Artículo original

Organizational Knowledge

Conocimiento Organizacional

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Abstract

Knowledge is the most important active element for any company to adapt to changes in the macro and micro contextual environment in which it operates. The objective of this article is to analyze knowledge creation at the organizational level. Research was conducted under the qualitative paradigm, using bibliographic and hermeneutic approaches as study methods. A literature review was carried out on various indexed articles on the topic, from sites such as SciELO, Web of Science, and Dialnet, among others. A documentary and discursive analysis of the selected articles was then performed, contrasting the author's ideas with those of other researchers. The results indicate that knowledge is created daily in companies, but it often goes unnoticed, overlooking its importance in corporate decision-making. The study concludes that it is necessary to create appropriate administrative mechanisms to capture the knowledge created within corporations, in order to use it effectively, comprehensively, and promptly to adapt to changes in the environment.

Keywords: company, organization, management, knowledge, decision-making.

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Resumen

El conocimiento, es el elemento activo más importante de cualquier empresa, para adaptarse a los cambios del macro y micro entorno contextual donde se encuentran embebidas. El objetivo del artículo es analizar la creación del conocimiento a nivel organizacional. Se llevó a cabo una investigación bajo el paradigma cualitativo, utilizando como métodos de estudio, el enfoque bibliográfico y hermenéutico, ya que se realizó una revisión bibliográfica de diversos artículos indexados sobre la temática tratada, en sitios como: Scielo, Web of Science, Dialnet, entre otros. Luego se hizo una análisis documental y discursivo de los artículos seleccionados, donde se contrastan, las ideas del autor con la de otros investigadores. Los resultados indican, que el conocimiento se crea diariamente en las empresas, solo que pasa por desapercibido en la mayoría de los casos, haciendo caso omiso a la importancia que éste tiene, en la toma de decisiones corporativas. Se concluye que es necesario crear mecanismos administrativos adecuados para captar el conocimiento creado en las corporaciones, a fin de utilizarlo de manera útil, completa y oportuna, para adaptarse a las modificaciones del entorno.

Palabras clave: empresa, organización, gestión, conocimiento, toma de decisiones.

Introduction

In today's business environment, organizations have had to adapt to paradigm shifts in the macro-environment to address corporate culture and climate, which includes the management style implemented by the strategic apex. Furthermore, the direct relationship between organizational culture and organizational effectiveness necessitates research in this area to correlate both variables, enabling the optimization of institutional resources and assertive decision-making in the production of goods and services to satisfy societal demands.[1]

Organizations constantly strive to respond as quickly and efficiently as possible to the needs of their customers and the market, offering high-quality products and services at a competitive and timely cost. Organizations survive in a highly globalized and competitive market where opportunities are scarce. To this end, they rely on a range of resources, which they utilize to address each of the challenges they face. González et al.,[2] highlight the following challenges and pressures: compressing business cycles, transforming products and services into usable goods, reducing costs, knowledge-based services, e-business, globalization, consolidation, extending value chains, and increasing shareholder profits.

The main objective of any organization is to be effective, profitable, and adaptable to constant change. In this context, organizations have potentially similar levels of physical resources to face competition, with knowledge, according to Corona,[3] being the key differentiating factor. Organizations are increasingly basing their operations on knowledge, which is their most important asset. Its intangible nature does not prevent it from constituting the most sought-after competitive advantage for organizations of all types. And like any asset, it must be managed. Furthermore, efforts must be focused on its management due to the complex nature of its formalization and distribution.

Countless organizations recognize that they possess significant knowledge, but they do not take advantage of it. The feasibility of doing so through automated business processes is becoming an increasingly common industry standard, but its full potential is not being realized. In this context,

organizations that can capitalize on the available knowledge will have a significant advantage and added value in the increasingly competitive global market.

Based on the above, the objective of this article was to analyze the importance of organizational knowledge and the challenges currently faced in its generation, taking as its premises: ICT and knowledge management, postmodern management, and knowledge and knowledge creation.

