Knowledge management and key factors for organizational success in the perspective of the 21st Century

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Abstract

This paper will analyze knowledge management trends in organizations framed in the most up-to-date currents in administration in order to explain the knowledge-based vision, developed by multi-dimensional strategies in value creation. Furthermore, considering the various critical processes from the strategic alliances and the dynamic capabilities that determine it. In an analytical, bibliographic-documentary approach, study categories are defined to interpret and contrast how knowledge continues to be a comparative advantage, demonstrated in its conceptual deconstruction, where
theoretical discussions are generated. The same advantage point to new conceptions extracted from its applicative composition in the 21st century organizations, which implies various human and process adaptations. It is concluded that knowledge management and dynamic capacities, and strategic alliances are essential for organizational success and social welfare.

Keywords: knowledge management; dynamic capabilities; organizational success; strategic alliances.

1. Introduction

Humanity in the last two decades of this century has found itself immersed in various confluences, faced with scenarios of multiple and accelerated transformations that have determined fundamental adaptations for countries and their societies in general, as well as for any human organization. As a result of these changes, new forms of production, exchange, globalized connection, and social and human rearrangement generate new work relationships of citizens with States and society in general. Adaptations are necessary not only for organizational processes but decisively in the human connections that
occur. Although these changes indeed occur, other scenarios remain historically. For example, the great contradictions and deep inequalities still prevail.

Knowledge is the central object for achieving sustainable development, inclusive well-being, and quality of life from any context. Wisdom is associated with the product, and it is said that the more knowledge a nation has, the more skilled it is for its social and economic development. Thus, access to expertise represents a comparative advantage for any individual or nation in the different areas of human performance. The production and competitiveness are defined by an input added value, such as the knowledge expressed in workers’ intellectual contributions to their organizations, including the contributions that citizens make to the societies both publicly and privately.

Therefore, knowledge has revolutionized economic and technological globalization, being the mainstay of the experienced transformations. In this paper, we analyze knowledge management trends in organizations framed in the most up-to-date currents in administration. This analysis was possible through the review carried out according to different sources that allude to the categories pertinently selected to this research (intertextuality) obtained from databases, repositories, and libraries. This selection was confirmed by more than 100 condensed references in records of synthesis, although the ones mentioned in this article were mainly applied as crucial information.

From the review of the 100 documents, which were located in several databases, specifically; Pivot ProQuest, referents such as SCOPUS and WOS, and from the ResearchGate academic network; 21 sources were excluded, and 79 were selected, the selection criteria involved the searching of the following keywords: knowledge management, organizational success, strategic alliances, as well as the updating of data, information, contributions, as a trend of scientific production in the focal categories, that allowed to respond to the objective of this research.

2. From the perspective of knowledge and its applications

The current theoretical development is part of the most recent strategic management trends to explain its vision, based on the knowledge that generates multi-dimensional strategies to create value. The XXI century company or organization must integrate capacities that allow the creation, evolution, and recombination of resources into a new competitive advantage source. (Korshenkov & Ignatyev, 2020; Laužikas & Miliūtė, 2020). This systematic process of generating new abilities through routine learning processes has been called dynamic capabilities (Hernández-Linares et al, 2020; Kurtmollaiev, 2020; Schilke et al, 2018; Schoemaker et al, 2018; Teece, 2018).

From such perspectives, knowledge, then assumed, conceived as a tool for nations’ social and political development, should be oriented and addressed in a pluralistic, diverse, and accessible way. Coinciding with Áválos (2005), when states that the most relevant characteristic of the knowledge society is universal, massive, intensive, and permanent access to knowledge, because this is increasingly a significant variable in the distribution of power and,
of course, in the conflicts that such a distribution originates

In the same way, dynamic capacities are assumed; as “its main contribution concerning resources and capacities in the introduction of dynamism, the consideration of changing environments and the need for the company to renew its competencies to achieve adaptive coherence with the changing environment” (Garzón, 2015: 112).

Knowledge management and dynamic capacities allow adapting to changing, emerging, and facing uncertain realities in complex and unstable environments. For example, the unsuspected facts such as the Covid19 pandemic and its consequences in different human beings’ environments.

