Chapter 14

Enabling Digital Transformation in Education and Training:
Towards Effective Human Capital Development

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ABSTRACT

The rapid rise of innovation and digital transformation trends have already begun to cause disruptions to the way we live, work, and learn. Education and training are placed at the forefront of this transformation process because of the learning needs to develop the required competencies for enabling a successful transformation. As educators and training experts become more aware of the potential of open and distance learning, it is essential for their educational planning that the opportunities offered by new technologies like disruptive technologies or digital transformation enabling technologies to be realistically examined. It is evident that educational institutions that fail to embrace digital transformation will be left behind in the upcoming years. Therefore, this chapter aims to discuss the digital transformation process in the field of education and training through the innovative solutions for the development of next generation digital learning environments and spaces.

INTRODUCTION

In general terms, change can be defined as the transformation of any system, process or environment from a certain situation to another, whether planned or unplanned. The digitalization process, which started with the ubiquitous use of information and communication technologies (ICTs), led the way for a transformation process beyond change. Digital Transformation, in line with the opportunities offered by rapidly developing ICTs and changing social needs, might be defined as the holistic transformation of

organizations in human, business processes and technology elements in order to provide more effective service and beneficiary satisfaction.

Digital Transformation, also called "The fourth industrial revolution", has changed the way we do business entirely and started the transformation process in every field. With the digital transformation in which all business and relations are redefined in a digital environment, all the sectors are changing. In this rapid digital transformation process, we are experiencing, education and training needs change at all levels. Digital transformation in education and training is just as critical as in any other industry today, if not more, and there's an urgency driven by the gap between student and staff expectations and their current experiences. Development of strategy and policies will drive innovation and digital transformation in education and training, not the technology.

The knowledge economy, globalization and the pressure of international competition have increased the importance of innovation day by day (Camagni, 1995; Malmberg 1997; Ritsila 1999). Innovation is widely accepted as a key to creating and sustaining a competitive advantage and is considered a fundamental component of entrepreneurship and a vital element of business prosperity (Nonaka and Takeuchi, 1995). Innovation is essential not only for organizations but also for educational institutions. Effective learning environments depend on the creation and fostering of an environment that encourages innovation and application of new technologies (Arpacı and Gürbüz, 2011).

Innovations facilitate new ways for education and training so that the experts are watching their existing solutions and adopting new ones. It is very important for the academia to critically examine the digital transformation process and set a working agenda accordingly. Moreover, the digital transformation process in the fields of education and training are emerging as a significant area of research. More research is needed to gain better benefits from digitally enabled education and training. In this connection, there is an emerging need to review the studies of the field to see the big picture and to find some answers to develop innovative digital learning environments. Comprehensive research is required in order to explore the nature of e-learning and examine its potential for building future learning solutions. However, it seems that in order to effectively exploit next generation digital learning environments and corresponding cognitive practices, more systematic research on constraints and conditions of successful implementation of the innovative solutions should be carried out. This chapter, thus, examines the changing education and training environment and aims to discuss the digital transformation process in the field of education and training through the innovative solutions for the development of next generation digital learning environments and spaces.

BACKGROUND

This section summarizes the relevant background for understanding the digital transformation in education and training in detail.

Changing Needs and Conditions

The knowledge economy is defined as production and services based on knowledge-intensive activities that contribute to an accelerated pace of technological and scientific advance (Powell & Snellman, 2004). Therefore, it can be seen as a system of consumption and production based on intellectual capital. In this economy; knowledge can be considered as the main economic resource and learning as the most

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