Methodology

The methodology used was qualitative, with a bibliographic and hermeneutic design. This approach allowed for the study of organizational knowledge as it exists within the corporate context, without researcher intervention. Primary and secondary sources of information were analyzed, drawn from indexed scientific articles. This approach added scientific rigor to the selection and analysis of the texts chosen for the theoretical framework of the study.[4]

The selected articles came from reliable scientific directories such as SciELO, Dialnet, and Web of Science, among others. A hermeneutic analysis was then conducted on the authors' discourse to contrast their ideas with those of the author, generating a coherent and objective.[5]

Results and Discussion

ICTs and Knowledge Management

The current globalized, highly dynamic, and ever-changing environment has forced companies to value knowledge as intangible capital for development and productivity.[6] However, the sheer volume of information handled, its variety, and its imprecision make it essential to use tools to process the data that will generate this information and then leverage the knowledge that will bear fruit and enable the definition of quality strategies so that the organization can maintain or improve its leadership. These tools consist of the management of Information and Communication Technologies (ICTs), which will support the restructuring of business processes in organizations or companies in general, but they will not be the only element that will move the organization forward. Even if they were the only element, they do not represent the determining factor for the company's leadership and competitiveness unless there is a level of organizational maturity in technological management.

Companies must leverage ICTs by integrating them with their business processes and production systems, as well as the socio-economic and political dynamics of their environment, so they can adapt to the constant changes in the world. The use of ICTs allows for the reformulation of the business model and stimulates innovation, employee motivation, and accelerates the input and processing of tasks and functions.

This analysis revealed that with the rise of technology, and especially the Information and Communications Technology (ICT) sector, companies and organizations have found it necessary to strengthen their strategies to remain competitive and profitable in an increasingly globalized and changing market. Technologies have evolved to support these companies through the development of specialized software and hardware, increasing their efficiency and productivity. Research and

development in the ICT field continue to grow, generating new and improved technologies that open up new markets.

One of the fastest-growing and most developed applications in the ICT sector has been IoT, or the Internet of Things. While the internet has clearly impacted all economic and social sectors worldwide, IoT is changing the way things are done. IoT refers to real-time communication between objects via internet networks, enabling the collection of data and information to transform it into knowledge.[7]

Dave Evans, a Cisco executive, states that IoT has made it difficult to understand the constant changes in technology, in the sense that it is often thought to dominate the entire technological future and the social and economic changes to come. However, what is not widely known is that IoT constitutes the greatest technological revolution seen to date, both in terms of technology and the scale of business opportunities. It is exponentially more impactful than the current internet and the use of large volumes of data (Big Data).

The IoT has impacted the ICT sector due to the rise of internet-connected devices and machines embedded in everyday objects, visible in everything from cell phones and technological infrastructure to even the clothing we wear. The envisioned future where smart objects can detect their surroundings and interact not only with their owners but also with each other generates massive volumes of data in a very short time, aggregating information across the entire internet and, consequently, activating Big Data systems.[7,8]

In this context, knowledge and its management are playing an increasingly important role for companies, due to technological developments in information and communications. Organizational competitiveness is increasingly based on knowledge that is difficult to imitate and that allows for sustainable competitive advantages.[8] It is on the basis of knowledge, constructed socially and dynamically, that decisions are made in competitive environments.

Documented experiences in knowledge management focus on the organization's life cycle, and therefore, today they place great importance on technological tools for generating and storing information and recording these experiences, all with the aim of reusing knowledge to achieve profitability and productivity for the company. Thus, many systems and practices correspond to reuse, an issue that must be considered at a stage with a particular impact on the organization's performance.

