



THE IMPORTANCE OF SCIENTIFIC KNOWLEDGE AND INFORMATION TECHNOLOGIES IN DECISION-MAKING IN THE COMPANY

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SUMMARY

This article addresses the theme “The importance of scientific knowledge and information technologies in decision-making” based on the assumption that Information and Communication Technologies, facilitate the development of the production process in business organizations, requiring professionals responsible for management in companies know the different technologies that can be used in the company - programming, use of specific applications and programs and, consequently, understand the potential that these technologies offer to boost the activities of companies. In this sense, the assumption is defended that there is a need to master the technical knowledge that makes it possible to implement innovative technological solutions.

Key words: Technologies. Company. Scientific knowledge

1. INTRODUCTION

The arrival of globalization and the growing advance in scientific knowledge and in the technological field has led companies to take the initiative to seek, increasingly, tools that help in business management. Thus, in order for a venture to be successful, it is necessary to know how to work and analyze the information that the market offers, making them useful for the company's internal and external transactions. It is often the responsibility of the administrator to make decisions based on the information provided.

Banzato and Gasnier (2011) define Information Technology (IT) as an element that aims to facilitate the decision-making process, enabling the integration and exchange of information between the activities that make up a company's value chain, that is, so-called primary activities and secondary activities. The amount of information and decision variables is very numerous and difficult to synchronize manually, thus generating an integral dependence on IT for the logistical management of processes.

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The article is structured in two main sections in addition to the introduction and final considerations. In the first, it addresses the administration and the organizational environment for the use of ICTs and the importance of scientific knowledge and technologies in the production process.

PHILOSOPHICAL INFLUENCE ON ADMINISTRATION AND THE ORGANIZATIONAL ENVIRONMENT

The field of Administration, since antiquity, has been permanently influenced by philosophical thinking. One of the exponents of philosophy that spoke about the importance of Administration was Socrates, a prominent philosopher in Greece who reflected on how much this field of human activity should have the necessary attention.

An example of how much Socrates valued management or administration in all its aspects can be seen in the famous debate with Nicomaquides, where the former exposed his reasoning regarding the centrality of thinking about Administration. Mantoan (2012, p. 47) cites the core of his speech

About anything a man can preside over, he will be, if he knows what he needs and if he is able to provide it, a good president, whether he leads a choir, a family, a city or an army. Isn't it also a task to punish the bad and honor the good? Therefore, Nicomaquides, do not despise men who are skilled in managing their possessions ...

It is understood that for the philosopher to manage it consisted of a unique skill that some people were able to perform more successfully than others. Scientific or technical knowledge was important, but experience and the ability to make decisions and know how to manage them was the main characteristic of the administrator.

Thus, from the ancient period to the present, philosophy was also concerned with unraveling and finding solutions to a range of challenges that preoccupied those who were in management positions, and it is important to recognize that the effort in this direction would bring many benefits. (Chiavenato, 2000)

The Industrial Revolution in the 18th century and especially the advent of production processes based on technology (20th century) became events in history that favored the development of Administration, making it possible for the theories and techniques that underlie the control of tasks.

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As a result, the organizational environment has been the subject of several studies due to its importance for the success of the organization. The need to define and know the components that make up the environment culminated in the development of administrative theories in which organizations are seen as open systems, which need to adapt to external conditions in constant modification and adaptation (Bowditch & Buono, 2012, p. 33).

However, the definitions of organizational environment range from the most comprehensive, such as the definition that the organizational environment is anything that is not part of itself, to the most specific, for example, that the organizational environment is composed of all phenomena or elements that are external to the organization and that potentially influence it (Hall, 2004, p. 35).

It is still necessary to understand that there are elements that are explicitly relevant to the organization, and are in contact with it (the specific environment) and there are elements that are potentially relevant to the organization (the general environment). (Miles, 2010, p. 24)

Still, according to Porter (2012, p. 45)

The action of the general environment can take place through the influence on the components of the specific environment (such as suppliers, customers, competitors and shareholders) or through the creation of pressures that demand a response from the company, such as a change in the legislation or the appearance of a new technology, which makes new businesses emerge and / or disappear already established markets.

In reality, the discussion about the definition of the organizational environment and its components becomes more complex when one considers that not everything that happens in the environment is significant for the members of the organizations (Porter, 2012, p. 38).

Furthermore, no individual is able to capture the full range of information that is around him, and even if he did, nothing would guarantee that the perception of what he has captured is correct, or even useful for his activities. (Weick, 2003, p. 45)

There is another classification of the environment according to the perception of the members of the organization. Bowditch and Buono (2012) defines it as a real and perceived environment.

The real or objective environment consists of entities, objects and conditions outside the company's borders. Each organization has a real (or objective) environment that is external and measurable. Still, the real environment is constituted by a set of

objective conditions that can create pressure for the transformation, to the point that the viability of a company depends on that its developed dimensions are appropriate for those environmental conditions. (Child and Smith, 2007, p. 30)

The perception of this objective environment, by the individuals of the organization, constitutes the perceived or subjective environment. Although these perceptions are 'real' events, from the point of view of their consequences, they occur within the organization and this is important, since people react according to their perceptions and not the actual facts. (Bowditch & Buono, 2012)

In this sense, the correlations between objective conditions, or the real environment, and their perception on the part of managers are not high, influencing, in turn, the process of formulating strategies. Therefore, there are companies that are in the same environment, but that interpret it completely differently, adopting different strategies, which may be consistent with the environment or not.

However, at one point, large, medium or small organizations agree with each other: using information technologies have been essential for streamlining the operations put in place by employees. Without it, it is not possible to sustain itself in the market, nor to maintain having and maintaining the advantage competitive based on making decisions based on the reality of the market niche that that Organization exploits.

