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# INFLUENCE OF TECHNOLOGY ON EMPOWERMENT PROCESS AT WORK

Review  
Article

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## Abstract

*In a competitive environment, holding information is an essential form of power for any organization focused on continuous development and learning. In this sense, information technology (IT) is currently a valuable tool for facilitating communication in organizations, being used to improve the work results of employees and thus contributing to the implementation of the empowerment process. Since not all companies are aware of the power of this resource, or they are not able to use it. The present study aims to highlight the role of IT in the empowerment process, highlighting important IT tools that facilitate organizational communication, learning and providing organizational support at every step of the empowerment process. In the present research, the documentary analysis was used to analyze the most relevant and new articles found through Google Scholar, Elsevier, Web of Science search engines. Also, this article is providing a starting point of future empiric research on the topic for scholars or practitioners in human resource management.*

## INTRODUCTION

Information technology (IT) is a valuable tool for companies that seek to improve quality and achieve employee performance. Starting from the old systems, based on the mainframe technology of the 1970s and reaching the modern ones, a shift from centralized to decentralized management is observed (Psoinos, Kern, & Smithson, 2000). Thus, organizations are now much more concerned with "knowledge employees" (Tsung-Hsien, Li-An, Chinho, & Kuei-Kuei, 2010), capable of incorporating information technology in the workplace, in order to gain more value.

The fierce competition in the goods market, but especially in the services market, has determined that organizations want a competitive advantage, achievable first and foremost with the available resources. In this sense, motivated human resource, empowered to make the best decisions to maintain customer satisfaction, to improve the quality of products/services, is the key to achieving the desired success.

Based on this fact, organizations use information technology to build a favorable environment for the most efficient work performed by employees. Through empowerment, employees have greater freedom of action, being autonomous in making decisions, having more control over work and taking on responsibilities. In order to achieve these things, the employees need information available on request/need, but especially of the actuality, so that they can make the most appropriate decisions. In this regard, IT is an important support for employee empowerment, the specific tools facilitating the work done by providing accurate and timely information, with high quality and adequate costs (Sanjarani & Ya'gubi, 2015).

However, at present, it can be seen that organizations still use information technology to control their employees, failing to fully understand its important role in increasing employee satisfaction, by supporting the empowerment process. In this sense, the purpose of this study is to highlight this role of IT in the empowerment process, highlighting important IT tools that facilitate organizational communication, learning and providing organizational support. The purpose of this study is to draw up recommendations / tips for the managers of companies that want to empower their employees through information technologies.

## METHODOLOGY

The research design is a qualitative one, focused on the documentary research of a number of 30 articles on the topic of employee empowerment and

influence of technology on empowerment. In order to fulfillment of purpose searching for articles was done using the academic search engines such as Google Scholar, Elsevier, Web of Science, using the keywords "empowerment" and "information technology", "technology changes", "digital era" all in the context of empowerment at work. The articles were chosen after the relevance to the researched topic and year of publication, also an analysis of their bibliographic references was made, in order to deepen the ideas. Also, to highlight the main tools used by organizations in implementing the empowerment process, they resorted to searching for new articles, based on keywords such as: "information technology", "communication and organizational feedback", "learning opportunities and decentralization of decisions".

## LITERATURE REVIEW

### Empowerment

Employee empowerment is seen by theorists as an emerging construct, used to explain organizational efficiency (Conger & Kanungo, 1988), but which becomes quite complex when applied or evaluated. The notion of empowerment was understood by the researchers from the perspective of two approaches, which lead to a better but at the same time more complex understanding:

- Relational approach. This includes the structural aspect of the notion (structural empowerment), comprising elements specific to the organizational environment, such as authority in decision making, formal power.
- Motivational approach. It refers to aspects that are largely related to the individual, from the psychological side (psychological empowerment), but which are influenced to some extent and by the organizational environment. Thus, under this approach, the empowered individual feels that the work submitted is significant and at the same time appreciated by those around (Kazlauskaitė, Buciuniene & Turauskas, 2012).

