

# Chapter 10

## Using Recommendation Systems in MOOC: An Innovation in Education That Increases the Profitability of Students

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### ABSTRACT

*Massive Open Online Courses (MOOC) is a model of educational delivery that is, to varying degrees, massive, with theoretically no limit to enrollment; open, allowing anyone to participate, usually at no cost; online, with learning activities typically taking place over the web; and a course, structured around a set of learning goals in a defined area of study. The MOOCs (Massive Online Open Course) are online courses, which are mainly for higher education level. These courses present an interesting evolution in the distance learn methods. The MOOCs do not replace the current universities, but they can be an innovative proposal to the curriculum. In this chapter, the authors present the algorithm they are creating. The main purpose of this algorithm is to create automatic mechanisms as the recommendation system to give such assistance and personalized guidance to students. They will also discuss the integration of this algorithm in MOOCMAROC which is a MOOC platform powered by Open edX.*

### 1. INTRODUCTION

Massive Open Online Courses (MOOCs) represent a change in educational paradigm and perhaps point towards the future of course deliverance, (MOOCs) are Open Educational Resources (OER) which provide a strategic opportunity to improve the quality and outreach of education. The success of a MOOC is then related to the satisfaction of participants who find interest in its content and commits to follow it as long as it corresponds to their expectations.

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A growing number of institutions have been involved in engaging and experimenting with MOOCs for the purpose of expanding access, marketing and branding, as well as the potential of developing new revenue streams. Motivations for learners to participate in MOOCs are varied, and many struggle to engage with courses and keep motivated in the context of an online learning environment (Yuan & Powell, 2013).

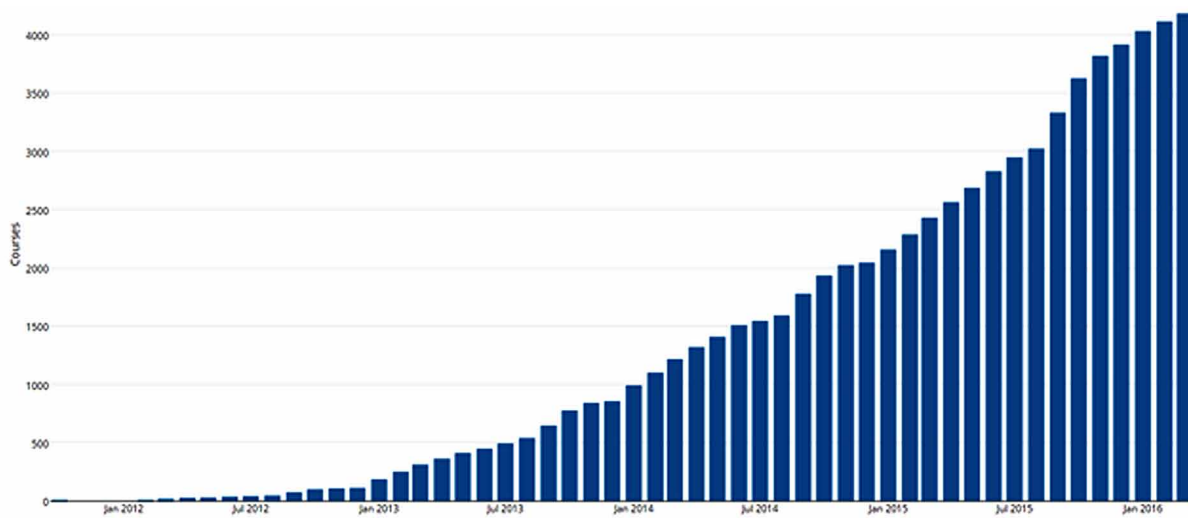
Some important platforms of current MOOCs already include recommendation systems, for example Coursera, however, we cannot know its operation because it is not an open source platform. The recommendation systems are increasingly present in our day-to-day virtual life, and in particular the recommendation systems applied to education are the subject of numerous studies (Manouselis, Drachsler, Vuorikari, Hummel, & Koper, 2011), trying that its inclusion can improve learning.

## 2. GROWTH OF MOOCs

More people signed up for MOOCs in 2015 than they did in the first three years. For example, Coursera the largest online course provider in the world, added 7 million new students to its user base which comprised 17 million students in total.

Around 1,800 new courses were announced in 2015, taking the total number of courses announced since the inception of MOOCs to 4,200. Explosive growth like this means the number of courses is still rising. And it's doing so daily. The number of MOOCs listed on Class Central grew at a rate of greater than 15 courses per day. But this kind of growth, like that associated with Coursera, is “faster than Facebook,” specifically in terms of having a user growth rate greater than 2,000%. That's growth from roughly 160,000 learners at one university in 2011 to 35,000,000 learners at 570 universities and twelve providers in 2015 according to ONLINE COURSE REPORT.

*Figure 1. Growth of MOOCs  
According to Class Central (2015).*



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