

The impact of knowledge management on the success of organizations

La incidencia de la gestión del conocimiento en el éxito de las organizaciones



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ABSTRACT

Unlike traditional capital, land and labor resources, knowledge is recognized as a fundamental resource of modern society and organizations as it has unlimited potential for the growth of the organization, because it provides a sustainable and competitive advantage and generates increasing returns in market studies. In this environment, entities need to increase their capacity to face changes, they need to innovate in order to be competitive and sustainable, and for this purpose, creative, flexible, proactive organizations with a global vision are required, and that provide added value to their competitors in order to be successful. The purpose of this work is to show the main typologies of knowledge management models, the most used key factors in the implementation of the organizational knowledge management as well as some of its most used practices with the intention of highlighting the favorable influence that these three aspects have on the success of an organization from an adequate knowledge management. The logical historical, hypothetical-deductive, analysis and synthesis methods were used to

RESUMEN

A diferencia de los recursos tradicionales capital, tierra y trabajo, el conocimiento es reconocido como un recurso fundamental de la sociedad moderna y de las organizaciones ya que tiene un potencial ilimitado para el crecimiento de la organización, debido a que provee una ventaja competitiva sostenible y genera rendimientos crecientes en los estudios de mercado. En este entorno las entidades necesitan aumentar su capacidad para hacer frente a los cambios, necesitan innovar para ser competitivas y sostenibles, y para ello se requiere de organizaciones creativas, flexibles, con iniciativa, con visión global y que aporten valor agregado a su competencia para llegar a ser exitosas. El presente trabajo tiene como propósito mostrar las principales tipologías de modelos de gestión del conocimiento, los factores claves más utilizados en la implementación de la gestión del conocimiento organizacional así como algunas de sus prácticas más utilizadas con la intención de resaltar la influencia favorable que tienen estos tres aspectos en el éxito de una organización a partir de una adecuada gestión del conocimiento.

systematize the entire bibliography consulted and argue the proposal. A chart is obtained with the main typologies of models to be implemented in an organization according to their type and the need for information to be managed, as well as the main key factors and some actions to be implemented for their achievement. The essential idea that this research defends is that knowledge is one of the intangibles, perhaps the most important, on which the source of competitiveness of organizations in the 21st century rests.

Keywords: knowledge management; organizations; knowledge management models; key knowledge factors; knowledge society

Se utilizó el método histórico lógico, el hipotético-deductivo y el método de análisis y síntesis para sistematizar toda la bibliografía consultada y argumentar la propuesta. Se obtiene una tabla con las principales tipologías de modelos a implementar en una organización según su tipo y la necesidad de información a gestionar, así como los principales factores claves y algunas acciones a implementar para su logro. La idea esencial que esta investigación defiende es que el conocimiento es uno de los intangibles, quizá el más importante, sobre el que descansa la fuente de competitividad de las organizaciones en el siglo XXI.

Palabras claves: gestión del conocimiento; organizaciones; modelos de gestión del conocimiento; factores claves del conocimiento; sociedad del conocimiento

INTRODUCTION

While knowledge originates in people's minds, organizational knowledge occurs when members share beliefs and interact to work together. Therefore, it is incorporated in different areas of the organization, in culture, identity, practices, documents, routines, policies, procedures, systems, rules, as well as in employees (García Quevedo, Mas Verdú, & Montolio, 2013). For example, the real value of companies such as Compaq or Kodak, Hitachi or Siemens depends more on the ideas, points of view and information in the heads of their employees and in the information or patent banks that these companies control than in their industries, machinery, assembly lines or other physical assets that they may have.

Unlike traditional capital, land and labor resources, knowledge is recognized as a fundamental resource of modern society and organizations (Adelstein & Clegg, 2014), as it has unlimited potential for organizational growth because it provides a sustainable competitive advantage and generates increasing returns on market research (V. H. Lee, Foo, Leong, & Ooi, 2016). Capital itself is now largely based on intangibles. Therefore, the triumph of new enterprises is based on learning, where the most important capital is man, who is the one who possesses the most precious good of this era and has the power to transform it through learning, socialization and application. In this environment, entities need to increase their capacity to face changes, they need to innovate in order to be competitive and sustainable, and for this purpose, creative,

flexible, proactive organizations with a global vision and that add value to their competition are required to become successful.