Spreitzer (1995) considers that what determines an employee to feel psychologically empowered in the workplace are some aspects that concern both the organizational environment and the person himself: the place of control (internal, external), self-esteem, access to information and rewards. Once these aspects are accessed, the individual will feel that the work he/she is doing is significant, possessing the skills and self-determination necessary to provide an important result for himself and others (colleagues, supervisors, managers, etc.).

In order for an employee to feel empowered at the psychological level, the organization must strive to build the foundation, the structural empowerment,

by calling for opportunities, access to information and resources, offering organizational support, formal but also informal power (Spence Laschinger, Finegan, Shamian & Wilk, 2001), because thus positive workplace behaviors (job satisfaction, organizational loyalty, stress reduction, etc.) will not hesitate to occur.

### **Information technology**

Information technology (IT) is a set of digital resources, dedicated to facilitating the communication/transmission of information, which are previously procured, processed, stored, converted, sent and characterized by three defining aspects: capacity, quality and price (Markus & Robey, 1988).

The technological evolution began with the industrial revolution. The industrial revolution consists of four stages:

1. Stage one begins in 1784 with the advent of the steam engine, a fact that revolutionized both production and transport worldwide.
2. Stage two is marked by the appearance of the electric mass production lines, in 1913 the first Ford assembly line appeared.
3. Stage three begins with the advent of microprocessors in the early 1970s and leads to production automation.
4. Stage four (where we are today) is based on the technological evolution that started 50 years ago and has major implications for all, this revolution changes the barriers between the physical, digital and biological environment. (Davis, 2016).

In the current state of development, namely industry 4.0, the technology has important characterization elements: the use of gadgets in the carrier, augmented reality, autonomous vehicles and robots, blockchain technology, big data, mobile and cloud applications. These technologies influence and create different business models (Hofmann & Rüsich, 2017).

Technology has become a part of social life, the internet, technological tools (gadgets) changing the way people live and work today. The evolution of technology has brought, will bring and will continue to add value to the organizations that incorporate it, having the capacity to facilitate the accomplishment of things in an efficient way, but at the same time requiring efforts to adapt to it (Lamey, 2018). Information technology can be used to carry out the process of empowering employees by offering a new learning mode (due to the emergence of the Internet), continuous learning, developing various skills for employees (Moradian, 2016).

### **The role of IT in the empowerment process**

An empowered employee needs access to the desired information in real-time, to receive feedback at the right time so that he can make the

best decisions. In this sense, it seems that digital tools have made their mark on these elements, coming with a number of effects on both individuals (employees) and organizations. It has been found that employees have the opportunity to broaden the spectrum of knowledge, through the information needed at one point (Psoinos, 1998). For example, to sell a telecommunications package to a client a sales agent will need additional information, such as customer information, the area in which he lives, the technical elements, etc. Information is obtained more easily using digital tools. An empowered employee must have access to the desired information in real-time, also to get feedback at the right moment in order to make the best decisions. Literature shows that digital tools influence employee at the individual level and also the organizations. It has been found that employees have the opportunity to broaden the spectrum of knowledge, through the information needed at one point (Psoinos, 1998).

Psoinos et al. (2000) highlight some effects of information technology on work in the organization:

- IT allows employees to gain access to the necessary information (specific to the daily routine and not only), at the appropriate time, for making decisions or even delegating responsibilities;
- IT contributes to the performance support, an aspect outlined by reporting the volume of sales, profits, market share, business plans, etc.;
- IT facilitates the tasks of the employees in various ways and automates them (examples: can find out if a product is in stock without going to the warehouse; can receive process instructions on the screen), saving time and effort;
- IT allows (to a certain extent) to overcome the barriers between the departments of the company, the employees being able to have access to various information that is not in their area of expertise, but which can help them to make some decisions;
- IT allows faster communication at the organization level and thus finding answers to the problems encountered.

