

Massive Online Open Courses Platforms: Analysis and Comparative Study of Some Pedagogical and Technical Characteristics

Soumaya El Emrani, Abdelmalek Essaadi University, Tetuan, Morocco

Ali El Merzouqi, Abdelmalek Essaadi University, Tetuan, Morocco

Mohamed Khaldi, Abdelmalek Essaadi University, Tetuan, Morocco

ABSTRACT

This article presents a comparative and analytical study that was carried out for six massive online open course (MOOC) platforms: Coursera, edX, Udacity, Canvas, FutureLearn and Riwaq. The main objective of this article was to analyze the attitudes, perspectives, and different technical and pedagogical characteristics of these platforms. This analysis was achieved by examining a sample of 16 courses from these platforms in the fields of: computing sciences, business, art and humanities. The results show the differences and similarities among these platforms in terms of interface ergonomics and interface reliability, computing tools, information systems, costs, course duration, variety of learning activities and pedagogical components, evaluation types, social interaction, and the degree of instructors' participation. This has helped us to finally choose the platform on which our Adaptive Connectivist MOOC (ACM) approach can be applied.

KEYWORDS

Canvas, cMOOC, Coursera, edX, FutureLearn, MOOC, MOOC Platforms, Pedagogy, Riwaq, Udacity

INTRODUCTION

More and more MOOC (Massive Online Open Courses) platforms are being launched, as a result of the increasing number of MOOCs. A wide range of courses is offered. Li, Wong, Chok and Lee (2014) reported that there were more than 60 MOOC platforms worldwide in 2014. These platforms provided more than 2,400 courses, in partnership with more than 400 Universities around the world (Shah, 2014). For example, by the end of 2014 in the US, the number of institutions offering MOOCs tripled from 2.6% in 2012 to 8% (Allen & Seaman, 2015; Wong, 2015).

After a short time, exactly in 2015, the number of MOOC platforms exceeded 80. According to data collected by the "Class Central" in 2016, 58 million people worldwide were enrolled in these platforms, where 6850 of these courses were offered in partnership with more than 700 universities (Class Central, n.d.).

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Each of the platforms provides MOOCs through its own pedagogical and technical view. So as to be able to decide on which platform our ACM (Adaptive Connectivist MOOC) approach can be applied, an analytical study was carried out for six MOOC platforms among the most worldwide known ones: edX, Coursera, Udacity, Canvas, FutureLearn and Riwaq. This selection focuses mainly on the examination of the technical and pedagogical perspectives, and the comparison of the main characteristics of each platform, in order to give landmarks and justify why one of the platforms was particularly chosen for the implementation of the ACM approach.

OVERVIEW OF THE SIX PLATFORMS

Coursera

Coursera was founded in 2012 in the US, by two computing science professors from Stanford University, Andrew Ng and Daphne Koller. Coursera highlights the learning characteristics through the transmission, the mastery (through recorded videoconferences, texts, etc.), the computer-generated quizzes, the peer assessments and the blended learning (Coursera, n.d.-b).

Regarding peer assessments, learners can get specific comments from their peers. They can also benefit from a valuable learning experience, evaluating each other's work. However, this type of assessment requires the learners to already have a thorough understanding of their courses.

Coursera also highlights the effectiveness of blended learning, by providing its learners with an enhanced learning experience (Wong, 2015). It has more than 100 partnerships with the most prestigious institutions in the world. It offers a large number of topics in almost all the scientific fields, with a simple search engine.

On its website, there are few free courses, but most ones cost from \$ 29 to \$ 99. For certain courses, Coursera gives 7 days of trial free of charges, but on condition that the user gives the necessary payment data so that they can withdraw the fees from the learner's account, if the course registration is not canceled before the end of the 7 days. When a learner finishes his course successfully, he must pay the necessary fee to receive a shareable electronic certificate.

Moreover, Coursera works with academic partners to offer flexible and affordable online degree programs. The offered courses are in the fields of Business, Computing Science and Data Science, where the duration of study varies from one to three years, with fees from \$ 15 to \$ 25,000 for an accredited master's degree.

However, Coursera announces that it offers financial support to students who cannot pay the costs. By filling in an application form, the student will be notified if his demand is validated (Coursera, n.d.-a).

EdX

Considered as the main competitor of Coursera, edX was founded by Harvard University and MIT in 2012 in the US. It was based on the implementation of interactive pedagogies in MIT and Harvard. The platform design was based on pedagogical foundations such as transmissive learning, active learning and self-regulated learning (edX, n.d.). The courses offer sequences of integrated pedagogical materials, such as texts, videos and questions, to provide an interactive learning and convivial navigation (Wong, 2015). It is one of the largest American and global platforms. It has more than 50 partners, including prestigious universities. It covers almost all the scientific fields and includes a very powerful thematic search engine.

Although it indicates that it is the only non-profit and open source MOOC provider (edX, n.d.), it offers some courses for free, but certificate fees sometimes exceed \$ 200 (\$ 249 for a program of Cloud Computing for Enterprises offered by University of Maryland for 8 weeks).

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