Role of MOOCs in Redefining the Dimensions of Learning: A Knowledge ManagementPerspective

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Abstract: The advent of Massive Open Online Courses (MOOCs) has changed the dimensions of learning in the recent years. Open online learning practices have unlocked a new world of digital transformation in learning, contributing and improving the educational outcomes without any time or place constraints. MOOCs learning technology has incorporated new possibilities to enrich learning experience of aspirants and motivate learners to exchange knowledge through effective learning. The present study intends to ascertain the revolutionary progress that MOOCs are bringing about in the landscape of learning. The study attempts to analyze MOOCs as tool of learning in the electronic age through the lens of knowledge management (KM). It further examines the role of libraries in creation, implementation and management of MOOCs and recommends the best practice to improvise the quality of MOOCs.

Keywords: MOOCs, Open Courses, Knowledge Management, e-learning

1. Introduction

The saga of knowledge business has been through tremendous changes and has reached an extent which could not even be imagined a decade before. The horizons of classroom are redefined with Information and Communication Technologies (ICTs) to shatter barriers such as socio-economic, geographic, political, and linguistic at global, national and local levels. E-learning environment is efficiently utilizing advanced pedagogy of innovative and methodological teaching in learning and research to enhance performance and relevance. The advancement of information technology has significantly impacted the education system by delivering just-in time, effective and personalized learning process with the incorporation of web-based KM and e-learning tools (Assaf et al, 2009; Elia, et al, 2009). Personal connection with subject matter through e-learning is proved to be equally effective as in traditional learning and even better at times for serious learners. Open Course (OC) culture has undoubtedly democratized the learning environment. The concept of MOOCs has been a boon for those who dropped out from the traditional education system for various reasons but wanting to gain knowledge on subject matter either out of their interest or being required to perform their work with a better approach. Wikis, Webinars, online workshops and conference calling have constituted the various elements of MOOCs and their applications are utilized to bring more effectiveness in learning. Applications of ICTs are being the most effective platform for research information dissemination as well. The revolutionary web technology is offering user-centric approach to learning, peer production in knowledge business, collaboration and collective intelligence in learning and sharing. In recent times, e-learning has become a significant strategy of knowledge community development which is a major area of KM policy (Chen, 2007).

2. MOOCs

MOOC stands for Massive Open Online Course is a web based online learning tool where a large number of geographically dispersed learners can virtually participate in courses of their desired area without any enrollment limit and prerequisites as demanded by a traditional education system. Any such educational delivery models are aimed to perform as large-scale interactive learning tools and engaging participants in the learning process. It allows anyone to participate, usually at no cost, though some MOOCs providers may charge for learning in specific areas and certification. OCs rely on the learners who self-organize their participation with active engagement to achieve their learning goals. MOOCs usually have a predefined timeline and a structure of topics. It includes no prerequisites, no official accreditation and no predefined expectations for participation (McAuley et al, 2010). Along the time, MOOCs have been developed to be classified into distinctive types in terms of their structure and attributes. Each branch of MOOCs possesses different learning environment and is in line with distinguished levels of knowledge acquisition. cMOOCs (connectivist MOOCs) which emphasize on creativity, social networking and convergence of thoughts in the process of learning. cMOOCs concept believes that learning happens in the network through Wikis, Social Media, Blogging, Instant Messaging which are basically digital platforms for information communication. A learner can also be a teacher in a cMOOC learning environment, where interaction, connection and collaboration play vital role. xMOOCs stands for 'extended MOOCs' which are basically an extension of conventional teaching models. It creates a platform for learning that is more of teacher centered. Educational videos, flash animation, tests, quizzes and assessments are part of learning on xMOOCs. Coursera, EdX, Udacity, Open2Study are some xMOOCs providers. pMOOCs (project-based MOOCs) focus on knowledge production with a constructivist approach (Cirulli et al, 2016). pMOOCs include more of industrial and entrepreneurial guidance with practical approach for knowledge seekers.

3. Objectives of the study

The study aims to overview the potential impact of MOOCs as part of e-learning in the present scenario. It is an attempt to reflect on how MOOCs can be instrumental in KM. The study examines the role of libraries in creation and management of MOOCs. The paper also intends to recommend the best practice to improvise the quality of MOOCs.

