Investigating the role of knowledge management on learning organizations in knowledge-based organizations

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Abstract

In recent years, various organizations and companies, especially management projects, have joined the process of knowledge and its effective use, with concepts such as expertise, knowledge management, learning organization to achieve their goals. Paying attention to knowledge as the driving force of development around the axis of knowledge will play an important role in advancing the goals of organizations. Therefore, in planning and organizing work projects, the concept of knowledge management has emerged, which refers to how to manage knowledge. In other words, it includes activities to create, organize, share, and use knowledge in organizations. In order to benefit from knowledge management in organizations, the concept of learning organization has also been encountered, which considers the learning organization as a knowledge-creating organization. The learning organization consists of a common compromising and cultural structure with the possibility of identifying opportunities and dealing with crises. One way to become a learning organization is to use knowledge management in the organization. Because by facilitating the process of creating and sharing knowledge, along with providing positive work environments and an effective reward system, it speeds up organizational learning and allows the organization to successfully keep pace with changes in project progress. Therefore, this article, considering the importance of information technology in the field of management, to achieve new goals in organizations, the impact of the role of knowledge management on the learning organization has been studied.

Keywords: knowledge, Organization, Learning, Knowledge Management.

Introduction:

1. Introduction

Today, knowledge is considered as a valuable and strategic "resource" and an "asset" in any organization. Peter Drucker, using these words, announces the creation of a new type of organization where the power of the mind dominates instead of the power of the arm. According to this theory, in the future, societies can expect development and progress that have more knowledge [1]. Thus, having natural resources cannot be as important as knowledge. The knowledge organization achieves capabilities that are able to build enormous power from a small force. Such organizations face new challenges. Today, the competitive environment of organizations is increasingly complex and variable. This space is changing so fast that for most organizations, this speed is far more than the speed of response and their ability to adapt [2]. Continuous changes in knowledge have also created a new imbalance for organizations. The endless flow of knowledge has put markets on constant change, forcing organizations to make constant changes. Learning organizations, in other words, can be called student organizations, organizations in which the creation of new knowledge and awareness, innovations and initiatives is not a specialized and specialized work, but a kind of convergent behavior; The way all members of the organization act wisely [3].

In other words, a knowledge-creating organization is an organization in which each person is a creative and knowledge-based organization. In this organization of thought, collective discussion, and the discovery of new ideas and thoughts are encouraged and innovators are nurtured [4]. The more one knows, the better one can act. Another era in which only money, land, and manpower were known as capital has come to an end, so in the age of knowledge - in which knowledge is considered the most important asset - organizations need a different management approach to organizational and employee issues. Maintaining the employees of the organizations and cultivating their learning capacity has a decisive role in the success and gaining a competitive advantage for the organization [5]. The growth of knowledge in the new age is very fast and every five and a half years, the volume of knowledge doubles. However, its average lifespan is less than four years. In this way, this change has created a new attitude in business management called "management". Knowledge management means managing the systematic availability of scientific information and reserves so that they can be given to people in need when they need them so that they can do their daily work [6]. Knowledge management involves a set of strategies and strategies for identifying, creating,

representing, disseminating, and applying insights and experiences into the organization. In other words, knowledge management is a systematic and systematic process of discovering, selecting, organizing, summarizing, and providing information; In a way that improves people's cognition in the area of interest. Knowledge management helps the organization gain experience, insight, and insight, and focuses on acquiring, storing, and using knowledge to help solve problems, dynamic learning, strategic planning, and decision making. Knowledge management not only prevents the decline of intellectual and brain assets, but also continuously increases this wealth [7].

2. Knowledge management and learning organization

The complexity of the concept of knowledge, as well as the existence of different approaches to knowledge management, has led to the formation of a single approach to knowledge management. Sokanan (1998) says that some definitions of knowledge management are such that it has been degraded even to the level of data management. "Knowledge management is a process by which organizations acquire skills in the field of learning (internalizing knowledge), coding knowledge (externalizing knowledge) [8]. Haynes sees knowledge management as a process based on four pillars:

A) Content: which is related to the type of knowledge (overt or covert),

B) Skills: Acquiring skills to extract knowledge,

C) Culture: The culture of organizations should encourage the distribution of knowledge and information,

