



Factors Influencing Successful Completion of Massive Open Online Courses: A Synthesis of Literature

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ABSTRACT

Massive open online education is the recent development in online education. This was first introduced in 2008 and Emerged as a popular mode of learning in 2012. The number of learners has drastically increased in recent years. However the major issues faced in MOOC courses are low completion rates. The researcher is basically interested in identifying factors which influences successful completion of courses. Ebsco, Emerald and Google scholar, IEEE explore digital library were the major database considered for accessing literature on Massive Open Online Course. Analysis of literature reveals that learner Motivation, Background, Technological infrastructure, Content, effective instruction methods like e lecture, reading materials, Discussion forum, and aspects with respect to community development plays a very important role in influencing the learner to complete the course.

KEYWORDS : : Success factors, Massive Open online Course, Learner Background, Interactive learning Environment and Technological factor

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I INTRODUCTION TO MASSIVE OPEN ONLINE COURSE

A massive open online course is an online course aimed at unlimited participation and open access via the web. The newspaper review also reveals that there is a great demand for MOOC courses in developing countries like India and also highlights that the market potential for MOOC courses are expected to reach 17 billion by 2017. Flexibility in admissions, no cost or least cost, and distance mode policies of MOOC courses attracts larger number of enrollment for the course. However the major issue face by the MOOC courses is low completion rate. News paper sources reveal that Completion rate is lesser than 7%.

II RESEARCH METHODOLOGY

A Objective of the Study

To identify the factors influencing the successful completion of Massive open online learning courses

B Methodology

This study is descriptive in nature. The data was collected through the secondary sources from online digital library including Ebsco, Emerald and Google scholar, and IEEE. Various national & International journals, newspapers and online resources also have been considered in identifying the critical success factor.

C. ANALYSIS

CRITICAL SUCCESS FACTOR

Learner Background and Motivation:

Objective or purpose for registering in to MOOC course and educational qualification plays a significant role in accomplishing the course. Strong evidence from the research article has been collected through literature review. MOOC frame work proposed by (Shuchi Grover, Paul Franz, Emily Schneider, Roy Pea) included learner back-

ground and Intention .another article reveals that student with PhD in science filed and Master degree's (Jennifer DeBoer, Glenda Stump, Lori Breslow and Daniel Seaton (2013 June)) earns higher points in online courses than others. The article return by (Ilona Nawrot, and Antoine Doucet) identified Enthusiastic and Self-Motivated Learners, job and Career Requirements, Authenticated Certificates, University and Teacher Reputations, .E. Flexibility to Make Mistakes, and Instant Feedback as contributing factors of MOOC success .(Deborah Engle, Chris Mankoff, and Jennifer Carbrey) in their research highlights that students with doctoral degrees were a greater proportion of the students who passed the course or passed the course with distinction

2. Interactive learning Environment

An **interactive learning environment** is a web-based **environment** that supports structured interaction between communities of **learners**

Interactive learning Environment is a concept also named as Participative pedagogy (simen 2012), Collaborative learning (Saijing Zheng) . The concept behind the interactive learning environment is not to view online course as a means of disseminating learning resources. But influencing the learners to learn and to share the knowledge gained across other class mates online. The entire course design inculcates the culture of promoting collaborative learning. Course design Components like activities (assignments, case analysis) Assessment (Peer assessment, Automatic), Means and Resources (Videos, and reading materials), Interactive tools like Wiki, Discussion forums are basically used to enhance Interactive learning environment

Shuchi Grover, have introduced **Interactive learning environment**, which includes components like pedagogy or instruction, Assessment, content and Community. The author stated that video lecture assessment methods, along with the content stimulate the learner to participate in the discussion forum, and thus makes the environment interactive

FACTORS OF INTERACTIVE LEARNING ENVIRONMENT

2.1. Pedagogical aspects:

Pedagogy can be defined as a method or practice of teaching. The pedagogical design adopted by MOOC platform basically focus on 5 key areas which includes learning (Dr. Manuela Raposo-Rivas), activities and tasks, means and resources, interactivity and assessment. (Lourdes Guàrdia, Marcelo Maina, Albert Sangrà) in her research article highlighted that the pedagogical design has to focus on competency based design learner empowerment, clear orientation, Collaborative learning, Self paced, assessment and peer feedback, Social networking, peer assistance and media technology enhanced

learning. Peer to peer to peer pedagogy, and social learning including blogs, chat, Discussion forums, wikis and group assignment were highlighted by Paul Stacey.

2.1.1 Activities & Tasks:

Providing application oriented activities are the major component of MOOC. Activities like case analysis, Practical Exercises, Multiple choice Quiz are the common method of tasks provided by the course providers. These activities are given with the purpose of ensuring learning .assignments are designed carefully to provoke the communication process which contributes in enhancing the learning environment

Elke Lackner stated in her check list that the assignments should incite communication processes within and outside the course, e.g. in social networks

Dr. Manuela Raposo-Rivas defined that the activities and tasks refers to both modality (compulsory or optional, individual or collective) and typology (questionnaires, tests, readings, practical exercises, problem sets, projects, case studies, questions and answers, participation...).

2.1.2 Means & Resources:

This refers to the learning resources which includes Video, Reading Materials, slide shows etc used by the facilitator to assist the learner to achieve the expected level of learning. The ability of Video, Reading materials and other resources in establishing link to the assignment, quality of the content results in bringing interactive learning environment.

Dr. Manuela Raposo-Rivas defined that the Means and resources are the traditional and technology-based videos, slideshows, forums, blogs, wikis, emails, interviews, readings, optional additional material.

