

# Chapter 84

## The MOOCs: Characteristics, Benefits, and Challenges to Both Industry and Higher Education

**John F. LeCounte**  
Texas A&M University, USA

**Detra Johnson**  
Texas A&M University, USA

### ABSTRACT

*In this chapter, the authors present the rapid rise of Massive Open Online Courses (MOOCs) derived from a yearning to create and make widely available materials and conditions for participatory learning and creative space dedicated to the open education. Massive Open Online Courses (MOOCs) were developed to provide open, meaning unrestricted, online courses without higher education cost constraints to students. This new technological platform was embraced, developed, and offered by some of the country's leading universities and institutions including Harvard, University of Pennsylvania, Stanford, and Massachusetts Institute of Technology (MIT). Students may collaborate through strategic social media platforms such as LinkedIn, Facebook, and Twitter. Further, according to LeCounte et al. (2014), the social media partnerships have been found to offer competitive advantages in terms of low cost and tremendous visibility to both corporations and institutions of higher learning.*

### BACKGROUND

In recent years the topic of Massive Open Online Courses (MOOCs) has caused the world of academia to review educational delivery strategies through scholarly discourse (Ebben, 2014). MOOCs were created to serve a multifaceted purpose for use in different contexts. There are significant factors that differentiate the platforms of an xMOOCs from cMOOCs is proprietorship. Moreover, cMOOCs participation requirements tend not to be as structured xMOOCs and the administrators consists of collaborative teams who develop the courses. In contrast, xMOOCs is usually developed and designed for colleges and universities. The participation requirements in institutions of higher learning must adhere to

DOI: 10.4018/978-1-5225-1624-8.ch084

rigorous accreditation standards. Some institutions in higher education have smartly chosen to embrace MOOCs as apparatus to engage a diverse population of learners. Of course, MOOCs just as any new phenomenon requires rigorous research and development to determine how to maximize this technology to ensure systematic integration into the institution. However, conversations are taking place in universities and colleges which have signaled a transferal in the customs in which digital teaching and learning are engaged in and understood. For this paper, a comprehensive search of leading academic databases was examined to capture the initial phase of MOOC scholarship between 2009 and 2013, an offers and analysis of empirical studies that conceptualizes themes in MOOC scholarship and locates them within a chronological order. The rise of xMOOCs, benefits and challenges to further development of MOOC pedagogy and platforms, growth of learning analytics and assessment, and the emergence of a critical discourse about MOOCs. Further, corporate collaboration is researched to determine how organizations can take advantage of this technology to address increased training expenses for employees. Since MOOCs have tremendous promise of enhancing organizational effectiveness, profession development is also researched to determine how individuals can benefit from this technology. Ultimately, once coherent business models are in place institutions of higher learning that have decided to embrace MOOCs will prosper.

Professors George Siemens and Stephen Downes are considered to be pioneers in their right as they designed, developed, and offered the first MOOCs course. This seminar course focused on Connectivism and Connect Knowledge at the University of Manitoba in Canada. For a new topic they offered, there were 25 students enrolled who earned credit and 2,300 additional students from the general public (Wikipedia, 2012a). Shortly thereafter, in 2002, Massachusetts Institute of Technology (MIT) created OpenCourse Ware to provide free web access to MIT course materials. OpenCourse provided information and the manner in which to promote the educational course provided at their university. The term Massive Open Online Courses was introduced in 2008 by David Comier. Comier endeavored to describe Connectivism and Connective Knowledge in a free and open, online course with the intention to be delivered to thousands of students. After this course offering had been considered to be a success, other universities began developing MOOC courses. In 2011, The Massachusetts Institute of Technology (MIT) announced that MITXx would launch in spring 2012 which is now commonly known as edX (edX, 2012). Stanford University offered a free MOOCs course on Artificial Intelligence in 2012 where approximately 160,000 students registered (Daniel, 2012). The success of MOOCs inspired the spirit of entrepreneurship in professors from elite universities such as Sebastian Thrun, an instrumental faculty member of developing MOOCs at Stanford went on to establish Udacity, an MOOC private start-up firm that facilitates implementation MOOCs in other universities (Meyer, 2012). The company, edX, increased partnerships with the addition of Harvard and UC Berkley (edX, 2012). Coursera, another private start-up firm in 2012, publicized that student enrollment numbers reached 1.4M which included 200-course offerings and 33 partner institutions (DeSantis, 2012; Lewin, 2012). According to Armstrong (2012), Coursera did not have researchers on their team with significant knowledge of pedagogy during the development of their courses. The lack of pedagogy knowledge during the development phase resulted in courses that were not considered to be of equal rigor to that online courses taught at traditional universities. In fact, Coursera has an autonomous model which encourages institutions to design courses based upon their institutions preference (Daniel, 2012). Higher education administrators should view the lack of pedagogy integration as an opportunity to improve upon MOOCs research and offer sources at their college or university. Thus, MOOCs are internet-provided courses, typically free of charge with

18 more pages are available in the full version of this document, which may be purchased using the "Add to Cart" button on the publisher's webpage:

[www.igi-global.com/chapter/the-moocs/169086](http://www.igi-global.com/chapter/the-moocs/169086)

## Related Content

---

### Quality Management Principles Application to Higher Educational Institutions

Jose Manuel Saiz-Alvarez (2020). *Quality Management Principles and Policies in Higher Education* (pp. 1-22).

[www.irma-international.org/chapter/quality-management-principles-application-to-higher-educational-institutions/237613](http://www.irma-international.org/chapter/quality-management-principles-application-to-higher-educational-institutions/237613)

### First-Time Leaders and the Role of Organizational Culture in Family Businesses

Miodraga Stefanovska - Petkovska, Marjan I. Bojadjev and Ivona Mileva (2021). *Handbook of Research on Innate Leadership Characteristics and Examinations of Successful First-Time Leaders* (pp. 274-299).

[www.irma-international.org/chapter/first-time-leaders-and-the-role-of-organizational-culture-in-family-businesses/271344](http://www.irma-international.org/chapter/first-time-leaders-and-the-role-of-organizational-culture-in-family-businesses/271344)

### Magnetocaloric Refrigeration for Space Exploration: Obstacles and Opportunities

Gerald William McNerney (2025). *New Horizons in Leadership: Inclusive Explorations in Health, Technology, and Education* (pp. 475-486).

[www.irma-international.org/chapter/magnetocaloric-refrigeration-for-space-exploration/371047](http://www.irma-international.org/chapter/magnetocaloric-refrigeration-for-space-exploration/371047)

### The Risk Assessment Enhancement Process at the Federal Deposit Insurance Corporation

Rania Mousa (2021). *Encyclopedia of Organizational Knowledge, Administration, and Technology* (pp. 407-420).

[www.irma-international.org/chapter/the-risk-assessment-enhancement-process-at-the-federal-deposit-insurance-corporation/263554](http://www.irma-international.org/chapter/the-risk-assessment-enhancement-process-at-the-federal-deposit-insurance-corporation/263554)

### Manipulating Business Performances by Creative Accounting

Ionica Oncioiu, Traian Ovidiu Calotand Alin Eliodor Tnase (2021). *Encyclopedia of Organizational Knowledge, Administration, and Technology* (pp. 24-34).

[www.irma-international.org/chapter/manipulating-business-performances-by-creative-accounting/263524](http://www.irma-international.org/chapter/manipulating-business-performances-by-creative-accounting/263524)