D) Organizing: Organizing existing knowledge [9].
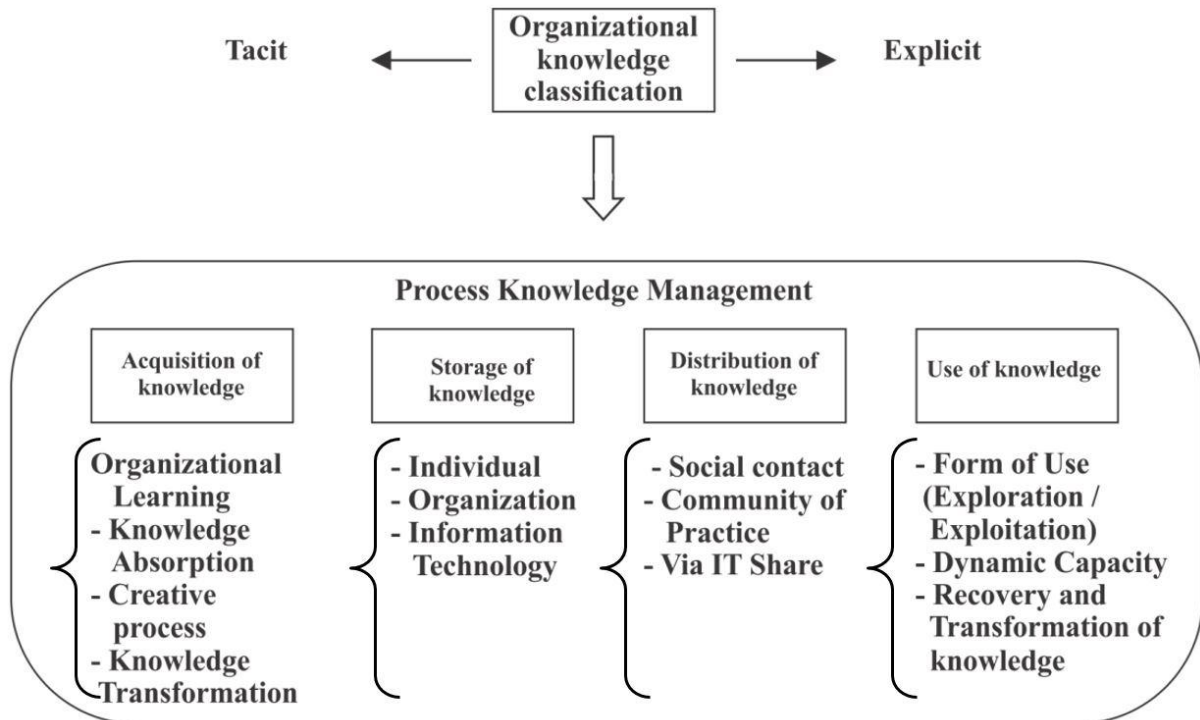
Carl Weig believes that knowledge management means creating the processes necessary to identify and absorb data, information and knowledge required by the organization from the internal and external environment, and transfers them to the decisions and actions of the organization and individuals [10]. A cursory glance at the literature of the learning organization shows that many researchers of the learning organization have become ambiguous in their studies of the definition of the learning organization. In addition, most of the studies conducted in this field are theoretical rather than experimental and systematic. As for the definition of such organizations, there is no specific practical definition [11].

A learning organization is an organization in which the organization is constantly rebuilt by creating a whole? The main processes are enhanced, in which a positive tendency to learn, adapt, and change is reinforced, and individuals are viewed as a natural resource and vital credit for the organization. According to Richard Pettinger, the learning organization is a general term that refers to approaches and strategies that are used to improve effectiveness [12].

And finally, Peter Sangha's (1990) comprehensive definition of a learning organization is as follows: "Learning organizations are places where people are constantly increasing their ability to create the results they want; "Where new and broader patterns of thinking are developed, collective ideas are promoted, and people are constantly learning how to learn together." [13].