Knowledge is specific to people, but its level of complexity and practice will depend on the degree of competencies, skills and experiences of those who possess it, and the challenge represented by its expression as a form of socialization will be the most important challenge of modern society (Brudny, 2004), if we want to survive in an era where triumph is not of those who know the most but of those who learn the most.

The new economy that the world develops today carries as adjectives: information, knowledge and learning, basing its processes on the resources that we now call intangible, frequently being heard "(...) we are creating value in the economy thanks to knowledge, based on intellectual capital, (...) we are acting in an economy based on intangible (...)" (Bueno Campos & Salmador Sánchez, 2000). These intangibles are the results or products of activities that are based on and derived from knowledge or intelligence put into action, and represent the processes and functions of any organization.

However, despite the recognized importance of knowledge management (KM) within organizations, there is still uncertainty, gaps and gaps in research on this topic in the business context. The study carried out by Marulanda et al. (2012), states that there is a marked trend towards the application of knowledge management models in traditional organizations and very little in terms of innovative or mixed organizations. On the other hand, the research of a group of authors conducted by Medina Nogueira (2018) specifies that the most frequently occurring variables in KM models are the processes through which KM is developed; the key factors (people, processes and

technology) and the different ways and processes to manage it. Consequently, based on these antecedents, this research proposal is oriented towards the independence that organizations must have in the introduction of knowledge management, the need for a previous diagnosis that offers elements that argue the type of KM model that your company needs, as well as knowing how to identify its main components and key factors of your organization. Therefore, the purpose of this paper is to show the main typologies of KM models, the key factors most used in the implementation of organizational KM, as well as some of its most used practices with the intention of highlighting the favorable influence that these three aspects have on the success of an organization based on adequate knowledge management.

MATERIALS AND METHODS

The research used the logical historical method for the critical study of previous works related to the object of study of Knowledge Management analyzing its evolution over time. The hypothetical-deductive method allowed to go from the general to the particular, as well as to define specific criteria and concepts of the investigated phenomenon. The analytical-synthetic method was used to break down the research problem into separate elements and deepen the study of each of them, in order to synthesize them in the proposal that carries out the research regarding the three main components of KM that affect an organization.

RESULTS AND DISCUSSION

The current globalized economy and the intense speed of change that it causes

incite organizations to develop initiatives that allow them to improve their response capacity, mainly optimizing the dynamics of their processes with the environment. In this horizon of possibilities, knowledge is considered as one of the fundamental resources to maximize the productivity of organizations. From this point of view, the success of the impact of KM in an organization is associated with the possibility of using different approaches to knowledge to obtain a new stage that can improve organizational actions or create the basis for a new action, in a way that facilitates creative performance and direct the body of knowledge of the organization towards the generation of new ideas that provide an increase in its innovative capacity.

According to the literature review of this research, there are different aspects that differentiate the impact of the successful introduction of KM from one organization to another. Within the broad scenario of application possibilities that KM has, this study focuses on three of its essential components: knowledge management models, key factors and KM practices.

It is considered that the necessary identification of each of these components in each organization will depend to a large extent on the favorable impact of KM in an organization. It is important for organizations to learn that there is no common formula or recipe with the exact ingredients for each organization; that KM requires a design tailored to the characteristics of each company or organization so that its impact provides significantly superior results. Organizations need to analyze which KM

model to apply, identify which are the key factors that will support all KM processes in their institution based on their own strengths, and finally, what practices to apply within the entire universe of KM possibilities that exist. Its implementation requires in-depth analysis based on information of a different nature. Only in this way can a favorable impact of KM on an organization be asserted.

Knowledge Management: Models

Knowledge is the ability to act, process and interpret information to generate more knowledge or provide a solution to a particular problem. In recent years there has been a momentous change, in which the growth of economies and businesses is driven by knowledge and ideas rather than traditional resources (Del Moral, 2007). The world is moving towards a knowledge-driven society, where traditional tangible assets are losing value to intangibles. It has been recognized that knowledge is power; but as Nonaka and Takeuchi (1995) state, the importance of knowledge in organizations depends on what can be done with it within a business environment. That is to say, knowledge by itself is not relevant, as long as it cannot be used to give rise to value creation actions.

That is why it is so important to know what type of knowledge each organization is capable of managing; what model it should adapt, what would be its main components, etc. From this initial diagnosis is that the organization is in a position to manage its knowledge and that this has a favorable impact on the organization.