Due to the above, new expectations and demands arise for higher education and research centers, justified even more by their reason for being, which is the generation and mobilization of knowledge to achieve more just and equitable societies. An education, where exclusion does not exist (Filmus, 2005), so that all citizens are involved in equal opportunities, applying a comprehensive vision of development that incorporates aspects such as elimination of poverty, deep democratization, quality of life, general well-being, preservation of the environment, decent work, in short, a model of integral human development proposed on four fundamental axes: national identity; democracy; productivity and growth; and integration and social equity.

Consequently, the scientific and technological actions become an aspect of greater significance for scenarios such as organizational, humans of various kinds, and the public sphere. An inclusive democracy requires a social and ethical challenge in societies needing institutional innovations to resolve the divergences between technocratic and democratic logic, besides the market and citizen logic. The need to articulate a new “social contract” between scientific practice and social development, which appears as a priority issue on the world political agenda, promoting human development, supported by a comprehensive education, specified in the XXI century by the UNDP in the Sustainable Development Goals, World Goals (2020), like quality education, among other strategic issues.

3. Knowledge management and some key factors

Knowledge management involves people, processes, and leadership. It is a fundamental aspect in all societies, as expressed by Castells (1996); it is the attribute of any social organization in which information generation, processing, and transmission become fundamental to productivity and, consequently, power (Chehabeddine & Tvaronavičienė, 2020).

The production of knowledge and its heritage as conservation of the intellectual capital of any organization requires processing inputs such as leaderships that harmonize a culture according to preserving the acquired social learning and the contributions of those involved. Its incidence determines that heritage that makes significant learning, collaboration, and impacts internally and externally.

As Agudelo & Valencia (2018) point out, this proactive leadership element focuses on the team’s strengths and fosters trust, mutual respect, and recognition for contributions. In short, the participatory direction is...
essential for managing the knowledge and is aligned with the organization’s objectives. Regardless of its economic activity, it should also strengthen the formal implementation of expertise in its management processes and teamwork, because when it is shared, the organizational vision, the achievement of proposed objectives; and the value of the individual’s skills, becoming significantly prone to the impulse of institutional belonging.

Other variables intervene in the effective management of knowledge, both systematically, such as; cutting-edge information and communication technologies, and temporary, imprecise and unexpected. This intervention can arise at any time and in any context, but with a decisive global impact on the human race’s survival.

Today, with more urgency because of the experiences from the Covid 19 pandemic, scientific structural variables must go hand in hand with an efficient and accessible health sector and the implications for other disciplines of knowledge that interact to improve health, social, political, economic, and human conditions in general.

4. Knowledge management and business-organizational success

Since the end of the 20th century, scientific literature has been significantly interested in knowledge management in business. In the era of Big Data, the potential for technology-based companies’ economic growth is determined primarily by the following elements of a strategic nature: knowledge, the learning ability, and the concept of R+D+I (Research, Development, and Innovation). Associated with the items mentioned above, we can affirm, among other things, the strategic importance that the knowledge variable acquires to improve its management quality and competitiveness (Hamdoun et al, 2018; Martínez-Martínez et al, 2018; Cabrilo & Dahms, 2018; Yori et al, 2011).

The knowledge present between companies with agreements or alliances and their management becomes a key factor for their competitive success. Those contributions reveal characteristics of what is understood by knowledge management. It highlights a set of methods that use knowledge to generate value, increasing its innovation capacity (Ode & Ayavoo, 2020). It is also found that adequate knowledge management improves its ability to solve problems and improves their ability to adapt to the changing environment (Sun et al, 2020; Maravilhas & Martins, 2019). Therefore, for knowledge management to be effective, decision-making must be shared throughout the organization.

Knowledge management begins with the importance of people and their capabilities since human resources play a crucial role in improving the organization (Hajir et al, 2015). In this sense, it should be noted that there is an extensive bibliographic production that links knowledge management with the following aspects: information and communication technology, innovation, management method, organizational culture, strategic policy, human resources, management by objectives, quality, or process reengineering (Zhuang, Chen, & Wang, 2019; Turulja & Bajgoric, 2018; López-Nicolás & Meroño-Cerdán, 2011; Zheng et al, 2010).

