

Chapter 15

The Reconfiguration of Human Capital in Organizations: The Relevant Competences in the Digital Natives in the Postgraduate Level

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ABSTRACT

The objective of the chapter is to describe the main competences to be developed in digital natives at the postgraduate level, based on the characteristics generated by information and communication technologies in the context of the fourth industrial revolution. From this perspective, individual knowledge, experience, initiative, and creativity are recognized as the unlimited resource of organizations and countries, so the talent of the people is the basis of the competitiveness and survival of organizations of any type. Three axes of training at the graduate level are identified: social competences, global competitions of investigation and innovation, and digital competitions with base in the inverted learning and gamification.

INTRODUCTION

Intellectual capital has become the intangible that generates value in companies and has an impact on the quality of higher education institutions, which has led to the need to establish processes that ensure proper management and measurement, aimed at increasing their production, protection and distribution. This situation is the result of the technological revolution and the globalization of markets, which have impacted society, government and the economy, where knowledge has been constituted as the strategic element to promote national and organizational development, which generates innovation in organizations (Arrieta, Gaviria & Consuegra, 2017 and Edvinsson & Sullivan, 1996).

In this way, the intellectual capital of an organization includes the intangible resources and assets that can be used to create value through its conversion into new processes, products and services. These intangibles are the knowledge, experience and intellectual capacity of their employees, as well as the resources of knowledge, processes, culture and philosophy of an organization. Therefore, the need to

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implement effective strategies to promote lifelong learning for all, to strengthen the ability to adapt and acquire new skills, which are the determining factor of long-term growth (OECD, 2012 and Ramírez, 1999). To achieve this, a new focus on the formation of human capital as a main component of intellectual capital is essential.

Consequently, the need to know, manage, store and disseminate knowledge as a means to cultivate the intellectual capital of organizations and countries will become more evident, especially as the conviction that the productivity of Knowledge and knowledge workers are the decisive factor in the global economy (Drucker, 1997).

Thus, in the framework in which the knowledge society is located, a world of continuous alterations is glimpsed, where science and technology are at the base of the economic competitiveness of the countries, where innovation plays a strategic role in the competition, for which they are forced to cover a series of requirements to compete successfully in an increasingly globalized economy, including high investments in both education and research. With respect to organizations and individuals, the knowledge society requires the acquisition of new qualities to adapt to the accelerated changes in the context, which implies continuous or permanent training. As long as countries, organizations or individuals fail to meet these requirements, they run the risk of being excluded from the knowledge society and, with it, from globalized economic competition.

In this sense, Anderson (2012), Jules (2017) and Peters (2017) argue that the fourth industrial revolution offers the following opportunities to be exploited that will allow in the different sectors of a country the following: 1) lower barriers between inventors and markets; 2) more active role for artificial intelligence; 3) integration of different techniques and domains (fusion); 4) improved quality of our lives (robotics) and, 5) connected life through the use of the Internet.

Based on the above, innovative technologies will integrate different disciplines, both scientific and technological. The key forces will come together in a fusion of technologies that is blurring the lines between the physical, digital and biological spheres, that is, artificial intelligence will equalize the reach of human intelligence and even exceed it due to continuous acceleration of information technologies (Schwab, 2015). This fusion of technologies goes beyond the combination because it creates new markets and new growth opportunities for each participant in innovation. In addition, the use of the Internet will allow the interconnection of networks of physical devices, which will impact on an advanced connectivity of devices, systems and services with a variety of applications. So it is expected that the interconnection of these integrated devices leads to automation in almost all areas, while generating advanced applications such as an intelligent network with the ability to expand to areas such as smart cities (Gershenfeld & Vasseur, 2014).

Thus, the Fourth Industrial Revolution is more than a change driven by technology because it is a phenomenon oriented towards innovation to positively impact the core sectors of a country such as education, health and business. Specifically, in the first, with the previous industrial revolutions, the focus changed; now in the Fourth Industrial Revolution, technologies expand in different ways the forms of training between the face and virtual, so it requires higher education to redefine its substantive functions considering new modes of curriculum and teaching, and therefore, consider the various forms of learning; which has led to the importance of designing alternative curricula (Jules, 2017).

Faced with this panorama, the massification of information and communication technologies (ICT) has caused that the generation of knowledge has a very high obsolescence, which is why human capital should be seen as a renewable resource, which requires updating and to renew permanently with the continuous learning, which will allow to endow it with flexibility and capacity of response before an

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