Table 1 - Classification of KM models

Author	Classification
McAdam & McCreedy (1999)	Categorical models of knowledge: This group includes models whose main characteristic lies in exposing knowledge management under an essentially conceptual and theoretical approach.
	Models of intellectual capital: This type of models assume how intellectual capital can be separated within human elements, of the client, of the Process and of development, which are contained in two main categories: Human capital and structural/organizational capital.
	Socially constructed knowledge models: They assume a broader definition and vision of knowledge. These models are intrinsically linked to social processes and organizational learning.
Rodríguez Gómez (2006)	Storage, access and transfer of knowledge: These models focus on the creation of methodologies, strategies and techniques that allow the storage of knowledge and facilitate its access and subsequent transfer among the members of the organization.
	Sociocultural: They are based on the impulse of an organizational culture that promotes the generation of knowledge management processes.
	Technological: This type of models focus on the development and use of computer systems, as well as technological tools for knowledge management.
Kakabadse, Kakabadse & Kouzmin (2003)	Philosophical models of knowledge management: these are related to the epistemology or constitution of knowledge itself. These try to explain how it is possible to obtain information from social and organizational reality.
	Cognitive models of knowledge management: they are related to positivist science and represent mechanisms for understanding cause-effect relationships.
	Knowledge management network models: Such models arise in conjunction with network organization theories and focus on the acquisition, exchange and transfer of knowledge as fundamental aspects of organizational learning, allowing for the choice and adoption of new practices where appropriate.
	Knowledge management community of practice models: Their basis is built from a sociological and historical perspective.
	Quantum knowledge management models: Its foundation is given from a quantum perspective, which is based on works of quantum physics, quantum emerging technology and economics.
Barragán (2009)	Conceptual, theoretical and philosophical: Models whose main characteristic is to enrich the study of knowledge management from a theoretical and conceptual approach based on the study of epistemology and issues related to knowledge.

	<p>Cognitive and intellectual capital: generally developed within organizations and industries that seek to make intensive use of the use and application of knowledge in order to generate value for their products and processes.</p> <p>Social and work: In this area the main characteristic that distinguishes the models is the study of the socialization of knowledge among different actors or work groups with the aim of understanding and optimizing the mechanisms of use and transfer of knowledge to promote social and/or group benefit.</p> <p>Technical and scientific: the technical and scientific models are those that in part of this type of classifications include models that manage to incorporate the use of ICT to improve the use and application of knowledge.</p> <p>Holistic knowledge management models: This group includes models whose characteristics do not fit within the first four groups described, or their contents present two or more characteristics of the previously discussed groups, which does not allow them to be clearly catalogued within any of the categories preliminarily proposed.</p>
Marulanda y otros (2012)	<p>Models with an approach from conception: They are classified into subject models, when the conceptual approach is focused on the subject and Organization, when the conceptual approach is focused on the organization.</p> <p>Organizational models: They are classified according to the type of organization, they can be mechanistic when those visions of the organization are included that as the Tayloriana and the Fayoliana, make of the man a simple gear of a technical process of production or of a functional whole; organists when inspired by living beings, their needs and survival relations with the environment, as structuring elements of the new organizational version; holographic each member of the organization fully participates in the purposes and knowledge of the company as a whole and systemic, which seeks the understanding of business problems, being more general and holistic.</p> <p>Models from the type of organization: They are classified as traditional when the traditional company is usually contemplated as an organization that acquires knowledge through the hiring of specialized personnel; of innovation that is oriented to the implementation of a culture of innovation that allows to promote or potentiate that synergy effect that has the organizations and mixed that have the combination of the two previous concepts.</p> <p>Management models: These are classified into organizational culture, change management, strategic management, management by competencies, management by processes, information management.</p>

Source: Own elaboration

Key Factors of Knowledge Management

Resource-based theory offers an enlightening interpretation of the phenomenon of the key and most valuable aspects of an organization, for example: possession of scarce, valuable, inimitable and difficult to replace resources implies that some companies obtain better results over time (Barney, 1991); while the knowledge-based approach maintains that knowledge resources, being socially complex and difficult to imitate, can produce a sustainable long-term competitive advantage (V. H. Lee et al., 2016; Vásquez Rizo & Gabalán Coello, 2015). However, it is reiterated that knowledge by itself is not the basis for achieving a competitive advantage, but the ability of the company to effectively control and apply the knowledge acquired, develop appropriate systems and procedures to manage and increase knowledge, and the skills to incorporate and transform it for the benefit of the organization (Phipps & Prieto, 2012). It is a systematic and organized approach that allows organizations to be faster, more efficient, innovative and effective than the competition (Shahzad, Bajwa, Siddiqi, Ahmid, & Sultani, 2016).