The literature also gives a preferential place to the management style as a crucial element to manage
knowledge since the management style supports the organization’s behaviors and goals (Archanjo de Souza et al, 2020). Based on this fact, it is convenient to show that management leadership is one of the most important keys that the organization has to implement adequate knowledge management. It is worth highlighting its relevance in life’s internal company, the collaborative or transformational leadership style (Tepper et al, 2018; Cooper, 2016). When speaking of knowledge management, the term business culture cannot be omitted, understood as the set of values or beliefs that define the strategic behavior or conduct of the organization for its economic and social progress (Muchiri et al, 2012).

To be better and strategically explained, knowledge management encompasses many business vectors (culture, management style, human resources, information, and communication technologies). It becomes essential when there is an alliance strategy between companies since the success or failure of the agreement between both organizations depends on their management (Hagedoorn et al, 2018; Zhao et al, 2019; Ualzhanova et al, 2020).

Nonaka & Takeuchi (1995) present a model that explains the creation and dissemination of knowledge in companies and organizations. The model is based on the dynamic and constant relationship between tacit knowledge and explicit knowledge to disseminate knowledge. It distinguishes two different types of experience; implicit, which is not physically palpable but is internal and owned by each individual, and explicit knowledge, which can be expressed or represented by physically storable and spreading symbols.

Recently, Acosta et al, (2013) presented a model relating dynamic capacities and knowledge management in new technology-based companies. The model’s main contribution is that the management style, the climate, and the organization’s double-dealing impact knowledge management. This condition is favored in the organization’s dynamic capacities by developing strategies that renew internal and external competencies.

From an internal point of view to the company, an organization comprises a set of resources that reside within it (Unge et al, 2011). The foundation of the theory of resources and capabilities “RRV” (Harsch & Festing, 2020) has evolved, and today there is a talk of creating a sustainable competitive advantage from companies’ resources and capabilities. To generate a competitive advantage, they must be valuable, rare, inimitable, and irreplaceable (Unge et al, 2011). Due to the above, the difficulty of imitation is the critical element for a resource or capacity to be a source of sustainable competitive advantage. Collis (1994) states that organizational capabilities have been specified as the set of routines that constitute the efficiency of a company physically converting inputs into outputs.

In addition to its functions’ development capabilities, the company can also develop dynamic capabilities of a more creative nature (Mikalef et al, 2020). From the RRV, the term of dynamic capabilities is extended, which resides within the company, and are responsible for promoting change and adjusting the company with greater flexibility to changes in the environment, said capabilities being strategic nature and empowered by business management (Semke & Tiberius, 2020).
Teece et al, (1997) state that the set of abilities constitutes these dynamic capacities to learn, adapt, change, and renew themselves over time. Dynamic capabilities are responsible for developing new and innovative strategies that allow the company to forecast its behavior against its competitors in changing environments (Teece et al, 1997). Under this approach, non-dynamic capabilities are also called operational. They are the capabilities available to any company to develop its functions and achieve success, the management responsible for selecting and promoting them (Fainshmidt et al, 2016).

5. Strategic alliances and competitiveness.

Assuming that firms are heterogeneous, as each company shows a single allocation of resources and capabilities, strategic alliances are presented as an instrument to the key for companies to develop, acquire and thus expand its endowment of resources being competitive (Arslan, 2018; Rothaermel & Deeds, 2006; Ireland et al, 2002).

Business cooperation or strategic alliance can be understood as medium or long-term voluntary agreements or contracts between two or more independent companies, which involve exchanging or sharing part of their resources or capacities or developing new resources (Gulati, 1998: 294). Tanganelli (2004: 36) establishes that strategic alliances are defined by the relationship’s nature based on the allied companies and are intrinsically marked by the ambiguity of this relationship that combines rivalry and cooperation.

Regardless of the definition adopted on the concept of strategic alliance, it is indisputable that the partnership becomes a source of competitive advantage due to the turbulence of current environments (O’Dwyer & Gilmore, 2018). Therefore, making a strategic alliance becomes a pivotal factor in guaranteeing survival due to the difficulty of competing with a single company in the market (Bruyaka et al, 2018).