4. Life-long Learning Process

Most if not all the business in the information world are driven by learning and sharing. It is an open fact that the formal education that one undergoes would never be sufficient to perform all the jobs spanning for decades. The accomplishment of such professional skills on various areas in the ever changing world is possible only by means of constant learning. E-learning, correspondence course, continuing education and home-schooling are the marks of importance of learning (Ho, 2012). With the advent of ICT, the learning method has changed its facets to fit into the changing needs. With modifications to the traditional teaching and learning methodologies, evolution of e-learning has reached different heights in the world of learning and it is found to be the most effective and practical oriented mode of learning in the age of

information. In a way, the extended part of KM has caused the evolution of open learning, OC and the MOOCs. E-learning is the result of realization that signifies the importance of knowledge sharing. MOOCs aim to pave the way for high quality education, to support the learning process and knowledge creations by making it socially interactive and to progress the research on learning (Younos, 2012). With a unique set of characteristics, an e-learning scenario encourages the learners to become the managers of their own learning (Fig 1). E-learning serves the needs of individual learning, organizational learning and social learning (Dinh, 2013)

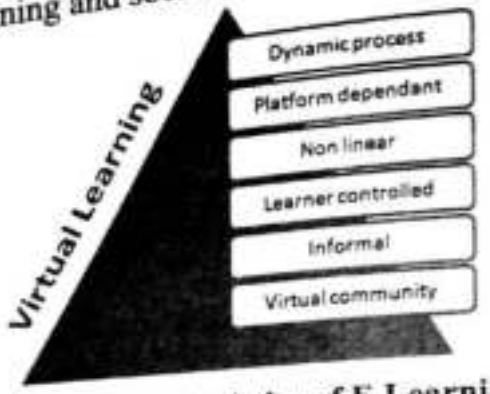

Figure 1: Characteristics of E Learning

5. MOOCs and KM

The concept of MOOCs is a keystone of KM in the informal electronic environment. The core objective of KM is to manage the knowledge spread over various sources such as human mind, documents, organizations, computer databases and internet. The realization of need to share the information constitutes the important part of KM. It intends to manage the information flow and getting the right information to the right people in need of it (Gates, 2000). The virtual platform on the digital learning space facilitates learning in a non-linear and informal manner and provides collaborative learning experiences. The most important aspect of MOOC with regard to KM is that it enables one to share the hidden knowledge which serves the "Tacit-to-Explicit" purpose of KM. MOOCs can be an effective tool to capture tacit knowledge of an individual or organization. Turning the tacit knowledge which is by nature solemnize, tough to transfer and subjective into explicit one is the major challenge of KM and MOOC in this direction facilitates the stage and occasion to make it a reality. The un-codified knowledge cannot be instantly converted into a form that is supported by technology as they are naturally context based. The transmission of such unarticulated and experience based knowledge should mostly flow through person to person. Much human expertise across the globe has advanced through experience and practice which is invaluable. In this respect, MOOCs can be good platforms for capturing tacit knowledge.

No organization can be unchanged for a long time in the information society that keeps drifting towards perfection in everything that takes place within. The organizations are indirectly imposed upon to constantly change their ways of doing things to adopt for the changes. This requires the people to learn and act in the changed environment to enhance the organization performance. Learning management and KM are the two sides of the same coin (Chatti et al, 2007). Successful diffusion of digital information has the potential to create the platform for every possible participant to articulate his view which may add great value to the existing knowledge. Further, it can motivate the individuals in an organization by introducing their expertise to the

larger community and can strengthen the recognition of the organization as a whole. As the learning happens in a friendly and supple manner, there is always a space for learners to bring information from different possible sources to share on the learning platform. KM aims to increase intelligence of information processing and excellence in knowledge business which MOOCs are highly supportive of. Setting up the context for sharing knowledge of past and present and cross-pollination of creative thoughts from different sources are positive attributes of MOOCs.

