Impactos das Tecnologias nas Ciências Sociais Aplicadas 3

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APRESENTAÇÃO

A obra “Impactos das Tecnologias nas Ciências Sociais Aplicadas” aborda uma série de livros de publicação da Atena Editora, em seus 16 capítulos do volume III, apresenta experiências do mundo corporativo em diversas áreas da gestão como: Pessoas, Finanças, Logística e Responsabilidade Social, tais áreas impactam diretamente nos stakeholders do ecossistema empresarial.

Os impactos da evolução tecnológica desde a máquina à vapor até a ascensão “Machine Learning”, é percebida de forma clara no ambiente organizacional, onde observa-se desde mudanças de processos à exigência de habilidades comportamentais. Com isso, as organizações que não estiverem atentas as tendências tecnológicas e mercadológicas serão fadadas a extinção.

È necessário um novo reformular o pensamento a respeito aos modelos de gestão existentes e das atitudes do profissional que converge nas habilidades técnicas e sociais, impactando no resultado final da organização.

Estes artigos apresentam cases que vem de encontro com essa perspectiva disruptiva do momento, conforme previsão de Magaldi e Neto (2008) “qualquer companhia desenhada para ter sucesso no Século XX está destinada a fracassar no Século XXI.

Glaucia Wesselovicz
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SUMÁRIO

CAPÍTULO 8

EVOLUTION AND TRENDS IN MANAGEMENT SYSTEMS BASED ON INTERNATIONAL STANDARDS

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ABSTRACT: The quality concept started mainly with the statistical control of products. Then it was continued with the quality assurance to apply it to the continuous improvement process. However, since the emergence of standardized management systems in the 80s, the schemes, and reference standard of the operation and management of these systems have changed, being those issued by ISO (International Organization for Standardization) the most recognized and applied. In this work, the evolution and trend of the management systems in organizations are analyzed based on the modifications in the ISO 9001 and 14001 standards.

KEYWORDS: ISO standards; management system; quality; risk.

METHODOLOGY

A bibliographic survey was carried out on the Internet, through identified keywords in Spanish and English, as well as their synonyms and combinations through the corresponding Boolean operators (AND, OR, NOT). The search strategy includes the review of specialized databases and official ISO page.

It was established as inclusion criteria the use of documents that contain useful dates for the research. Also, works preferentially in pdf format with bibliographic references that contribute to sustaining its authenticity.

RESULTS AND DISCUSSION

One of the definitions of management systems states an interrelated set of elements like procedures, instructions, formats, and others. Through these, the organization plans, executes and controls certain activities to achieve its objectives. (HERAS et al, 2007). It is also specified as a guide that explains the daily company management: defining the organizational structure of the company,

the processes, the main procedures of business and the corresponding assigned responsibilities (CASADESÚS et al, 2005). All these aspects referring to quality, environment, prevention of occupational risks, innovation, among others, can be managed through systematized procedures according to standards. Any of those standards mentioned have application in a company or organization. Considering the latter as a system since is formed by a set of interrelated elements (HERAS et al, 2006). Besides, it is an "open system" for being in a continuous relationship with the environment, influenced by it but at the same time influencing it.(CHAMORRO MERA, 2003).

The standards of the ISO 9000 series were the first ones that had a good acceptance to implement systems relation to quality. The first version of 1987 was based on BS 5750. They are standards developed by the British standardization organization, British Standards Institution (BSI), which established requirements for the implementation of a quality assurance system. The 1994 version maintained the quality assurance vision and contemplated minor changes. The first significant modifications occurred in the 2000 version. The system to be implemented was generically called Quality Management System. It has a processes management approach and introduces requirements related to continuous improvement and customer satisfaction which differentiates it from the quality assurance. To this are added changes of a single certifiable norm, ISO 9001, and changes in its structure, in part adopting a certain similarity with the ISO 14001 norm, arise in 1996 for environmental management systems. The great diffusion of ISO 9000 for the quality management system, has facilitated the diffusion of others standards of similar structure and corresponding to different aspects of the management of the company as they were the ISO 14001 of the environmental management system and the OHSAS 18001 norm of safety management system and occupational health (SAIZARBITORIA et al, 2006).

In the 2008 version, ISO 9001 had minor significant changes. However, in its current version 2015 it changes its structure in order to facilitate its integration with other series such as ISO 14000 of environmental management and ISO 26000 of social responsibility. The requirements are grouped into the titles of: organizational context, leadership, planning, support, operation, performance evaluation and improvement. As regards the terminology, some concept modifications were included and new definitions incorporated: risk, performance, organizational context, knowledge, and improvement. This version aimed to adapt to the new context of the different organizations, incorporating the focus on products, services, non-profit organizations and public system, with a more generic profile and that is more easily applicable to services. It incorporates an emphasis on the concept of leadership, based on the idea that the quality system should be managed strategically by management, and should remain committed. It contains less prescriptive requirements since it is intended objectives and goals are fulfilled, beyond the formal method used like the non-binding nature of the quality manual. Another significant change was the identification of context

risks for both negative and positive issues so an organization can use risks as an opportunity for improvement (HUBBARD, 2009). However, it involves the identification and management of the risks first.

