Chapter 6
Differentiated Instruction Supporting MOOC: A Pedagogical Framework to Improve the Dropout Rate

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ABSTRACT

MOOC have opened up learning opportunities to a wide public. With these advantages, they have emerged in the development, promotion, and delivery of courses from leading American universities. Nevertheless, in parallel with this potential, several problems have arisen. The dropout of learners is the most common problem. Therefore, this chapter highlights the high dropout rate in MOOC, according to two visions: learners’ heterogeneity and diversification of the learning theories supporting MOOC. On this basis, the authors propose the introduction of differentiated instruction within MOOC to overcome this problem. The main purpose of this chapter is to discuss MOOC from pedagogical and organizational perspectives. More specifically, it is interesting to emphasize how differentiated instruction can be implemented in these courses. The interest is to propose a MOOC model that is more effective and more aligned with the learning objectives and preferences of each learner in order to improve the success rate.

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INTRODUCTION

E-learning refers to the use of the Internet and Information and Communication Technologies (ICT) in the field of education. Integrating ICT has promoted the evolution of teaching practices and learning process. Online education has been used to support educational renewal by enabling access to resources and services on the one hand, and distance learning and collaboration on the other hand. Its aim is to improve the quality of teaching-learning process and to offer new teaching experiences in the digital age.

Among e-learning modalities, Massive Open Online Courses (MOOC) represent the modality which has revolutionized distance education and whose popularity can be described as phenomenal in recent years. Certainly, since they first appeared, the biggest American universities have turned to this new paradigm and are increasingly constrained to undertake it (Karsenti, 2013). In addition, these massive courses are seen as transformers from traditional education to numerical practices, since they offer an opportunity to explore new technologies in order to achieve the learning outcomes (Tahiri, Bennani, & Khalidi Idrissi, 2017).

MOOC is a logical trend of open educational resources, integrating social aspects into courses (Siemens, McAuley, Stewart & Cormier, 2013). They have interested many pedagogical actors for the benefits they offer. Thus, they have positioned over the world. However, there has been much criticism of these massive courses because of the high investment required for training design, the potential diversification of pedagogical approaches and the high dropout rates observed (Carolan, Magnin, Gilliot, Grolleau & Vaufrey, 2014).

The dropout rate is related to several factors. This chapter explains this important rate in two ways: (1) learners’ heterogeneity and; (2) diversification of the learning theories supporting MOOC. In such an educational environment, these factors have a negative impact on learners’ success, as the disorientation caused by the open nature of these courses may limit their interaction and encourage them to dropout in the middle of training.

The starting point of this chapter is to define a flexible and efficient framework that can manage the factors stated above. On the basis of previous work by the authors, it appears that differentiated instruction is the most appropriate pedagogical approach (Tahiri, Bennani & Khalidi Idrissi, 2016; Tahiri, Bennani & Khalidi Idrissi, 2017). It goes on several levels. Pedagogically, it identifies the characteristics of each learner in relation to a learning situation in order to provide a suitable pedagogical solution. Organizationally, it ensures the sustainment of the learning process and manages the learning paths.

Moreover, designing an effective and pedagogically sustainable MOOC must respond with agility to a rapidly changing landscape of tools and approaches.
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