(Philip J. Guo) in his article highlighted that the shorter videos are much more engaging than the larger videos. (Shekhar Murthy) recommended that the video lectures may be revised with relevant examples and illustrations that have a direct bearing in accomplishing task based assignments and also advised to design an interactive video with high quality transcripts. At the end of Every e lecture , learners can be motivated to participate in discussion forum for purpose of encouraging social presence and learning .

2.1.3 Assessment:

Assessment of student learning is a fundamental aspect of instruction. Automatic scoring and Peer feedback are the major assessment methods followed by most of the MOOC courses.

Peer assessment, or **self-assessment**, is a process where the assignment or the activities accomplished by the learners will be evaluated by the peers. This is a major method used in most of the mooc courses. As the number of enrolment is more, this method helps to assist the instructor in saving the time and also facilitates sharing of knowledge & contributed towards the formation of online community

(Chrsis Piech Stanford Universit) stated that . The most scalable solution for reliable grading and feedback for open ended assignment is peer grading.

Khe Foon Hew , Instructor accessibility and peer interactions would foster the sense of relatedness which in turn affects students' affective engagement.

2.2. Sense of Community

There are varying definitions for the term community (Summers, 2007). Osterman (2002) states that a community exists when members have a sense of belonging. Rovai (2002) also describes community as a feeling of belonging. Wilson and Ryder (2008) define a learning community as a group of people who gather together to provide mutual support for learning and performance. Additionally, learning communities have mutual interdependence and shared goals and values (Rovai, 2002). DiRamio and Wolverton (2006) focused their definition of online community on student interaction and social activity for collaborative learning

D. W. McMillan, D.M. Chavis, Defines Sense of Community is a feeling that members have of belonging, a feeling that members matter to one

another and to the group, and a shared faith that members' needs will be met through their commitment to be together" [18, p. 9].

Instructor in any MOOC course plays effective role in developing the community in online learning(**Jo L. Shackelford**) indicated that The interactions between learner and instructor that were most contributive to Sense of community factors like (1) instructor modeling; (2) instructor support and encouragement; (3) Instructor role as facilitating discussions; (4) facilitation multiple communication modes; ad (5) required minimum participation plays important role in developing the community . Dezhi Wu found that online discussion forum do influences students perceived learning

DiRamio and Wolverton (2006) imply that the integration of online communities in the online environment can reduce student dropout rates and "can help meet the quality challenge" (p. 111)

(Suzanne Young) found that the instructional design plays important role in bringing student sense of communication & he also indicated that students who feel a sense of connectedness rather than isolation are very likely better prepared to become more actively involved with course learning, successfully persist, and experience real world success.

William A. Sadera Towson University , In his study on The Role of Community in Online Learning Success has found that there is a positive relationship exists between students' sense of community and their learning success in online courses.

3. Technology infrastructure

User's perception on Technological aspects becomes very important as far as concern with the MOOC studies because, participating in Peer assessment, Self reflection, collaboration and Interaction will become impossible without technological features.(Ahmed Mohamed Fahmy Yousef, Mohamed) The technological criteria that are addressed in the reviewed literature can be classified into four main categories, namely user interface, video content, social tools, and learning analytics.

3.1 User Interface: refers to the means by which the user and a computer system interact. This dimension in MOOC basically measures the impact of MOOC layout in improving the Users learning experience. Factors like easy access of teaching resources, and videos, presence of control features in videos, provision to download the teaching resource.

3.2 Discussion forum & Social tools: Discussion forums in massive open online courses (MOOCs) are a primary means of interaction among learners and instructors. Discussion forum is used as a main learning tool in many MOOC platforms. This is used with the objective of introducing collaborative learning in MOOC platform. Accessibility of discussion forum & ability to interact with other social tools like wiki etc, are considered under the User interface

3.3 Learning analytics:

Learning analytics is defined as "the measurement, collection, analysis, and reporting of

data about learners and their contexts, for purposes of understanding and optimizing learning and the environments in which it occurs" (Long & Siemens, 2011, p. 32). Learning analytics offers promise for predicting and improving student success and retention (e.g., Olmos & Corrin, 2012; Smith, Lange, & Huston, 2012) in part because it allows faculty, institutions, and students to make data-driven decisions about student success and retention.

Learning analytics plays very important role in MOOC environment. Sending reminders for the assignment submission , Notification on guest lectures , information on upcoming courses , providing information on results of assignment , certification are the basis functions of learning analytics

Linda Corrin, Paula de Barba, Exploring students' interpretation of feedback delivered through learning analytics dashboards found that the majority of students were able to interpret the data in a way

that promoted reflection on their performance and engagement

III. FINDINGS AND SUGGESTION:

The literature review clearly suggests there are three major factors responsible for the completion of MOOC Courses. They are learner background, Factors of interactive learning environment and technological factor. Among the learner background motivation or basic reason along with the academic qualification plays very important role.

The type of assignments, learning resource materials like videos , reference articles , discussion forums , uniqueness and quality of the content available in learning resources, are the major factors of pedagogy. The effectiveness of all these factors induces the learning environment very live and results in formation of community.

The third major factor for MOOC success is Technology which can be further classified as user interface, Discussion forum and learning analytics. This indicates convenience of MOOC lay out, easiness in downloading the e resources, convenience to participate in discussion forum. The literature review also suggests that the frequent reminder mails, course dashboard and intimation on assignment scores help the learners to complete the course to a greater extent.

Focus on above factors might help the MOOC providers to reduce the dropouts to a greater extent.

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