Among the multiple key factors identified in the different models, those most associated with the impact of KM in an organization are: human resources, processes, and technologies.

The interaction of these three elements (human resources, processes, and technologies) in a systemic way has been interpreted as the essential basic support for the organizational KM management wave to reach its highest point. These three elements together with the time factor mark the differences and destinies of the organizations. In this conception of organization there is no time to stop a process or to consult "the one who knows,"

so knowledge has to be collective and must be socialized.

Organizations today need this type of KM to increase business opportunities, increase communication, increase present and future competitiveness, elevate the company's leadership in its market, and elevate the performance of its products and services, and so on. The knowledge that the company knows it has must be made explicit in some way for those who need it to access it in a timely manner. This is achieved through an information system to support knowledge and this process will be more agile as it is automated. This means that for an entity to have optimal knowledge management there must be a corresponding balance between human resources systems, technological systems and the information of its different processes.

The organization that intends to manage its knowledge has to know its human capital represented by the skills, competences, experiences and individual knowledge of its human resources (this is the primary source of KM and the most difficult to manage) so companies must work on the basis of achieving their socialization, expression, documentation and application so that this knowledge then form part of the structural capital of the organization. The structural capital is a reflection of the continuous work of the individual management of its personnel according to their objectives, functions and results through methodologies, process manuals, projects, research, identification of flows, etc. It is where individual knowledge is made explicit, becoming of collective use, for the good of the entity. And finally, the relational capital that shows the results of the company in the environment and therefore determines the level of satisfaction in customers and suppliers through the impact of their products and services, is the physical and tangible image of the

company giving social and market recognition.

An organization that works under the approach of knowledge management, giving priority to its human resources is better adapted to innovation and undoubtedly have identified as their main factor of competitiveness the knowledge of people, because it lies the ability to identify and develop new business opportunities, offering new and better products, faster and at lower cost than competitors. It is necessary to ensure that people have the necessary information and knowledge at the right time as this is what potentiates an appropriate organizational learning, through which organizations create and acquire knowledge. According to Senge (1999), this is the first step towards becoming the intelligent company that the future requires "(...) organizations where people continually expand their ability to create the results they want, where new, expansive patterns of thinking are cultivated, where collective aspiration remains free and where people continually learn to learn together (...)".

Knowledge Management Practices

These practices refer to the set of techniques, strategies and processes that are adopted by the organization for the creation, storage, transfer and application of knowledge. While the distinction between explicit and tacit knowledge offers an understanding of how knowledge is created and can be controlled in organizations (Nonaka & Takeuchi, 1995), it does not recognize the specific activities that organizations can carry out to improve the creative process. Within all existing practices (Alavi & Leidner, 2001; Echeverri, Lozada, & Arias, 2018; Simanca, Montoya, & Bernal, 2016) this research focuses on the following: knowledge creation, continuous learning practices, knowledge and feedback

systems, and management of individual employee competencies.

Knowledge creation practices

The creation of knowledge is positively related to the creativity of organizations and is positively related to the performance of the organization (H. Lee & Choi, 2003). These include the processes through which new knowledge is acquired and developed or existing knowledge is replaced, making it available for use by the organization. In this sense, a strategy capable of increasing the efficiency of KM and supporting the transfer of knowledge between individuals and companies is codification. The transformation of tacit knowledge into codified knowledge makes it possible to improve access to and application of knowledge (Massingham, 2014). Explicit knowledge is that which can be encoded and stored, and is easy to transmit to others through formal language or in a symbolic way such as databases, files, rules and formulas.

Knowledge sharing is another practice, here individuals share ideas, relevant information, and organizational experiences with others (H. Lee & Choi, 2003); this process has been considered a key component of KM systems and one of the most important elements of the organization's creative behaviors (Fullwood & Rowley, 2017). It shares the view that knowledge creation practices influence organizational creativity and hence productivity.

