Chapter 4
Design, Implementation and Evaluation of MOOCs to Improve Inclusion of Diverse Learners

Sandra Sanchez-Gordon
National Polytechnic School of Ecuador, Ecuador

Sergio Luján-Mora
University of Alicante, Spain

ABSTRACT

This chapter presents accessibility requirements that need to be considered in the design, implementation and evaluation of Massive Open Online Courses (MOOCs) to ensure they are inclusive. Accessibility requirements take in account particular needs, preferences, skills and situations of diverse learners, e.g. people with disabilities, elderly people and foreign students. The accessibility needs have to be considered in the design and implementation of MOOCs' interfaces, contents and learning/assessment activities. Due to its open and massive nature, with an adequate implementation, MOOCs can overcome inclusion barriers for the benefit of potential learners worldwide, both able and disabled. For evaluation, there are accessibility evaluation tools that identify accessibility problems in the content, semantic and structural elements of a website that can be used to evaluate the level of accessibility of MOOCs. Additional expert-based and user-based evaluations are always recommended in order to achieve valid results.

INTRODUCTION

Humankind is diverse. Hence, there is also great diversity among learners, especially in the context of Massive Open Online Courses (MOOCs). This diversity imposes accessibility needs associated to students with different types of disabilities, elderly students with combined disabilities, and foreign students with cognitive issues due to lack of proficiency in the second language.

Persons with Disabilities

According to the World Report on Disability made by the World Health Organization (2011), more than one billion people live with some form of disability. This is around 15 per cent of the world's population. This fact makes this community the world's largest minority.

The World Report on Disability is a guide to implement the United Nations' Convention on the Rights of Persons with Disabilities (CRPD). The CRPD entered into force in 2008 after decades of work by the United Nations to change attitudes towards viewing persons with disabilities as capable of claiming their rights as well as being active members of society. The CRPD simply guarantees that the same rights recognized in the Universal Declaration of Human Rights of 1948 are respected for persons with disabilities.

The CRPD stresses that persons with disabilities should be able to live independently and participate fully in all aspects of life. To this end, signatories should take appropriate measures to ensure that persons with disabilities have access to the physical environment, to transportation, to information and communications technology, and to other facilities and services open or provided to the public.

Of particular importance in the context of this chapter is Article 24 of the CRPD. This article recognizes the right to education for persons with disabilities. Signatories must make sure that persons with disabilities are able to get access not only to general education but also to tertiary education, vocational training, adult education and lifelong learning without discrimination and on an equal basis with others (United Nations, 2008).

As of April 2015, 154 countries or regional integration organizations have signed and ratified the CRPD, Kazakhstan being the latest one so far (United Nations, 2015). When a country signs and ratifies a convention, it becomes a legal promise and it often leads the government to adapt and change its own laws to support the goals of the ratified convention.

Nevertheless, Morales (2007) reports that in Spain only 3.6% of the population with disabilities completes higher education while the correspondent percentage for general population is 20%. Besides, 84% of Spain college students with disabilities state that they face several barriers through their studies.

In the same line, Molina (2007) presents the following data from Colombia: only 2.3% of the population with disabilities has some level of higher education (technical, technological or professional), 1% completes their higher education and 0.1% obtains graduate degrees.

That is, higher education penetration among population with disabilities has a long way to go before reaching similar levels than general population. Part of the problem is that higher education institutions might not have had accessibility in mind when getting facilities and equipment.

The adaptations of facilities and equipment to make a college campus accessible might be costly. A study made in the European Higher Education Area (EHEA) about standards and indicators for disability (Diez et al., 2011), describes 31 indicators such as: ensure students with disabilities have priority accessible rooms in residential accommodations or rooms near buildings where classes are taught; ensure computer labs are accessible to students with disabilities (e.g. appropriate sits or space for wheelchairs, height adjustable desks, alternative keyboards); ensure that classrooms and labs consider the needs of students with disabilities (e.g. physical access, adequate sound and light conditions); ensure that the aisles are wide enough to allow a person with a physical disability or a wheelchair user to get around them; ensure that alarms and security devices are available in both sight and hearing formats; ensure that campus maps and signs are available in Braille and long print.

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