Chapter 8
Guidelines Based on Need-Findings Study and Communication Types to Design Interactions for MOOCs

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ABSTRACT

Experts affirm that interaction in learning settings represent a necessary process for knowledge acquisition and cognitive development. In this vein, is crucial to ensure effective interaction and communication through the user interface of MOOCs. This work proposes a set of design guidelines as starting point for developers to integrate a set of interactive elements into the MOOCs' user interface oriented to foster the four basic types for communication in distance education. The design guidelines were conformed through a need-findings process (observing people-interviewing), in which 35 participants provided their user experience perceptions after using MOOCs from edX; Coursera; and Udacity. Obtained results suggest a particular set of interactive communication elements that should be incorporated in every MOOC's user interface.

INTRODUCTION

Nowadays, the teaching and learning demand is growing inordinately around the world; this phenomenon suggests the need of radical changes and innovative strategies oriented to reinforce currently available techniques.

Additionally, new learning proposals should encourage lifelong learning, besides factors such as society, professional life, among others. In this way the process should be customized, adapting itself to the student requirements and abilities. Similarly it should consider student's free time, other activities and the acquired knowledge through both cultural and educational life of the student (Christopher, 2013).

There is a need that can be fulfill with a tool that gives the possibility to be used in different times and places, a tool host in the cloud that allows the self-taught person easy access to the information and tuition during the learning process. This tool that gives solution to these requirements is a MOOC.

The main goal of the MOOCs is mostly focused on provide access to the people who are looking for get their education completed, or even the people who want to extend their education, but in some way cannot do that in classrooms (Dasarathy, Sullivan, Schmidt, Fisher, & Porter, 2014).

The MOOCs are developed based on the great experience of the biggest Universities in the subject of distance education and open resources.

The MOOCs are accessible, and the high quality courses allow to the students to develop knowledge to support their own learning goals (Al-Zoube, 2009). The main attribute or strength of these courses is their scalability, meaning that, a course which has been already developed can be reach globally, allowing to the big amount of students to be part of the specific topic.

The biggest achievements of the MOOCs include the capability of get together some of the finest academic people of the best Universities through the world in order to develop the material and resources, and the more special one are to offer free courses. The MOOCs are often known as supercharged distance education courses.

Thanks to the increasing amount of the information sources through network, the MOOCs have been better structured. Much teaching material consists of pre-recorded lectures/videos divided into weekly sections with assignment tasks. They have a specific start and finish date and students sign up online. The courses are last for a few weeks and might be offered two or three times by year. A wide range of interactive and media tools are available to students to enable them to interact with other learners. For example, video lectures, online discussion boards, blogs, wikis and social networks such as Twitter and Facebook. There are also opportunities to meet face to face with fellow students, in meet-up organized by students themselves. As the learning support is provided by the online learning community, students can form support groups as they require. The assessment of MOOCs is carried out mostly using peer and self-assessment and computer assessed assignments. There is often no requirement for interaction between the teacher and the student.

The courses are offered by commercial startups, working with elite universities and professors and some of the best known examples are Coursera, Udacity and edX.

Coursera was founded in 2012 Stanford affiliates, computer science professors Andrew Ng and Daphne Koller. It is a for-profit company, though it currently does not generate any revenue. Coursera have the most diverse course selection of all the MOOC providers and currently have over 4 million students and 410 courses from 83 partner institutions. Partners include the University of California, University of British Columbia, Oxford University and Princeton.

Udacity was founded by Sebastian Thrun, who is a former professor of computer science at Stanford University and the creator of the artificial intelligence system behind Google´s self-driving cars. He left Stanford to spearhead this new venture soon after the huge success of his online artificial intelligence course in 2011, which attracted over 160,000 students from more than 190 countries. Udacity's focus is on college-level courses for building and applying your knowledge of STEM (Science, Technology, Engineering, and Mathematics) disciplines.

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