Cooperation between companies pursues achieving a common objective that cannot be performed individually or in isolation. According to Stuart (2000), the explanation of why companies establish alliances is directly linked to the participating organizations’ presumption of profit generation. Koza and Lewin (1998) show a significant disparity in motivations and objectives for establishing an alliance. However, a company will only cooperate if it obtains strategic or financial benefits in the future. In the emerging literature written in recent years, there are different reasons why alliances between companies can be established.

For Koka and Prescott (2002), the coalition can access new partners’ new knowledge. For other researchers, the reason may be to learn tacit and technological expertise, cooperate, acquire new skills, or manage an alliance (Ardila et al.,2020; Gomes, 2020). Another aspect to consider when undertaking business cooperation is that the companies that agree to carry out an alliance have among their objectives to achieve strategic initiatives that, in isolation, they would not implement (Mamédio et al, 2019; Nyaga et al, 2010).

Heijs (2000) points out that there may be institutional motivations for creating an alliance, such as public institutions’ incentives, due to policies to support companies in knowledge-
intensive technology sectors. Considering what has been said, it is convenient to point out the existence of an abundant bibliographic production linked to the term technological alliance, showing that under this name, a large number of strategic and business partnerships have been made in the era of industry 4.0 (He et al., 2020; Wang & Rajagopalan, 2015). In this sense, García-Canal and Guillén (2008) distinguish five typologies of technological alliances:

• Alliances whose objective is to carry out a unilateral transfer of technology.
• Alliances whose purpose is to undertake a cross transfer of technology between the partners.
• Alliances to generate technology from the existing technology of one of the partners.
• Technology alliances originate from the combination of technologies from partners.
• Alliances to promote technology without starting from existing technologies.

According to the documentation consulted for the development of this paper. It can be stated that an essential volume of the first studies carried out on technological alliances was focused on exploring the problems associated with the risks of specialized knowledge appropriation. It involved little scientific interest in analyzing how knowledge management influences the alliance’s success and innovative capacity (Oxley & Sampson, 2004).

6. Knowledge management, organizational cooperation, and learning capacity.

When an organization wants to discover new opportunities or acquire new skills, learning constitutes one of the primary keys to consider when undertaking future business alliances in the globalized world (Subramanian et al., 2018; Huang & Wang, 2018).

In this sense, Garzón et al. (2012) define organizational learning as the “ability of organizations to create, organize, and process information from its sources. To generate new individual, team, corporate, and inter-organizational knowledge, generate a culture that facilitates and enables conditions for developing new capabilities, designing new products and services, increasing supply, and improving existing processes aimed at sustainability.”

In this way, companies can develop learning within their organizations where their partners’ skills are present; this contributes significantly to exploiting the innovative synergies generated around business alliances (Jiménez-Jiménez & Sanz-Valle, 2011). Under this premise, learning is strategically manifested as a differentiating element; this causes, on the one hand, companies to specialize in those capacities where they are experts. Furthermore, on the other, companies dedicate themselves to subcontracting the rest of the productive activities and looking for partners as resources of complementary knowledge and competence (Aggarwal & Kapoor, 2018; Sukoco et al., 2018).

Stuart (2000) identifies organizational learning as one of the first objectives that partners of an alliance should consider from the moment of its constitution. This will allow it to effectively solve the internal problems within the organizations that make the business alliance. The importance of learning within a joint agreement has been reasoned as one of the essential elements that
companies’ top management has to stimulate technological progress, the efficiency of their human capital, and productivity. Child and Faulkner (1998) maintain that learning is probably one of the most attractive and innovative intangible resources that a company can enjoy to create value. It is not an easy process to achieve because it depends on multiple factors of both internal and external nature. Anand and Khanna (2000) state that the ability to learn from a specific alliance increases with experience, so it is necessary to “learn to learn.”

