ISBN: 978-989-8533-23-4 © 2014 IADIS

A CASE STUDY OF MOOCS DESIGN AND ADMINISTRATION AT SEOUL NATIONAL UNIVERSITY

Cheolil Lim, Sunyoung Kim, Mihwa Kim, Songlee Han & Seungil Seo
Seoul National University, 1 Gwanak-ro, Gwanak-gu, Seoul 151-742

ABSTRACT

This research, based on the case study of edX at Seoul National University, which is running Korea's first Massive Open Online Courses (MOOCs), discussed and proposed the roles of principal facilitators, the process, and the relationships among various facilitators in selecting, designing, opening and administrating MOOCs classes. Researches on MOOCs so far have been deficient in practical consideration for actual MOOCs administration system and process demanded by universities, teachers, class designers and administrators who wish to develop and run MOOCs as well as activities and strategies that needed to be implemented step-by-step by each member that comprises the system. In particular, since most researches on MOOCs as well as establishment of MOOCs organizations have been done in the United States and Europe, there is a need for researches done based on actual case studies of MOOCs implemented in Korea in order to facilitate more effective MOOCs administration under different environments, e..g, a Korean-type MOOCs. In conclusion, principal facilitators for MOOCs administration largely consists of MOOCs administration, MOOCs support and teachers. Each facilitator, based on online/face-to-face form of training and communication, engages in agreement, design, development and administration of MOOCs programs. Each process is defined through repetition of activities and strategies as well as feedback. Using the process and activities needed for designing and administrating MOOCs in practice proposed by this research, it is hoped that there will be further researches on designing and administrating MOOCs more effectively under a variety of environments.

KEYWORDS

Massive Open Online Courses (MOOCs), MOOCs Model for Managing

1. INTRODUCTION

Massive Open Online Courses (MOOCs) are open online courses operated by leading universities and educational organizations for people around the world. Through MOOCs, interactive learning takes place between teacher and student/system and student not only by using learning resources such as videos and documents but also learning activities such as solving practice questions, doing assignment and engaging in discussions. (Alario-Hoyos et. al., 2013) By offering high quality educational contents and support for teaching/learning, MOOCs aims to achieve the goal of providing retraining opportunities and sharing of knowledge from the perspective of lifetime education and enhanced teaching/learning experience at school from the perspective of supporting higher education. As a result, the program has been rapidly expanding since 2012 via Coursera(http://www.coursera.org), edX(http://www.edx.org) and Udacity(http://www.udacity.com) as an educational model (Martin, 2012) as well as a business model (Daniel, 2012)

There are researches being done on the definition and the significance of MOOCs (Clarà & Barberà, 2013; Mackness, Waite, Roberts, & Lovegrove, 2013; Yuan & Powell, 2013), course design and evaluation (Cross, 2013; Meyer & Zhu, 2013) and analysis of student characteristics and learning pattern (Breslow et al., 2013; Milligan, Littlejohn, & Margaryan, 2013) based on potential and influence of MOOCs. However, on the other hand, the researches and case studies of the schools who want to run MOOCs, teachers of MOOCs classes, system of operating MOOCs needed by course designer and administrator, strategic plans and actions required for those who make up the system are lacking. In particular, since establishing MOOCs organizations and related researches have been done primarily in the United States and Europe, it is necessary to conduct researches based the examples of MOOCs implemented in Korea in order to administrate MOOCs programs more effectively under different learning environment.

In this research, based on the case of Seoul National University edX (SNUx), is proposed methods of selecting, designing and introducing principal facilitators for classes and the procedure for actually administrating the class; and the roles and relationship among various facilitators.

2. RESEARCH METHODS

This research covers the activities done and the materials produced from May 13, 2013 when Seoul National University began preparing for agreement with edX, the organization that manages MOOCs to April 30, 2014 when the school has 1 class open and running, has designed and developed additional 2 classes and is in the process of developing a sequel to the class that is currently running.

First, people or organizations needed to select, design, develop and administrate MOOCs were chosen as the principal facilitator and, based on the agreement made between Seoul National University and edX, activities to be performed by each facilitator has been listed and categorized. Second, things to be considered during design, development and administration of MOOCs have been derived based on the analysis on MOOCs related documents, well-performing classes within edX and information on class administration provided by MOOCs administrating organization. Finally, programs that were not examined in the previous two steps were additionally derived during the process of actually selecting, designing and developing MOOCs.

3. RESEARCH RESULTS

Principal facilitators for MOOCs administration can be divided into MOOCs administration team, MOOCs support team and MOOCs instructors. Each facilitator is to perform actions in the course of agreement, design and development, and training and communication pertaining to MOOCs. In this research, MOOCs administration team is edX and MOOCs support team is SNUx of Seoul National University registered in edX, consisting of Center for Teaching and Learning (CTL) and Task Force Team (TFT). Finally, MOOCs instructors are faculty and teaching assistants who are either running or will be running a class in SNUx.