Knowledge management is a concept that has been relevant in Information Engineering and Software Engineering, and it is of great importance for systems development, since it promotes the creation and reuse of software building blocks, cataloged for easy reference, standardized for easy application, and validated for integration.[2] Information technologies and the tools associated with knowledge management are part of the organization as support for decision-making, forming a dynamic process that is closely related to the knowledge life cycle.

Once integrated into the organization, knowledge is reused to promote innovation and organizational creativity, supporting the structures, capabilities, and competencies of its own resources and collaborators, as well as external elements that will give the company an open systems perspective, allowing new paradigms to be introduced to support its management. This significant evolution leads to postmodern management, as described below.

Postmodern Management and Knowledge

The development or Organizational development has been based on adapting to the constant changes experienced by the world and humanity. This evolution occurs in parallel with the social, political, economic, and cultural changes in which human beings develop, becoming what is known as postmodernity. This postmodernity finds support in three fundamental axes that guide being and doing: the affirmation of the plural and the particular, the rejection of the philosophy of the subject, and the critique of reason from an anarchist perspective.[9]

In light of this approach, the importance of aligning with the constant changes in the environment in which the company operates, according to a particular context, and avoiding excessive systematization and generalization, is emphasized. In other words, the organization must be open to different situations constantly and avoid always sticking to the same model of action, since otherwise, it would perish and be unable to compete. The key to avoiding falling into individualism and embracing pluralism is generating knowledge through action, language, and spirit. The way knowledge is used and shared is how we classify and categorize the phenomena that impact the company, thereby formulating strategies that lead to decision-making to overcome obstacles and achieve organizational goals.

By generating and communicating knowledge, we break free from subjectivity and the senseless imposition of power. It's not about competing to impose one's will or instilling a forced organizational culture, but about accepting multiple perspectives that, together, can make the company more profitable and competitive. It is through knowledge and a plurality of opinions, more than through new technology and scientific advancements, that postmodernism truly emerges.

Gautherot and Ferrín,[10] argue that while modernist approaches to the study of organizational life present organizations as immutable phenomena, as extensions of human rationality, postmodernist approaches address organizations as contingent and temporary expressions of a systemic impulse to order social relations according to the model of functional rationality. In other words, rationality, critical analysis, and the interpretation of phenomena foster an open and robust culture for confronting chaos, or what amounts to almost the same thing, the constant change in which everyone is immersed.

Corona,[11] suggests that, given that postmodernist reflection has opened a space for Critical Theory, it can be used to achieve an emancipatory praxis in management. This leads to the assertion that information has become the most valuable capital for organizations, to the point that they will grow in light of the commercialization of this information. These companies will need to structure strategies that allow them to manage and control the millions of potential data sources that appear and disappear; and implement storage solutions to organize and feed their Business Processes (BP), applying Business Analytics techniques to transform data into valuable information.[12]

The IoT constitutes an additional source of data for business optimization, data that can originate from information sources such as data warehouses or operational applications, and master data from machines, applications, devices, or people.[13]

Business Analytics seeks to process all this data from different sources and enable or make it available to the consumer in a simple way. Similarly, Big Data encompasses both structured and unstructured data,

but it must provide the user with transparent and easy access as much as possible. Enterprise search is the most common paradigm for exploring unstructured data.[14]

With the above in mind, it is easy to see that by combining Business Intelligence and Enterprise Search through Big Data and other data sources, the needs of the future consumer of information and business processes can be optimally met.

Knowledge Creation

The organization has been viewed from two dimensions for knowledge creation: the ontological dimension and the epistemological dimension, where the way in which knowledge is created from the conversion between what is known as tacit knowledge and explicit knowledge is analyzed. For the authors, the knowledge-creating organization has three primary functions: generating new knowledge, disseminating it throughout the organization, and incorporating what has been learned into new technologies.