The literature on business management considers organizational knowledge an exciting vector to generate sustainable competitive advantages through innovation and intellectual capital (Manhart & Thalmann, 2015; Von Krogh et al, 2012). For Colombo (2003), productive or strategic alliances that share knowledge significantly improve its members’ business and economic capacities in the 21st century. According to the above, it can be said that the management of organizational knowledge into an alliance favors the achievement of the objectives whenever companies work corporately by the design of a strategic plan aimed to transfer knowledge efficiently and apply it in a standard way. This fact cannot be carried out if its members’ relationship is distant since proximity promotes collaborative learning cultivating innovation and future cooperation agreements with other companies or public institutions. The latter is observed quite clearly in the high-tech sector because this instrument promotes access to know-how between companies (Cooper, 2017).

On the other hand, the results of studies that analyze the relationship between work networks and the innovative performance of organizations have been quite inconsistent (Tsai, 2009). Collaboration networks are identified as determinants of innovation that have attracted the most attention (Gronum et al, 2012). In this regard, Keeble (1997) shows that entities operating in competitive and turbulent environments are more likely to participate in alliances and networks with other companies or organizations. In line with this research, Ravina-Ripoll et al, (2019), Thornton et al, (2019), and Perkmann & Walsh (2007) indicate that the ties that are created between small and medium-sized companies with universities or knowledge transfer centers exponentially increase the innovative performance of said productive entities. Many of them have enough financial and material difficulties when developing R + D + I projects in the era of Industry 4.0 by themselves.

Consequently, according to global expectations, educational institutions, specifically universities, must adapt to the demands of transformation for general and timely development but in harmony with their immediate context's capacities and realities. Education is a vehicle of knowledge but inserted in the needs of social and economic development and the widespread understanding of the social groups involved, as a way of introducing coherent responses, which in the synergy of obtaining successful results, involves collective learning to have the ability to apply and improve changes. From this perspective, knowledge, conceived as an instrument for nations’ social and political development, must be oriented, channeled, and approached in a pluralistic, diverse, and accessible way. Scientific and technological activities become increasingly crucial
for democracy, making this a social and ethical challenge in societies in need of institutional innovations that tend to improve the general welfare, considering the scientific developments that occur within society.

“An education where exclusion does not exist” (Filmus, 2005). All citizens are involved in equal opportunities, applying a comprehensive vision of development that incorporates: eliminating poverty, complete and deep democratization, quality of life, protection of the environment, and access to decent work. A model of integral human development is proposed on the fundamental axes of democracy, productivity, growth, integration, and social equity, (Diagram 1)

**Diagram 1**

**KNOWLEDGE MANAGEMENT AND BUSINESS-ORGANIZATIONAL SUCCESS.**

Source: the authors

**Conclusions**

From this analytical approach, it is convenient to undertake a multidisciplinary research framework. It is put on the academic table that learning and knowledge management constitute two intangible assets that promote business cooperation and add value within strategic alliances. Faced with this reality, it is necessary to fill the literary gap detected in this study by developing a significant volume of works demonstrating that business success is based on enhancing trust, *Know-how*, complementarity, or technology transfer.

Currently, there is a large amount of bibliometric production on strategic alliances. However, much of the wide range of studies carried out on this particular topic between 2000 and 2018 have not been dedicated to examining...
the fundamental role that knowledge and learning play in generating new digital society alliances. Throughout this text, it has been shown that the senior management of the organizations usually gives great importance to these two factors. Internal innovation is significantly cultivated through them, and the construction of sustainable competitive advantages is promoted through the efficient use of its human, economic, and technological capital.

A significant aspect is undoubtedly organizational leadership as a determining factor for collaborative and dynamic teamwork. Strategic leadership is for achieving the proposed objectives and supporting the vision’s mission and scope but in proportion to the employees’ encouragement and recognition of proactively and proportionally to the results’ contribution.

These analyses require further deepening, specifically in the immediacy of the Covid19 from its planetary condition, realities, knowledge, and human capabilities, all of which have been transformed. Therefore, the literature represents a sample emerging set of research activities since the pandemic on knowledge management and learning capacity, undoubtedly generating new business alliances. Hence, the exposed reflections may have a limited scope regarding their impact on human capabilities, but not necessarily on the categorical constructions treated in theoretical terms.

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