Continuous learning practices

The internalization of knowledge is one of the best examples of this practice. Obtaining new tacit knowledge from explicit knowledge is fundamental for the development of new thoughts and the generation of ideas (Shahzad et al., 2016). Tacit knowledge suggests a personal

quality that makes it difficult to formalize and communicate because it is rooted in action, experience and participation in a specific context. It involves cognitive elements such as views, beliefs, ideals or intuitions, and technical elements such as know-how and skills that apply to a specific context (Kim, Lee, Chun, & Benbasat, 2014). In this sense, tacit knowledge, not being easily communicable, requires interactions between people, usually teams of people or organizations over time in order to be applied and transferred. This can be achieved through some practices such as education, training, scientific research projects, tutorials, etc. where new knowledge is acquired that can be applied for decision making or exchanged with other people within the organization. Organizational learning is essential for creativity (Gong, Huang, & Farh, 2009), as new knowledge and ideas are inspired, the ability to understand and apply new ideas and innovations is increased, knowledge sharing (Yeh, Yeh, & Chen, 2012) and organizational intelligence are intensified. This helps to identify existing opportunities, anticipating and understanding the needs of clients, the strengths and weaknesses of its rivals and available technological developments, orienting its capabilities to organizational innovation (García Quevedo et al., 2013). Therefore, it is fundamental to have an organizational culture that leads the members of the organization to have a permanent search for continuous improvement and a climate conducive to learning (Verreynne, Hine, Coote, & Parker, 2016). This research also considers that continuous learning practices have an impact on the performance and competitiveness of each organization.

Knowledge and feedback systems

Effective KM requires KM systems that integrate organization, people, processes,

and technology; it must not simply store information; it must be an effective system that is flexible and context-oriented for each organization. Regardless of the structure chosen to design KM systems (Diaz Perez, 2017, 2018; Diaz Perez, Armas Peña, Rodriguez Font, & Carrillo Calvet, 2016), an aspect on which the success of their implementation in the organization depends to a large extent; it should facilitate the distribution of knowledge and should require diverse mechanisms that allow employees to be familiar with "who knows what," "who is working on what," and "who to ask when particular questions arise. An optimal KM system must consider both the tangible and intangible elements that the organization has and from there generate new indicators that allow measuring the different types of knowledge that the organization has with a wide battery of indicators (Rivero Amador, Díaz Pérez, López Huertas, & Armas Peña, 2016b, 2016a, Rivero Amador, Díaz Pérez, López Huertas, & Rodríguez Font, 2017, 2018) and on this basis of analysis generate new ideas that create new knowledge networks that share information and solve problems, establishing resources dedicated to specific purpose

Additionally, these knowledge management practices contain frequent and constructive feedback mechanisms to foster creativity by strengthening employees' intrinsic motivation, as it provides them with standards to evaluate their own work, learning and development levels, facilitating the acquisition of creative skills and strategies that stimulate the organization's internal and external KM.

Management of individual employee competencies

The recognition of employees' creative ideas is an intrinsic motivator that operates as a support for creativity and,

according to Amabile (1988), intrinsic motivation prevails over extrinsic motivations, so reward and feedback systems promote an organizational environment where employees' competencies and achievements are recognized, work autonomy is increased, and greater opportunities for professional growth. At this point, the area of human resources plays an important role (Miterev, Engwall, & Jerbrant, 2016). Therefore, the research agrees that the management of individual competencies of employees has an impact on the creativity of organizations and the management of their knowledge.

Finally, we can conclude by commenting that knowledge is one of the intangibles, perhaps the most important, on which the source of competitiveness of organizations rests in the twenty-first century. The administration of knowledge generates a

new way of doing economy optimizing the collaboration of technological and innovative knowledge (Díaz Pérez, Casas Guerrero, & Giráldez Reyes, 2019), altering the way of administering technology and human resources; managing knowledge as a good, generates a new way of managing organizations which imposes a challenge to change and the new organizational culture if we want to be part of the new era. The transformation of knowledge into an economic resource is complex, therefore its materialization is the only way to guarantee an adequate use when necessary, playing a determining role the treatment and opportunities that the directors or managers of knowledge give to their human resources, because this empowerment will depend on the development of the intellectual capital of the organization and with it all the competitive advantages in the market.

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