

Chapter 24

Digital Skills in Times of the COVID–19 Pandemic: The Case of Faculty in Mexican Higher Education Institutions

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ABSTRACT

This chapter describes the digital competencies that have become essential in the workforce and how higher education institutions (HEIs) are trying to keep up in a moment in which faculty members have been acquiring digital skills alongside students. A field study was conducted with faculty from HEIs in Mexico to identify the differences between the digital skills that faculty possessed previous to the pandemic and those acquired as a result of remote work. It also analyzes the digital tools they have been provided with to perform their jobs, the training they have received, and the digital skills that they still lack to help students acquire the digital competencies demanded in the workforce. The objective is to identify areas of opportunity and create general guidelines that will help develop critical digital skills. A literature review of the most relevant aspects of digital dexterity and digital competence in higher education (HE) is presented. An analysis of the current context and how it is producing changes faster than before is also included.

DOI: 10.4018/978-1-7998-8275-6.ch024

INTRODUCTION

Individuals and organizations are experiencing times of unprecedented change. Uncertainty has been the most significant digital transformation catalyst (Quade, 2020) and a wake-up call about the need to cultivate an inclusive digital space (Sachs, 2020). The education system is called upon to adapt and evolve to take advantage of new technologies and tools and develop strategies and actions to play an active role in the digital transformation process (OECD, 2020). Studies have been conducted about emerging digital skills in Mexico, showing a lag behind more developed countries (León-Pérez, Bas & Escudero-Nahon, 2019).

To face the challenges brought about by the pandemic, faculty needs to acquire digital competencies in an accelerated way because Mexico is one of the countries with the lowest mastery of technological skills (Aguilar & Otuyemi Rondero, 2020), mainly due to the inadequacy of infrastructure in the country to support the use and continuity of ICTs, the number of rural areas that are still uncommunicated and the lack of funding and resources to prioritize the development of digital skills, primarily in public universities (Rodríguez-Abitia, Martínez-Pérez, Ramirez-Montoya & Lopez-Caudana, 2020).

Before the pandemic, few faculty members in HEIs in Mexico had been trained in developing digital skills and competencies, and most were not digitally dexterous. They could not explore and face new technological situations with the flexibility required to analyze, select, and critically evaluate data and other types of information, taking advantage of technology to identify and solve problems, as well as to achieve the construction of shared knowledge (Calvani, Cartelli, Fini & Ranieri, 2008).

Digital technologies have become the lifeline to continuing businesses and education. The digital revolution is the primary driver of change and innovation. It creates networks of people and things through information technologies, facilitating and transforming human activities and reshaping society like never before. HE systems and institutions have been significantly affected by digital transformation, but they are embracing digital technologies to promote growth and development for their ecosystems.

Since the social distancing measures were implemented globally, numerous social life domains became structured around digital communications and media infrastructure. Video conferencing systems have increased in both number and users. Digitalization is the essential condition of the present that permeates multiple sectors, transforming relationships between individuals, companies, and governments.

The techno-economic digital revolution, based on acceleration, automation, and cyber-physical systems (Kache & Seuring, 2017), involves creating new ways of working, collaborating, and living. This context also generates a demand for new and evolving skillsets. Due to the pandemic, the skills that employees will increasingly need are becoming more available because businesses and HEIs had to change their business models almost overnight, and learning, just as work, grew wider in virtual settings and using the same tools (English, 2020).

This environment is expected to restructure the workforce to thrive in the context of digital disruption (Snyder, 2019). It seems that the silver lining of the pandemic is that it has been creating the change and the environment necessary to start bridging the digital divide (English, 2020). Constant technological development produces a need for trained personnel with extensive digital skills. Organizations with the cognitive capacity and social practice to harness information and technology in innovative ways perform higher than those who do not have a digitally skilled workforce (Gartner, 2019). Digital dexterity is no longer a competitive advantage but a requirement for market survival. Upskilling is essential to enable collaboration, promote agile teams, and increase productivity.

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