Chapter 5
The Digital Educational Model: Transformation of a Medical Program Amid the COVID-19 Pandemic

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ABSTRACT

The declaration of the sanitary emergency of COVID-19 changed the way that multiple sectors operate. In education, in addition to taking care of the health and safety of the community, continuity and academic quality of programs must be ensured. This transition gave rise to a new digital educational model to offer a quality distance university experience. The objective of this chapter is to present a framework to assess the quality of a digital educational model, and to present the findings of an implementation of this model that resulted from the transformation of a medical program amid the health emergency of COVID-19.

INTRODUCTION

Technology and digital tools have been incorporated into higher education because of the potential benefits in the teaching-learning process, as well as in the scalability and sustainability that these strategies provide for the transformation of the university experience (López, Hernández-Rangel, Mejia and Fuentes, 2017). Offering content and an educational curriculum at a distance has been gaining acceptance in the community of teachers, and in students, by enabling flexibility through an innovative format for training (Cabero, Llorente and Puentes, 2010). This leads to the need to transform teaching and learning

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practices in order to trigger transformative educational experiences, where technology and infrastructure are means for collaboration and the generation of networks (Suárez and Najar, 2014).

The declaration of the health emergency of COVID-19 disrupted different productive and industrial sectors (Government of Mexico, 2020), education being one of the most impacted, because in addition to taking care of the health and integrity of the members of the community, it should ensure continuity and academic quality (Valdez-García, López, Jiménez, Díaz, Dávila and Olivares, 2020). Although some universities that routinely carry out innovation already had experience about pilot implementations of educational projects that they could take advantage of, the emergency generated confusion in the different actors of the educational community (López and Valdez, 2019). Teachers had to migrate content and its practice to a new environment, and do it under a record time that involved an intensive training process. The academic support team had to design and execute an action plan to enable resources, licenses and support to provide an experience that was comparable to the one that was carried out face-to-face. Students concerned with their professional development, had to learn to better manage their study time and rhythm, use new virtual tools and convert their homes into classrooms (Camacho, Gómez and Pintor, 2015).

The objective of this chapter is to present a framework to assess the quality of a digital educational model, and to present the findings of an implementation of this model that resulted from the transformation towards a remote format during the health emergency of COVID-19.

Background

The development of tools in telecommunication has allowed the continuous communication between people in different and remote geographical regions. In education, these tools have been applied in several models to provide distance education and reach far communities and locations. For Rumble (2019), distance education is any method of educating the learner when there is separation from the teacher. It has two components, the dialogue of a determined subject that needs to be communicated between the learner and the teacher. The other is the structure, that includes strategies to communicate the learning objectives and evaluation methods adapted to the learner's individual needs allowing comprehension of the topic. Simonson (2019) incorporated in the definition, that it relies on a formal institution to provide training to a learning group that is separated, through interactive telecommunication systems allowing use of intended resources. However, distance education for the twenty-first century must rely on new technology and telecommunication infrastructure of institutions, and creativity and expertise from educators to adapt the educational settings as interactive safe-spaces for students.

The change that educational models foster comes with new challenges which impact on the institution, educators and students. One of the greatest advantages of distance education is the flexibility of schedule and mobility, allowing to interact in different spaces and settings in a time that is adequate for the student (Georgsson, 2019). These formats also contribute to a cost reduction of transportation of students and teachers, as well as the setup of new infrastructure for institutions. Some of these factors enable the massification of education which is extremely important in underdeveloped countries that still need to provide opportunities to the most vulnerable sectors. Another advantage is the opportunity to reach students anywhere in the world, whenever they have access to a computer, electricity and internet (Saltan, 2017). The main contribution of distance education is the international cooperation that can potentially be created as it can broaden the panorama by involving a community from different regions. Even that technology is an important tool for effective distance learning, technical issues may also arise