Respect to ISO 14001, this norm was published in 1996 based on the British norm BS7750 and it established requirements for an environmental management system. It had minor changes in the 2004 version and, like ISO 9001, in 2005 modifications of mayor relevance were presented. It incorporates the context, approach of risks and opportunities and the concept of the complete life cycle of its products, to ensure the environmental protection by designing them until their final disposal. It also promotes the proactive implementation of initiatives to reduce waste, decrease and effective control of pollution and the efficient management of resources (TARCAYA et al, 2016).

The demands of the regional and global markets, the assurance and certification by third parties of compliance of certain requirements for the different suppliers, regardless of the geographical location in which the integral parts of the business are located, has caused that in a few years the development of the management systems have more weight inside the companies (ULLOA-ENRIQUEZ, 2012), in order to obtain higher returns in their processes (GISBERT SOLER et al, 2014).

Both the ISO 9001 and 14001 are certifiable standards. They allow a third party to verify the operation of the management system of the organization. The most popular ISO management standards are still widely appreciated, with a combined total of 1.644.357 certificates worldwide (ISO, 2018).

According to what was published by the International Organization for Standardization (ISO, 2017), the following tables show the corresponding evolution of certifications, both locally and globally.

Standard	2.011	2.012	2.013	2.014	2.015	2.016
ISO 9.001	1.009.845	1.017.279	1.022.877	1.036.321	1.034.180	1.105.937
ISO 14.001	243.393	260.852	273.861	296.736	319.496	346.147
ISO 22.000	19.351	23.278	24.215	27.690	32.061	32.139
ISO 50.001	0	1.777	2.590	1.939	5.220	8.231

Table 1. Certifications worldwide. Source: The ISO Survey of Management System Standard Certifications 2016

Standard	2.011	2.012	2.013	2.014	2.015	2.016
ISO 9.001	4.753	6.605	6.634	6.741	7.112	7.059
ISO 14.001	784	1.268	1.308	1.339	1.422	1.619
ISO 22.000	93	108	117	144	137	104
ISO 50.001	0	2	6	8	11	10

Table 2. Certifications in Argentina. Source: The ISO Survey of Management System Standard Certifications 2016

The tables show the recognition of the previously mentioned standards accepted by organizations because they continue to increase certifications both locally and globally, with ISO 9001 being the one with the highest number of certifications. The ISO 14001, with an appearance difference of 9 years, is in second place in numbers of certifications and reaches the number of 1.619 in our country.

Tables 1 and 2, show the statistics standards certifications that emerged in recent years; the ISO 22000 and ISO 50001. The first was published in 2005 and refers to the requirements of food safety management systems. The ISO 50001 was published in 2011 and relates to the requirements of energy management systems. Although the ISO 50001 was published not long ago, certifications have been made in Argentina since 2012.

Even though there is still no valid rule that incorporates integral management, several authors emphasize the business advantages of the integration process. Besides it contributes to achieving more confidence, motivation and staff participation (RICARDO CABRERA et al, 2015) strengthening organizations.

When analyzing the available bibliography and the different criteria of several authors on the harmonization, organization, and integration of management systems of environmental quality, energy and health and safety at work, a series of benefits can be described. These benefits are based on the integration of management systems which relate in the following way: rationalization of internal work in terms of documentation avoiding duplication; integration of data and information; development of mayor staff competence and skills to efficiently act when facing non-conformities. Also, based on results there is evidence of a better performance of the company; increase in effectiveness and efficiency in systems management in the achievement of the objectives and goals; the reduction of the use of resources and the time spent in carrying out the integrated processes; the internal communication improvement, such as the external image, achieving more confidence of customers and suppliers. Additionally, other results are obtained in the internal learning of the company like promoting leadership (ANTÚNEZ SAIZ et al, 2016). To all these aspects, the integrated vision of the identification of the context and risks is added.

FINAL CONSIDERATIONS

There is a trend of great acceptance of international ISO standards in organizations for the implementation of management systems of different aspects: activities, products, and services. Since, it produces an internal value of the organization by the process improvement. Consequently, it also creates a value of the staff welfare.

The ISO 9001 standard continues to be the most implemented and certified management system standard, As regards the others and from its first publication to the present, there was an evolution from the concept of assurance to quality management,

aligned with the PHVA cycle (plan, do, verify and act) of continuous improvement. The other standards of management systems, the ISO 14001 and the ISO 50001, have the same structure as the ISO 9001. This facilitates the integration between the standards, for an effective implementation and a more efficient administration of the resources used for the systems' execution.

The concept of context identification and of risks is the most novel and common to all the latest versions of ISO standards after 2010. It created a management framework based on identifying risk situations and evaluating them by proposing control alternatives. The tendency is that every management system based on ISO international standards, considers risk management as a daily tool in the planning and activities of organizations. Parallel to the recent emergence of ISO 45001, of occupational health and safety management system, in 2018, there is another ISO standard with a structure for the system integration.

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