Chapter 2
Lifecycle for MOOC
Development and Management

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ABSTRACT

Massive open online courses (MOOC) are online courses in which there are no requirements for students to enroll and that have the capacity to serve thousands or even hundreds of thousands of students simultaneously. MOOCs are complex to develop due to their dual nature: on the one hand, they are an educational product; on the other hand, they are a software product hosted on a web platform. Due to the novelty of MOOCs, there is a lack of proven methodologies for their development. In this chapter, the authors propose a lifecycle for the development and management of MOOCs that allows educators to focus on teaching, interaction with their students, and other elements indispensable for the success of the learning experience. The proposed lifecycle includes three stages: development, management, and improvement of the MOOC.

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INTRODUCTION

Massive open online courses (MOOCs) are a special kind of online courses. MOOCs differ from traditional online courses in their massiveness and openness. That is, there are no entry requirements to enroll and they are prepared to accept thousands or even hundreds of thousands of participants simultaneously.

In 2013, Anant Agarwal, founder of edX, a U.S. based MOOC platform, stated:

*The past few centuries have witnessed revolutions in virtually every area of our world – health, transport, communications and genomics, to name but a few. But not in education. Until now, that is, with the advent of MOOCs. One way MOOCs have changed education is by increasing access. MOOCs make education borderless, gender-blind, race-blind, class-blind and bank account-blind. MOOCs are democratizing education* (Agarwal, 2013).

Five years later, MOOCs faces some important challenges, such as quality, completion rates, learning assessment and accreditation, which prevents them from actually democratizing education (Gul, Mahajan, Shafiq, Shafi & Shah, 2018).

In this chapter, the authors propose a lifecycle for the successful development and implementation of MOOCs. Authors’ involvement with MOOCs begins in 2012, when one of the authors implemented and coordinated the first edition of a MOOC called “iDESWEB – Introduction to Web Development” that came to light in September 2012 and of which there have been several editions. In its third edition, iDESWEB reached 7,730 registered students from several countries such as Spain, Colombia, Mexico, Peru, Argentina, Venezuela, Ecuador, Chile, Dominican Republic and Guatemala. The video-lectures of iDESWEB have been seen more than 2.7 million times. With this first MOOC, the authors realized the geographical and numerical reach that can be achieved. In 2013, three more MOOCs were the authors had involvement were published: “iXML – Introduction to XML”, “Learn Web Accessibility Step by Step” and “Introduction to Web Development: HTML and CSS”, Part 1 and Part 2. iXML video-lectures have been viewed over 288,000 times. This accumulated experience of six years developing and managing MOOCs has been fundamental for the creation of the lifecycle proposed in this chapter. The authors truly believe that MOOCs are an opportunity for people that want to learn but do not have alternative ways to access to education.

Complementary, the United Nations Educational, Scientific and Cultural Organization (UNESCO) defines Open Educational Resources (OERs) as “freely available materials for teaching, learning and research available in the public domain or published with a copyright license that allows its use, adaptation and free distribution” (UNESCO, 2002). The relevance of OERs has been recognized by UNESCO in
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