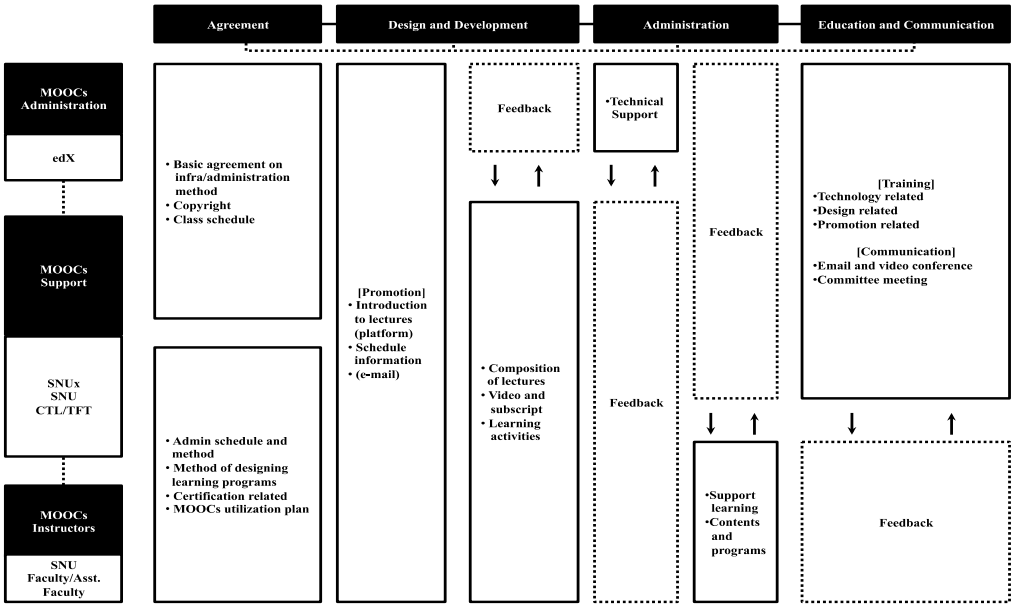

Figure 1. Principal facilitators for MOOCs administration, steps of actions to be taken, and accompanying activities

The picture above is a diagram of each facilitator, the steps of action and the activities pertaining to each facilitator and action steps. The following is the survey of major activities that take place among the facilitators in each step.

3.1 Agreement

Most MOOCs administration, excluding Udemy(http://www.udemy.com), currently have agreements with MOOCs support organizations such as universities, educational organizations and corporations throughout the world for more effective and higher quality management. Agreements are largely made between MOOCs administrating organization and MOOCs support organization such as universities, educational organizations and corporations throughout the world; and between MOOCs supporting organization and MOOCs teachers.

Agreements between MOOCs administrating organizations and support organizations usually go through discussions to reach basic agreement on infrastructure and administration methods as well as intellectual property rights, schedule of courses, etc. (edX, 2013a) Then, a MOOCs support organization selects classes through administration committee and works with teachers of the selected classes on various issues such administration schedule, designing and administration methods of learning activities, allocation of design and development tasks, selection of teaching assistants, whether to issue certifications and, ultimately, discusses specifically how to use MOOCs to achieve innovation in university education.

3.2 Designs and Development

Things that are needed to be developed in order to administrate MOOCs are largely promotion, overall structure of classes, videos and subtitles and learning activities. First, for promotion, information about class that includes the class title, photos and resume of faculty and teaching assistant, class descriptions, a class schedule and the required hours of study per week is made available in public eight weeks before the scheduled start of class. Also, e-mails are sent to students who applied for the class two weeks before the start of class to announce the start of class to remind them of their interest in classes so that they do not miss the class.

Considering the students' concentration level and attendance rate, the length of the class is set for 5-8 weeks and class objectives, the name of learning activities and materials and their count and sequence are designed and developed according to a weekly schedule. For SNUx, it used to consist of 13 weeks worth of videos and was divided into 2-3 classes. Next, videos, important learning materials, were designed and developed, and uploaded under the corresponding title. Although videos should ideally be divided to be 3-6 minutes video each (edX, 2013b), one of the classes in SNUx was 20-30 minutes in length due to the nature of the subject and was used without dividing it further. Learning activities such as practice problems, discussions, questions, assignments and tests are developed using relevant web-based authoring tools and uploaded under the corresponding title with links to related web sites. In particular, when certifications are issued, there has to be a verification process for a multiple number of students to verify their participation in learning process. Therefore, a class must be designed so that difficulty level and the frequency of the class is maintained at an appropriate level within the boundary of not lowering the student motivation for learning.

3.3 Administration

One of the more important characteristics of MOOCs is that it is run to allow students to conduct an effective learning process instead of just designing and developing learning materials and programs. (Clarà & Barberà, 2013; Milligan, Littlejohn, & Margaryan, 2013). MOOCs is made available to a multiple number of students and therefore technical approaches, e.g., learning system and authoring tools, are taken to facilitate effective and efficient administration. However, in addition to such technical support, faculty and teaching assistants must encourage students to conduct self-led studying and continuous participation by answering their question, encouraging student discussions, selecting outstanding responses as well as using e-mails, announcement and videos, etc.

3.4 Training and Communication

In order for agreement, design and development and administration of MOOCs to take place in effective ways, it is important to provide training in MOOCs authoring tools, learning platform, teaching plan and promotion. Also, in addition periodic training, use of e-mails and communication via video conference on a regular basis is crucial for success of a class and in maintaining its quality. Furthermore, by creating a consultive group among MOOCs support organizations and holding academic symposiums hosted by MOOCs administration committees, MOOCs is being transformed and developed into a locus of recognizing the need for new directions and strategies for university education and sharing of relevant information. (Coursera, 2014: edX, 2013b)

4. DISCUSSION AND CONCLUSION

This research, based on the actual case study of MOOCs administration at Seoul National University, proposed how to select, design, develop and administrate MOOCs classes and principal facilitators the system, the process required and the roles and relationships among facilitators. It is expected that, with accumulation of more knowledge in administrating MOOCs classes in various academic disciplines, this research will be used as a basis to further researches on developing more effective MOOCs design and administration under more diverse environments. Going further, it is hoped that this research will become a foundation for developing a Korean-type MOOCs that incorporate unique linguistic characteristics and educational environment as well as existing educational infrastructure, thus leading a way for more effective administration of MOOCs.

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