLE

	Original sample (O)	Sample mean (M)	Standard deviation (STDEV)	T statistics (O /STDEV)	P values
KS -> IP1	0.655	0.656	0.025	26.726	0.000
KS -> IP2	0.602	0.602	0.027	21.968	0.000
KS -> OM1	0.449	0.451	0.036	12.515	0.000
KS -> OM2	0.520	0.521	0.036	14.597	0.000
KS -> OM3	0.464	0.468	0.041	11.280	0.000
OM1 -> IP1	0.302	0.298	0.026	11.670	0.000
OM1 -> IP2	0.389	0.389	0.031	12.318	0.000
OM2 -> IP1	0.411	0.411	0.030	13.501	0.000
OM2 -> IP2	0.409	0.410	0.035	11.698	0.000
OM3 -> IP1	0.378	0.372	0.031	11.965	0.000
OM3 -> IP2	0.340	0.340	0.029	11.604	0.000

SOURCE : SMARTPLS. 4 OUTPUTS

Appendixe 19 : FINAL MODEL



SOURCE : SMARTPLS. 4 OUTPUTS

Abstract

ملخص

تواجه المنظمات الحالية عده تحديات جوهرية، نجد في مقدمتها الرغبة في البقاء والاستمرار، خاصة مع الاضطرابات التي تشهدها البيئة الناتجة عن شدة التغيرات الاقتصادية، وحثيه الابداع والتميز والمنافسة في ظل ما يسمى بالاقتصاد المبني على المعرفة. فعدم السعي نحو الاحتفاظ بكفاءات المنظمة يجعلها غير قادرة على مواجهة هذه التحديات، وبالتالي تصبح مجبرة بالخروج من الأسواق، اذ تعتبر المعارف التي يمتلكها الموظفون رأسمال غير مادي وجب الاهتمام بإدارته تماما كما يدار رأس المال المادي، خاصة وأن المعرفة هي المورد الوحيد الذي يكتسب خاصية الاستراتيجية من كونه لا يعترف بقانون التنافس بالاستخدام، ولا يعاني من مشكلة الندرة، لأن مشاركته وتقاسمه بين الموظفين واستخدامه تعتبر عوامل للنجاح وتمثل وقاية للمنظمة من خطر النسيان التنظيمي، الا أن التغيرات التي تعرفها المنظمات خاصة في مجال مواردها البشرية من احالة على التقاعد أو تسريح للعمال أو المغادرة الطوعية جعلها تفقد كما هائلا من المعارف التراكمية، وبالتالي فقدان التدريجي لذاكرتها التنظيمية. والأمثلة كثيرة عن منظمات صرحت بأنها عرفت تدهورا في أدائها نتيجة لفشلها في معرفة كيفية المحافظة على الخبرة والمهارات المتراكمة لديها بسبب فقدان أهم موظفيها، وبالتالي يمكن اعتبار هذه المنظمات نموذجا لفقدان الذاكرة التنظيمية أو ما يسمى بالنسيان التنظيمي.

تعتبر مشاركة المعرفة وسيلة جيدة للموظفين لتوليد الحلول وتطوير الكفاءات، وبالتالي اكتساب المنظمة لميزة تنافسية لان لها تأثيرا مباشرا على انتاجية العاملين، وحيث أن مشاركة المعارف بين الموظفين ينتج عنه دائما توليد أفكار ابداعية تساعد على تطوير القدرات التنظيمية وأيضا على اكتشاف حلول جديدة ومتطورة تعين على مواجهة التحديات اليومية والمواقف الجديدة، فالمغزى الاساسي من تشارك المعرفة هو تنسيق الجهود وتنظيمها وتوحيد توجهها من أجل تحقيق الاهداف الفردية والاستراتيجية والتشغيلية في المنظمة، لأنه يعتبر من ممارسات ادارة المعرفة التي تؤكد على أن المنظمة ملزمة باستغلال معارفها المتوفرة في مستودع المعرفة التنظيمية، والذي يطلق عليه الذاكرة التنظيمية، والتي تستطيع المنظمة بموجبها تمكين عمالها من الوصول السهل والميسر لما تم تخزينه من معارف مفيدة وقيمة؛ بمعنى آخر فان الذاكرة التنظيمية هي تلك المعرفة التي يمكن الاستفادة منها في أنشطة الاعمال الحالية، اي استرجاع، تشارك، تطبيق و الاستفادة من الدروس والتجارب السابقة ضمن نظام جماعي لتكوين هيكل ومعنى للأحداث، مما يسمح بالترجمة الفورية لمعلومات مساعدة على اتخاذ القرار، او القيام بالأنشطة التشغيلية على أكمل وجه.

وعليه، فالوصول الى بناء ذاكرة تنظيمية قوية يحتاج الى عمليات ممنهجة أهمها تشارك جدي للمعرفة، وهو ما تناولته هذه الدراسة تحليلا وتوضيحا وتفسيرا، حيث كان هدفها البحث في طبيعة العلاقة بين

Abstract

مشاركة المعرفة وبناء ذاكرة تنظيمية جيدة، وما ينجر عن ذلك من تحسين للأداء الفردي والجماعي عبر اسقاطنا لهذا التصور على الواقع، من خلال دراسة تأثير مشاركة المعرفة على الذاكرة التنظيمية ومن خلالها على الأداء الفردي لموظفي المنظمات الجزائرية.

تحقيقا لهذه الغاية قمنا بدراسة ميدانية لمجموعة من المنظمات الجزائرية من خلال توزيع استبيان يدرس العلاقة بين المتغيرات الثلاثة مشاركة المعرفة، الذاكرة التنظيمية، والأداء الفردي لموظفي هذه المنظمات.