3. General pattern of knowledge

Data are raw facts and realities, and these components are stored and managed in databases. "Information" is summary data that is grouped, stored, refined, and organized so that it can be meaningful. Information becomes valuable when it is collected and prepared for a particular dimension, a specific person, a specific purpose, and at a specific time, so information that is informative to one manager may not be valuable to another at all. "Knowledge" is the categorized and relevant information that is found in the executive and practical application of the organization [14]. In other words, knowledge is a set of beliefs, skills, cognitions, theories, rules, and practices that the organization and individuals have at their disposal and use to make decisions and solve various problems. Some thinkers have divided knowledge into overt and covert knowledge and distinguished between them. Another group has divided knowledge into two types: definite and implicit. Some authors also consider structural knowledge as the third category of knowledge [15]. In designing and applying knowledge management in organizations, two dimensions of descriptive and implicit knowledge, although different in nature and characteristics, play a greater role. Tacit Knowledge is knowledge that can be expressed formally and linguistically and includes grammatical sentences, mathematical formulas, detailed descriptions, etc., and can be formally and easily transmitted among individuals [16].
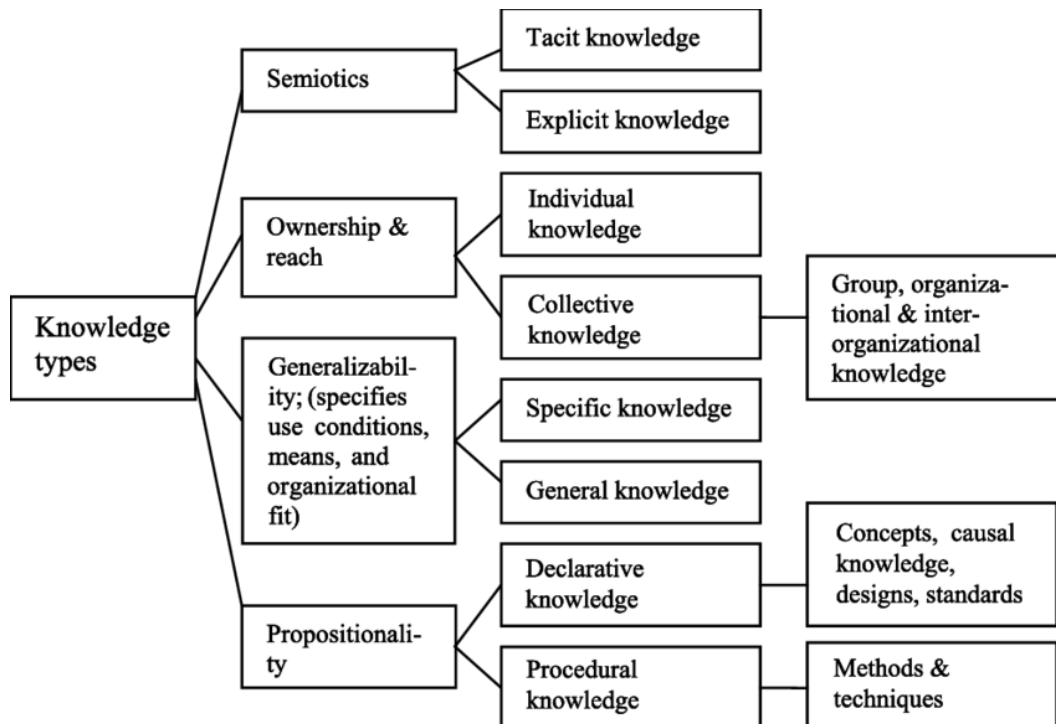
Explicit Knowledge is knowledge that is difficult to present in the official language and is a kind of personal knowledge that lies in the experience of individuals and includes intangible and intangible factors such as skills, experience, value system, etc. and often by persistence [17]. And practice is achieved. Implicit knowledge is never recorded or stored in many organizations, although its nature is identified to be at the core of organizational operations. Implicit knowledge is absolute, but explicit knowledge is knowledge based on law that adapts activities to situations based on appropriate laws. In other words, tacit knowledge can be defined as a set of experiences, skills, work perspectives, and value and mental systems within individuals that cannot be expressed and stored in any database, but whose place is formed by the human mind and its activities [18]. The most important challenge for an organization should be to strike a balance between the implicit knowledge created by individuals and the explicit knowledge needed to communicate and unite effectively. This means that organizational knowledge is preserved by clarifying the knowledge of the organization and by preserving the knowledge of the people who leave it [19]. The transfer of tacit knowledge requires, to a large extent, personal and informal interactions, and it is the task of the organization's management to create the right environment for people to freely use different ways of thinking by creating a culture and creating a suitable environment [20].