6. Knowledge Sharing through Exploratory Learning

The OCs often encourages the learner to share his/her idea, view and experiences on the given phenomenon. Discussions happen at every stage of the course where the participants share their views through the comments. For a learner who is entirely new to the topic, the series of comments made by the fellow learners becomes the source of basics for better understanding of the concept. Apart from the materials provided by the course coordinators, learners are encouraged to share any useful sources, be it a link of a website or published reading materials, etc. Vision of multidimensional aspect of a topic is achievable as OC facilitates every possible learner to share their contribution irrespective of their educational and knowledge background. The aggregation of many views and updates from different parts of the world on one platform happens in OCs.

Success and productivity of a MOOC system depend on the constructive thinking, discussions and efficiency of the communities who contribute to and the participation and collaboration of the learners. Through cMOOCs it is facilitated that people of common interest to create their own learning community where the course structure is decided and designed by learners who learn more through exploration and experts invited to the group. Discussions and debates bring more clarity and certainty about the topic in place. With contribution of every learner in the group, the learning takes place in a very informal and comfortable yet learning effective way. The communications between group members may be one-to-one or one-to-many which is subject to the choice of learners' communications. Social softwares, social tagging and folksonomies play vital role in collective intelligence as they foster building learning communities and connect with resourceful people for a better knowledge sharing. The e-learners become 'prosumers' by merging, revising, remixing and distributing the resources they discover from every possible information sources.

7. Role of Libraries in Open Courses

This is undisputed that the modern libraries are expected to be equipped with everything that takes to fill information gap. Library is the best place for OC initiatives as it deals with everything that is associated with knowledge. Libraries' involvement right from the planning till execution is imperative as these knowledge hubs are the only sources of authenticated and updated information on any branch of knowledge. In the process of KM, libraries are not limited to their in-house collection but their community involvement defines their course of action.

A library of electronic age is not limited to its premises but extends through seamless network to connect with any library that possesses the information relevant to the context. Apart from pulling out from the in-house collections, libraries can bridge

through the infinite online information source which may gratify the needs of course makers. Even in the age of search engines, librarians are still proved to be the best in finding information online. There have been successful stories of conducting MOOCs where the libraries acted as source, stage, provider and evaluator. Libraries are in the position to tailor the updates to keep the MOOCs up-to-date. Systems to monitor and alert whenever there is a new addition in the related field can be initiated and libraries with the help of experts take up the process to update contents of MOOCs at regular intervals to synchronize the information equilibrium. Libraries provide priceless information about how to aggregate the needs of OC aspirants.

Libraries and Information centers can be shouldered the responsibility to provide the relevant learning materials such as books, research papers and case studies for extended part of learning. The core responsibility of information professionals lies in not just providing the sources but reorganize the content of the materials so as to get them best fit into the context which could be achieved either with in-house professionals on possible areas or with the help of external subject experts. The governing factors are that, librarians can find relevant information on any stream of knowledge better than anyone and networked environment opens the gateway for resource sharing. OCs are basically knowledge products which require assimilation of content management of the courses. This is a cognitive task that involves creation of metadata, indexing, access and content retrieval which could be best achieved by libraries and this entire venture may be considered as an extension of digital library activities.

7.1 Participation of Public Libraries

Public libraries have the potential of reaching large population and they are the best places to initiate MOOCs programs for community education. Public libraries can be instrumental in more educational opportunities and community oriented program to address local issues such as environment pollution, waste management and rain water harvesting which would be more beneficial for the society. MOOCs in the changing phase of education are important not because of it is free and open but because of value it carries for a great deal of learning. Public libraries' efforts to make community learning more meaningful and their dedication to lifelong learning are noteworthy. Community education with association of public libraries has been reality in western countries (Ackerman et al., 2016). In the landscape of learning, public libraries can be active in preparing ready-to-use educational materials, moderating group discussion, helping develop quality instructions in conjunction with experts and students. Public libraries with provision of basic technological needs can pave the way for learners wanting to take up OCs (Schwartz, 2013).