نظريا، خلصت دراستنا الى أن بناء الذاكرة التنظيمية وادامتها يحتاج الى توفير البنى التحتية الأساسية من تكنولوجيا المعلومات الى معرفه معمقة في عمليات ونظم ادارة المعرفة، اضافة الى تسليط الضوء على المحاولات والمعوقات والتحديات التي يمكن أن تواجه عملية بناء ذاكرة تنظيمية نشيطة ومتطورة. كما اشارت الى العلاقة التفاعلية التبادلية بين الموارد البشرية وذاكرة المنظمة، حيث أن الافراد يمتلكون ويخزنون المعارف الضمنية، وهم وحدهم القادرون على ترميزها ومشاركتها وتعميمها ونقلها لزملائهم، وبالتالي فدورهم محوري في عملية بناء ذاكرة المنظمة، كما أنهم يستفيدون من هذه الذاكرة في نفس الوقت كونها تتيح لهم الوصول الى المعارف التشغيلية والمعارف التي يحتاجونها لاتخاذ قراراتهم ومواجهه مشكلاتهم اليومية.

ميدانيا، خلصت الدراسة الى أنه يوجد علاقة ايجابية بين مشاركة المعرفة والذاكرة التنظيمية بأبعادها الثلاثة (المعرفة الوظيفية، المعرفة الاجتماعية، المعرفة الصناعية)، إضافة الى أن للذاكرة التنظيمية علاقة ايجابية مع الأداء الفردي ببعديه (أداء المهام، والأداء السياقي) ، كما خلصت الدراسة أيضا الى أن الذاكرة التنظيمية تلعب دورا وسيطا في العلاقة بين تشارك المعرفة و الأداء الفردي.

الكلمات المفتاحية : مشاركة المعرفة ؛ إدارة المعرفة ؛ الذاكرة التنظيمية ؛ الأداء الفردي .

Abstract

Current organizations face several fundamental challenges, foremost of which is the desire to survive and continue, especially with the turmoil in the environment resulting from the intensity of economic changes, as well as the inevitability of creativity, excellence, and competition in light of the so-called knowledge-based economy. Failure to seek to retain the organization's competencies makes it unable to face these challenges, and thus it is forced to exit the markets, as the knowledge possessed by employees is considered intangible capital that requires attention to its management just as physical capital is managed, especially since knowledge is the only resource that gains its

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strategic characteristics by not recognizing the law of decrease with use, and does not suffer from the problem of scarcity. Rather, its participation, sharing it among employees, and its use are considered factors for success and represent protection for the organization from the risk of organizational forgetfulness. However, the changes that organizations are experiencing, especially in the field of their human resources, such as retirement, layoffs, or voluntary departure, have caused them to lose a huge amount of cumulative knowledge, and thus the gradual loss of their organizational memory. There are many examples of organizations that declared deterioration in their performance as a result of their failure to maintain their accumulated experience and skills, due to the loss of their most important employees, therefore, these organizations can be considered a model of organizational memory loss, or what is called organizational forgetting.

Knowledge sharing is considered the best way for employees to generate solutions, develop competencies, and gain a competitive advantage for the organization because it has a direct impact on employee productivity. Since sharing knowledge among employees always results in the generation of creative ideas that help develop organizational capabilities, and discover new and advanced solutions that help face daily challenges and new situations, the primary goal of knowledge sharing is to coordinate, organize, and unify efforts to achieve the individual, strategic, and operational goals of the organization, because it is considered a knowledge management practice that emphasizes that the organization is obligated to exploit its knowledge available in the organizational knowledge repository, which is called organizational memory, and through which the organization can enable its workers to have easy and convenient access to the useful and valuable knowledge that has been stored, in other words, organizational memory is that knowledge that can be used in current business activities, that is, retrieving, sharing, applying and benefiting from previous lessons and experiences within a collective system, to form a structure and meaning for events, which allows for the immediate interpretation of information that helps in decision-making, or carry out operational activities to the fullest extent.

Therefore, achieving the building of a strong organizational memory requires systematic processes, the most important of which is the serious sharing of knowledge, which is what our study dealt with in analysis, clarification, and interpretation, as its goal was to investigate the nature of the relationship

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between sharing knowledge and building a good organizational memory, and the resulting improvement in individual and group performance, through our projection of this perception into reality by studying the impact of knowledge sharing on organizational memory, and through it on the individual performance of employees of Algerian organizations.

To achieve this goal, we conducted a field study of a group of Algerian organizations by distributing a questionnaire that studies the relationship between the three variables (knowledge sharing, organizational memory, and individual performance of employees of these organizations).

Theoretically, this study concluded that building and sustaining organizational memory requires providing basic infrastructure from information technology to in-depth knowledge of knowledge management processes and systems, in addition to highlighting the attempts, obstacles, and challenges that may face the process of building an active and developed organizational memory.

It also pointed to the interactive, reciprocal relationship between human resources and the organization's memory, as individuals possess and store tacit knowledge and are the only ones capable of encoding, sharing, circulating, and transmitting it to their colleagues. Therefore, they have a major role in building the organization's memory, and they also benefit from this memory at the same time because it allows them to access the operational knowledge and knowledge they need to make their decisions and face their daily problems.

In the field, this study concluded that there is a positive relationship between knowledge sharing and organizational memory in its three dimensions (functional knowledge, social knowledge, and industrial knowledge).

In addition, organizational memory has a positive relationship with individual performance in both dimensions (task performance and contextual performance). The study also concluded that organizational memory plays a mediating role in the relationship between knowledge sharing and individual performance.

Keywords: Knowledge Sharing; Knowledge Management; Organizational Memory; Individual Performance .

الحمد لله