Exchange governance / Inter-organizational knowledge context	*Market*	*Network*	*Hierarchy*
Knowledge type	Explicit	Tacit, latent and explicit	Tacit, latent and explicit
Coordination	Price mechanism	Collaboration	Supervision
Formalization of exchange process	High	Low	Bureaucratic or based on authority
Means of communication	Prices	Relational	Routines
Network participant dependency	Independent	Interdependent	Dependent
Tone or climate	Suspicion	Mutual benefits	Power
Intermediation	Broker	Network facilitation	Administration and communication offices

Newman presents the general pattern of knowledge. In this model, knowledge is organized in four areas; these fields are:

Creating knowledge: Behaviors related to the entry of new knowledge into the human or social system, which includes a wide range, such as: discovery, acquisition, recall, development, which is closely related to the behavior that is called innovation. The second step after acquiring or learning knowledge is to maintain it [21].

▪ Preservation of knowledge: It is all activities that lead to the survival and maintenance of knowledge after its entry into the system. Preservation activities include a variety of behaviors, such as: activities related to the validity of knowledge, updating it, and so on [22].

▪ Knowledge transfer: includes a wide variety of behaviors such as: communication, translation, interpretation, refinement and knowledge presentation. Application of knowledge: The use of existing knowledge to make decisions, actions and achieve goals [23].

4. Analysis

This study was structured around the knowledge management process. Before starting the discussion around this process, it is noteworthy that the definition and classification of knowledge are extremely important. Knowledge should not be mistaken with information or data. In fact, knowledge is the final result of an evolutionary cycle, which requires observation, evaluation, reflection, and experience, i.e., knowledge, unlike data and information, only materializes with human activity. Other important characteristics that must be considered are its classification. Knowledge can be tacit or explicit, i.e., inherent in human skills and competencies, or codifiable respectively. Each of these portions of knowledge (tacit and explicit) has a different perspective regarding the management. While explicit knowledge can be easily stored and disseminated through procedures and the very organizational structure, using IT as a facilitator of its retention and distribution, tacit knowledge, in turn, requires organizational development to create a culture that encourages sharing, in addition to a structure that facilitates the integration of individuals and knowledge.

The models that address KM process are structured preliminarily around this classificatory concept of knowledge. A "positive" organizational culture is key to promote learning and sharing skills and knowledge.

	Criteria	Operational		Tactical		Strategic		Total	%
Knowledge culture	6	15	8,75	20	11	30	12	31,75	15,9
	7	15	9	15	10	30	14,75	33,75	16,9
	15	20	8,15	15	9,25	40	22	39,4	19,7
		Total						104,9	52,45
	Total	50		50		100		200	
	Criteria	Operational		Tactical		Strategic		Total	%
Knowledge strategies	8	15	5,75	20	10	35	28,25	44	22
	16	20	10,25	15	8,13	30	23,63	42,01	21
	18	15	5	15	5,25	35	13,65	23,9	11,95
				Total				109,91	54,95
	Total	50		50		100		200	
	Criteria	Operational		Tactical		Strategic		Total	%
Knowledge planning	3	15	5,10	15	8	15	13	26,1	13,1
	4	10	7	20	10,11	20	11,25	28,36	14,2
	9	15	4,15	20	5,25	20	12,15	21,55	10,8
	10	10	7	20	14,11	20	11,42	32,53	16,3
		Total						108,54	54,27
	Total	50			75	75		200	
	Criteria	Operational		Tactical		Strategic		Total	%
Infrastructure utilization capabilities	1	15	8,25	25	10,87	25	20,5	39,62	19,8
	2	15	10,12	25	19,13	25	18,73	47,98	23,99
	5	20	6,15	25	20,10	25	20,15	46,4	23,2
		Total						134	67
	Total	50		75		75		200	
	Criteria	Operational		Tactical		Strategic		Total	%
Assessment of activities for evaluation	11	15	7	8	5,18	8	5	17,18	8,59
	12	20	5,13	8	4,12	8	4,15	13,4	6,7
	13	15	5,8	9	3,25	8	4,12	13,17	6,6
	14	15	6	8	5,6	9	3,85	15,45	7,7
	17	20	5,18	8	4,25	9	4,12	13,55	6,8
	19	15	6,19	9	4	8	5	15,19	7,8
		Total						87,94	43,97
	Total	100		50		50		200	

Table3
Assessment of knowledge management activities in Company XYZ

	Operational		Tactical		Strategic		Total	%
1	50	25,9	50	30,25	100	48,75	104,9	
2	50	21	50	23,38	100	65,53	109,91	
3	50	23,25	75	37,47	75	47,82	108,54	
4	50	24,52	75	50,1	75	58,88	133,5	
5	100	35,3	50	26,4	50	26,24	87,94	
						Total	544.79	54,48
Total	300		300		400		1000	