Although there are so many benefits of using information technology at the workplace, by employees, organizations, customers and other stakeholders, the following questions can be asked: What are the possible shortcomings of IT in the life and work of employees? Or what difficulties/problems do employees encounter when using IT?

Information technology can be used by companies both as a support for employee empowerment and as a control lever. Some organizations, although they implement information technologies or information systems such as ERP, are oriented according to their structure/specificity either on control, or on empowerment, or both (Siew, May, Christina & Wai, 2002).

Information transmitted faster through technology, in addition to allowing employees to be more proactive, impedes a certain freedom of action, as managers can use IT tools to make pressure on employees to get responses faster (Psoinos et al., 2000). In addition, Psoinos et al. (2000) also mention the following shortcomings of using information technology: restricted access to information (principle: you must not know more than you need); inadequate or very much information (which can also be transmitted face to face); the architecture / structure of the information systems (too many prescriptions, technical difficulties, frequent changes); weak skills held by employees. Older generations of employees have the fear associated with the use of technology and without a set of appropriate measures (training hours, mentoring) the digital divide can expand, especially since many of the services "migrate to the virtual world" (Hill, Betts & Gardner, 2015).

Referring to the connection between the two elements: information technology and employee empowerment was treated early (1980-1990) in foreign literature, (Psoinos, 1998) emphasizing the following research findings: the use of the information system can lead to decentralization; new information (IT) strategies are needed for empowerment (seen as a necessity of modern businesses); information technology can lead to empowerment; computerization is an opportunity for users to have more control; electronic communication contributes to empowering employees, through increased access to information. However, Psoinos et al. (2000) conclude that information systems do not lead to empowerment by themselves, but rather empowerment is a process completed by them, supporting employees in fulfilling their assigned responsibilities.

Recent research shows that employee empowerment is closely linked to the implementation of information technology (Qudah & Melhem, 2011; Malafe, Ahmadi & Bei, 2017), as it facilitates the work of employees and helps employees to be more creative at work. Sanjarani & Ya'gubi (2015) argue that modern technologies contribute to enhancing the sense of self-efficacy, control and feeling of doing significant work.

### **Technological tools used in the empowerment process**

With the increasing use of technology in everyday life, employees entering the field of work have a high level of digital fluency. The empowerment process must adapt to these changes. In the following lines, the authors will analyze the possibilities offered by the technology in carrying out different processes related to empowerment, such as communication and organizational

feedback, learning process and decision making, and organizational support.

### **Communication and organizational feedback**

There are many techniques for performing the feedback process, but in line with recent technological changes, empowerment process must adapt to the demands of new generations of employees. A new concept appears, the concept of electronic feedback or "e-feedback". This concept describes the feedback process using the technology and tools developed, such as written comments, writing with the help of a stylus, video feedback, audio, automatic feedback generated by the computer (Denton, Madden, Roberts & Rowe, 2008). There are studies that show that feedback through technology using audio or video media increases the quality of the feedback process, which is perceived as personal (Eckhouse & Carroll, 2013).

*Electronic video conferencing systems* are technological tools that facilitate solving and discussing problems related to work, like lack of creativity, participation to discussions, team informing through the perspective of virtual meetings (Smithson & Psoinos, 1997), which may also be aimed at dealing with negotiations, brainstorming or even strengthening morale. At the same time, feedback can be provided through the video conferencing system (Angell & Smithson, 1991).

*Live chats* are at the same time a means of facilitating communication between colleagues (informal communication) and between workers and persons specialized in consulting (Hannola, Richter, Richter, & Stocker, 2018).

Internal communication in organizations can also be achieved through "*intranet portals*", allowing colleagues to communicate regardless of location or diversity of devices through which they connect. According to Neill and Richard (2012), the use of this tool has become more and more popular due to the pressure of technological changes to digitize organizations.