8. Promotion of Information Utility

Libraries and information centers play pivotal role of aligning the potential user with the right and useful course which are relevant to their interest. MOOCs can be an addition to the external library resource list where all open access resources such as open library, open access repositories that a library can count on. In an academic scenario, where traditional mode of education happens, the OC contents may be used as parallel sessions of knowledge provision and additional materials of extended learning. Irrespective of kind of libraries, MOOCs can always be promoted for the

potential users. Nonprofit oriented MOOCs providers such as edX, Udacity, P2PU, Khan Academy, Standord Online may be regularly checked for latest additions and promoted among the users. Though providers such as Coursera and Udemy are commercial in nature, they partially provide open access to their contents where only provision of certificates involves monetary aspect. Even commercial providers have an option for waiving off the fee for learning and certificates on valid submission of request from learners belonged to low and middle income nations. Use of social media, library portals, instant messaging and other applications help libraries to reach wide range of readers and bring maximum information utility. The providers of MOOCs announce the course scheduled through emails and other social softwares much before it begins so as to include as many participants as possible. The participation of learners in large number certainly matters in succeeding in MOOCs as every module in the course can be added with more value with the experience and views shared by learners. This plays key role in educating the fellow learners. Continuing learning is possible on OCs as the reminders of new courses on related/interested areas are notified through various points of contact. For instance, for a learner who opted to learn the 'Fundamentals of Big Data' can be a targeted learner to promote a course on 'Data Visualization'.

9. Recommendations

A recent study examined to find the reasons for drop outs from MOOCs reported that time management, a personal reason, was the biggest hindrance for the drop out followed by hidden cost for materials, poor presentation of course content, poor course design, behavior of co-learners, poor evaluation techniques and unjust peer reviews which could be listed under non-personal reasons (Nawrot, 2014). The solutions for time management could be sending alerts on email, phone and social profile. More efforts from the entry level on constructivism and group-oriented approaches need to be incorporated. In online learning environment, communication plays a vital role. It is important to take measures for improving the connection and self-motivation among learners who would otherwise feel lost in the social space. The regular universities in the traditional learning environment can make use of methods used in OC in providing education to possible extent on relevant areas which may bring perpetuity and competence in learning. Universities and organizations can also build partnerships and collaborations to facilitate a network of relationships between students, multiple universities and organizations.

In some instances, learning on MOOCs may be free but not the required and prescribed materials. The copyright issues and hidden cost for getting the needed information would be disappointing for serious learners. Regulation of free knowledge provision should even include the provision of learning materials free of cost and legal issues. Scientific learning models which emerged along the time have proven to be effective and fruitful in bringing greater academic achievements, constructing affirmative behavioral progress and increasing learning motivation. Formulating, experimenting and adopting e-learning models in planning curriculum, content development, teaching, practice and evaluation are the need of the day to improvise the quality and bridge the learning gap in MOOCs. The experienced educators' interest in devising models for delivery of teaching, evaluation methods, and materials for learning certainly help the reorganization of open learning.

A tradition of creating and managing MOOCs on all possible knowledge areas parallel to the tradition method of teaching helps in continuing learning on and off the track. The idea that, 'the virtual learning is always a process and not a technology' should be considered while developing an ethical code for e-learners. The prominence in a MOOC should always be for its value of content. OCs can be more effective and professional with convergence of teachers, learning technologists and information managers. The policy makers are required to address possible key areas such as rights management, archiving policies, promotion and exploitation, and effective metadata (Akeroyd, 2005).

10. Conclusion

MOOCs are creating greater impact on the way the learning and information sharing are happening. Learning opportunities and competence development with OC have given rise to platforms of collaborative KM. MOOCs are making mark by bringing discovered and useful information to the learning stream to a maximum possible extent and this intern is contributing to better KM. MOOCs have been incorporating most of the features of good learning experience such as communication, learning, delivery of teaching, sharing knowledge and utmost utilization of ICT. Involvement of educators, content developers, technologists, library professionals and learners in the process of design and implementation of MOOCs will bring maximum utility to the knowledge and help create new knowledge with greater values of learning.

Libraries are acting as community learning hubs in facilitating MOOCs. The borders of libraries are redefined with their extended role to play in MOOCs creation and management. Libraries' increasing association with MOOCs has potential to enhance the visibility of what e-learning has to offer. Public libraries have greater potential in organizing community learning and reaching out wide range of public for learning related to social issues. Strategic partnerships of libraries with education and knowledge oriented institutions and incorporation of feasible technology can bring about noteworthy contributions for the progress of KM. The modern educators ought to bring in pedagogical aspect to the e-learning process to make the learning process more professional and to enhance the learning effectiveness. With effective measures to fill the gap in the existing process and policies, MOOCs have promising future for e-learning.

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