The IT must be understood as a KM support tool. Therefore, organizations should work towards the construction of an organizational environment that fosters continuous improvement of individuals, the exchange of knowledge, and stimulating trial and error process, encouraging knowledge use. IT must act as a mechanism facilitating knowledge storage and distribution processes, increasing the flow of information between individuals, and aiding in the retention and institutionalization of knowledge. Deepening on the characterization of the KM process, the article defined it through four stages: acquisition, storage, distribution, and use of knowledge. Because it is a large, multidisciplinary process, every step of KM can be studied from different perspectives. The theoretical framework of this article raised the main approaches featuring the four stages of the KM process, listing the main associated articles.

Thus, the publications dealing with the knowledge acquisition process are focused on four main themes. The first refers to organizational learning, which deals with the acquisition as a process of reconfiguration of internal routines. The second deals with the ability of the organization in absorbing knowledge. This capability depends on the presence of primary knowledge that facilitates the absorption of new knowledge. The third part deals with the creative process, which depends on the organizational stimulus for the development of human resources and teamwork that results in improvements and innovations. And finally, the transformation of knowledge, mainly approached by Nonaka & Takeuchi (1995), states that the acquisition of knowledge is expressed by a transformation process in which knowledge migrates from explicit state to implied, a context called "knowledge spiral", which depends on creating an organizational context that encourages interaction between individuals and hence the sharing of knowledge.

5. Conclusions

The knowledge management issue has been studied by many researchers for some decades. For a better understanding and analysis, the KM should be studied as a process consisting of the following steps: acquisition, storage, distribution, and use of knowledge. Because it is a large, multidisciplinary theme, each of these phases of the KM process consists of several themes. This article achieves its goal of defining the KM process, conceptualizing its stages, and also identifying the main factors and aspects that relate each of these steps. Initially, the research identified the main approaches that support the models for KM. It is possible to

conclude that the models for KM are guided by two main features, called "soft track" or concerned models with organizational development, regarding organizational culture and structure, skills development, and work organization. On the other hand, there is the model of "hard track" type, i.e., models oriented to IT tools that seek to facilitate the process of storage and distribution of knowledge. Regarding the KM process itself, this research has identified four specific phases: acquisition, storage, distribution, and use of knowledge. For each phase we identified factors that influence the research. In the case of knowledge acquisition, it is concluded that four themes are dealt with: organizational learning, absorbing knowledge, creative process, and transformation of knowledge. Knowledge storage is studied around the individual, organization, and information technology. Knowledge distribution, in turn, is analyzed from the perspective of social contact, community of practice, and sharing via IT. Finally, knowledge use is covered around the form of knowledge use (exploitation or exploration), dynamic capability, and knowledge transformation and retrieval.

The article also contributes assessing the main journals dealing with the KM process, analyzing 71 articles and classifying their contributions regarding the themes that guide the four phases of the KM process. Thus, this article is presented as a guide to KM researchers concerning the identification of approaches and bibliographies related to the KM process.

This article meets its goal of mapping phases of the KM process and identifies two groups of organizational actions that support this process. The first, also called "soft", is concerned with the development of an organizational context which supports the creation, dissemination, and use of the acquired knowledge. The main initiatives that support this action group are aimed at the training of individuals, involving the development of new skills, the structuring of routine work, and problem solving in groups, to encourage the socialization of knowledge and sharing of tacit knowledge, development of organizational routines that incorporate the acquired knowledge, the development of a culture that encourages the exchange of knowledge and encouragement and constant support activities for improvement and innovation of the processes. These actions involve the expenditure of time and continuous support of senior management, as it comes to changing habits and patterns of organizational behaviors. The second group, called "hard", involves the use of IT as a support mechanism for knowledge distribution and storage processes.

Therefore, since knowledge has a tacit and an explicit characteristic, the management process of this asset requires actions that go beyond the use of IT, requiring a transformation of the culture and of the very organizational structure. Regarding the development of future studies, there are two types proposed. The first one dealing with the qualitative form of each of the approaches regarding the four stages of the KM process, characterizing, via case study or action research, such approaches. The second refers to conducting a confirmatory analysis of the factors identified in each phase of the KM process, being also an exploratory analysis, seeking to identify new factors that explain these steps, using, for that purpose, multivariate data analysis with confirmatory and exploratory approach respectively.

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