INFORMATION TECHNOLOGIES AND SCIENTIFIC KNOWLEDGE IN THE PRODUCTION PROCESS

The need to improve processes and procedures in companies, has resulted in the relentless search for resources that can encourage employees to be fully involved in the activities and operational demands of business organizations. .

It is observed, therefore, that over time, technological resources have become an effective part of the daily lives of employees in companies, and in any department they are present. And that doesn't just happen in the workplace, but it extends to all fields of human experience.

It is worth mentioning that currently several technological resources are available in companies, which with the use of these can improve production procedures and processes, making them much more acceptable to the consumer market.

However, it is worth remembering that the incorporation of new technologies and their languages in the daily lives of companies, based on competent decision-making and

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focused on what the consumer market requires, has been influencing the production process, with the technological resources available presenting new knowledge. In other ways, whether through an application, a technological resource, an activity, an image or a specifically developed program. These technological innovations are present in companies, valuing the autonomy and knowledge of employees.

Therefore, it is believed that technological advances, when used well, contribute to a new vision of the company in relation to the market where it operates. Hence, the Organization is responsible for offering employees the technological update, whenever possible, since information technology is a reality. And workers cannot be excluded from this process of elaborating, implementing and using technological resources in their specific area of work. According (PERRENOUD, 2010), states:

“Training for new technologies is to form judgment, critical sense, hypothetical and deductive thinking, observation and research faculties, imagination, the ability to memorize and classify, the representation of networks, procedures and strategies of communication and work development”. (PERRENOUD, 2010, p.06).

Thus, in the production process, technologies must become part of the daily life of these employees, as ICTs appear in the business scenario precisely to favor the activities of employees and make them increasingly autonomous and productive.

Therefore, it is believed that it is necessary to rethink the role of ICTs in decision making in the company, due to the proliferation of technological resources in the society of cyberspace, social networks, connectivity. In this context, there is an urgent need to make new technologies accessible to all employees in the company, so that the dynamics of the digital world can be monitored and citizens ready for work, to access new technologies and make these become tools for the production of new resources and elements that will improve the company's positioning in the competitive market.

Regarding the decision-making process on the use of ICT's, please inform:

It is necessary to create conditions for the employee to get involved with the phenomenon / object of study in question, and that, in addition, this experience is complemented with the development of hypotheses, readings and group discussions, in which case the manager of the company is fundamental to stimulate and guarantee the total understanding of the subject, without allowing employees to form a distorted view regarding the real and virtual worlds, especially in the case of computer simulations (MELLO JUNIOR, 2011, p. 94).

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It is already a recurring fact and object of observations that the gradual introduction of technologies at different levels of the production process in companies, presenting results that are sometimes not very evident to some, especially to the more traditional business administration, oblivious to methods and technologies and the way the production process is conducted using these tools.

The organizational climate has been described as one of the prerequisites that can contribute for motivation to be increasingly present in the context of organizations. Observing the above, human behavior is basically directed towards achieving conscious or unconscious goals that associated with the motivational point of view can interfere with human behavior and influence the organizational climate.

The understanding of the motivation of behavior goes through the knowledge of human needs, whether it is internal or external to the individual who throughout his life evolves in three stages of motivation corresponding to the physiological and psychological needs and self-realization.

Physiological needs are paramount to the individual's survival and require periodic satisfaction such as, for example, food, sleep, physical activity, that is, they are the basic needs for the individual.

Psychological needs are exclusive to man, they are absorbed throughout life, they are rarely met completely according to the individual's needs. According to Chiavenato (2009), psychological needs are related to the need for internal security, participation, self-confidence, affection and self-realization.

As an example, we can mention the research by Renival V. de Freitas and Magneide S. de S. Lima, published in 2010, under the title The new technologies in companies, where it is stated that this technological evolution and its arrival and use at work the daily life of workers in companies came to contribute in changing behaviors and even so, many people in the business context have difficulty understanding how to work with these technologies, especially, due to little contact with these tools and their procedures.

According to Tezani (2009)

[...] when we refer to the issue of the integration of technologies in companies, we show that there is a certain ambiguity, because, at the same time as there is euphoria in relation to the use of technologies in all stages of the production process, there are still criticisms, insecurities and uncertainties. There is an urgent need to rethink new ways of integrating technologies into the organizational

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environment, providing significant advances in processes and in the daily work of employees (TEZANI, 2009, p. 05).

In short, through the decision-making process, one should not disregard the potential that technologies have to change practices and processes that at many times have fueled production in companies. It is believed, therefore, that the field of business administration is on the threshold of new technological discoveries and that these will further agitate the business world as we know it and, with it, the entire production mode in Organizations.

FINAL CONSIDERATIONS

There is no single way or model to stimulate the production process or even influence the employee's profitability. Companies are not the exclusive place where this happens - despite being one of the main ones - since the work in companies needs to be constantly scaled up.

Thus, the company must be able to favor the growth and development of information technologies, in such a way that, in doing so, it contributes to the improvement of the groups of employees, heterogeneous, complex, different and unique in their individualities.

Therefore, when formulating the work, the main concern was to know how the use of information technology from decision making by the business organization positively influences the productive capacity of workers, in addition to serving as a support for business management to assume a dynamic attitude in view of its attributions, since knowledge of new technologies it is something that has been expanding and dominating spaces.

Encouraging research and continuous improvement in the use of technological resources is the best proposal for business administration to update, prepare and start equipping its group of employees for the new times to come, characterized by the knowledge society, letting "novelty" become an aspect of everyday life.

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