*Social media* is the term used to define a variety of online tools or technologies that highlight the social aspects of the Internet, facilitating communication, collaboration, and expression of creativity through the Internet (Dabbagh & Kitsantas, 2012). In the recent period, social media has gained a great deal of use in the workplace. The most important element brought in the communication at the workplace by the social networks represents the possibility of carrying out projects through virtual teams. The project members can simultaneously access content made by the members who are in different locations while also having control over the collaboration process (Kaplan & Haenlein, 2010)

*Blog-type* web pages can be a very effective tool in terms of internal communication regarding the information that must reach the employees. This tool offers the possibility to comment on the posted content, thus achieving constant feedback on the posted information (Des Pelsmacker, Geuens, & Van Den Bergh, 2007).

### **Opportunities for learning and decentralizing decisions**

On-demand learning has become an important component of our modern life (McLoughlin & Lee, 2007). People who are learning are constantly looking for new information that can help them at work, school or just to satisfy their own curiosity. In order to be able to easily find and share information, they take advantage of the benefits of digital technology.

*Gamification* is the use of virtual game design elements and techniques to motivate people to solve problems in a non-game context (De-Marcos et al., 2014). Thus, the use of virtual games for solving real problems intrinsically motivates the participants in the game (De-Marcos et al., 2014). Amazon, one of the biggest companies in the world, has begun to use this technology in its warehouses to increase employees' intrinsic motivation (Vincent, 2019).

*Online knowledge sharing platforms* became ubiquitous in organizations, at the same time being at the center of decision making and problem-solving, with presence in several geographically separated locations (Haas, Criscuolo, & George, 2015). Through these platforms, digital collaboration is developed, which is an important way to have all the facilities offered by the technology (Colbert, Yee, & George, 2016). Globalization and alternative work have led to an increase in the number of virtual teams, but team coordination in the virtual environment is a challenge and can reduce the effectiveness of the team if the management of the virtual team is not done correctly. Cummings and Bailenson (2016) consider that the current technological development and the elimination of the barriers between the virtual and the real environment can lead to an increase in the efficiency of the virtual teams.

*Decision support systems* are another means by which employees at any level within the organization can easily make certain decisions regarding the problems that arise, thus supporting the decision-making process, but also facilitating the organizational processes. A new form of this support system is the one that takes into account the decisions taken at group level, offering its members the possibility to manage their decisions in phases, during the formal and informal meetings (Smithson & Psoinos, 1997).

*Internet of Things (IoT) technologies* represent a set of devices designed to facilitate the work of

employees, which collect and process a huge amount of data that helps to make more accurate decisions (Liukkonen & Tsai, 2016)

*Predictive data mining* facilitates decision-making based on historical data registered on different organization departments (Hannola et al., 2018).

Combining the use of different technological tools within companies can increase decision-making and learning capacity. All these technological tools contribute to providing support to employees through the various functions they perform.

## **DISCUSSIONS AND CONCLUSIONS**

The purpose of this article is to highlight the possibilities offered by the technological changes regarding the empowerment process in the current organizations. At the same time, this article presents the empowerment process in the context of new technologies. The specialists in the field of human resources can identify in this article the effects of technological changes on the empowerment process but also the tools through which they can adapt their organizations to technological changes.

Technological changes represent a continuous process of change that constantly influences both organizations and their members. From the selected articles, it appears that technology helps organizations increase the level of empowerment in organizations if the appropriate tools are used.

Our recommendation for specialists in the field of human resources is to realize that in the current state of technological development, namely industry 4.0, a continuous adaptation of the organizations and of the classic strategies of employee empowerment is required. At the same time, it is necessary to have a correlation between the potential of the employees to adapt to new technologies and the implementation of new technologies, in order not to demotivate the employees with a lower degree of adaptation to the change or lower digital fluency.

## **LIMITS OF THE RESEARCH AND FUTURE RESEARCH**

The present article is limited to the analysis of the selected articles. Future research can be carried out on the present topic. Thus, this article offers a starting point in future research within organizations regarding measuring the effectiveness of the technological tools used in the empowerment process in organizations. Also, future research may take into account perceptions of the members of the organizations on the use of technology in the processes of feedback, learning, decentralization, and organizational support.

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