Alcívar, Alrcón, and Ferrín,[15] state that to work with the theory of organizational knowledge creation, it is necessary to understand the nature of knowledge. To this end, the two dimensions of knowledge will be examined: ontological and epistemological. The first refers to the fact that knowledge within an organization can reside at the individual level or be shared by the organization's members. Individual knowledge is a repertoire of knowledge "owned" by the individual, which can be applied independently to specific types of tasks or problems. It is also transferable, as it accompanies the person, which can give rise to potential problems with staff retention and knowledge accumulation.

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In contrast, collective knowledge refers to the ways in which knowledge is distributed and shared by the members of the organization. It is the organization's accumulated knowledge, stored in its shared rules, procedures, routines, and norms, which guide problem-solving activities and interaction patterns among its members. It can be a "reserve" of knowledge stored like a fixed database, or it can represent knowledge in a state of "flow" arising from interaction.

In concrete terms, knowledge is created only by individuals. An organization cannot create knowledge without individuals. The organization supports individual creativity or provides the context for individuals to generate knowledge. Therefore, organizational knowledge generation should be understood as the process that "organizationally" amplifies the knowledge generated by individuals and crystallizes it as part of the organization's knowledge network. For this reason, organizational knowledge generation relies on organizational support for potential knowledge sources: individuals, groups, teams, projects, areas, departments, among others.

Following the same line of thought, the epistemological dimension is based on comparing explicit

knowledge with tacit knowledge. In 1996, Michael Polanyi[16] identified the difference between these two types of knowledge.

- Explicit knowledge: This is knowledge that can be expressed in formal language (i.e., with words and numbers) and can be easily transmitted and shared in the form of data, scientific formulas, codified procedures, or universal principles.
- Tacit knowledge: This can be described as personal knowledge embedded in individual experience and involving intangible factors such as beliefs, perspective, instinct, and personal values.

Polanyi[16] considers that the origin of all human knowledge lies in intuition. Thus, an organization's learning and innovation capacity depend entirely on its ability to mobilize tacit knowledge and foster its interaction with explicit knowledge. There are four forms of knowledge conversion whose interaction drives the knowledge creation process (SECI):

- Socialization. This is the process of acquiring tacit knowledge through shared experiences via oral presentations, documents, manuals, etc. This knowledge is acquired primarily through imitation and practice. Socialization begins with the creation of a field of interaction, which allows team members to share their experiences and mental models. It produces what the authors call "Harmonized Knowledge."
- Externalization. This is the process of converting tacit knowledge into explicit concepts, making it understandable to other members of the organization. It also involves interaction between the individual and the group, and requires techniques that help express this tacit knowledge through figurative language, in the form of analogies, metaphors, and visual language. This produces what the authors call "Conceptual Knowledge."
- Combination. This is the process of systematizing concepts into a knowledge system. Explicit knowledge is synthesized and formalized so that any member of the organization can access it. For this stage to be completed, it is necessary to capture and integrate new explicit knowledge, disseminate explicit knowledge through presentations, conferences, etc., and process it to make it more accessible. It is related to "Systemic Knowledge."
- Internalization. This is the process of incorporating explicit knowledge into tacit knowledge through "learning by doing." It analyzes the experiences gained from putting new knowledge into practice and integrates them into the tacit knowledge base of the organization's members in the form of shared mental models or work practices, giving rise to "Operational Knowledge."

Each moment of knowledge conversion leads to new knowledge. If the tacit knowledge produced through socialization is not made explicit through externalization, the new knowledge will hardly be usable in any kind of innovation. Similarly, if the explicit knowledge generated in the combination cannot be internalized by the members of the organization, a good part of the new knowledge will be lost.[17,18]

Conclusions

Based on the contextual analysis presented, it is concluded that organizational knowledge is a complex neuro-organizational process that requires the attention of all levels of the company for its acquisition and transformation.

In this sense, business research is essential as a starting point for organizing and consolidating the

knowledge generated consciously and unconsciously by human capital, which entails requiring the commitment of the strategic and operational leadership of organizations.

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Conflicts of interest:

The authors report no conflicts of interest.