Chapter 10

Enabling MOOCs’ Usage to Mild and Moderate Intellectual Disabled Users: An Approach to Enhance Mobile Interfaces

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ABSTRACT

The intention of Massive Open Online Courses (MOOCs) is to extend online learning worldwide and to the most users as possible. Nowadays MOOCs have been used not only by undergraduate and high-school students, but also by the elderly and the children. MOOCs have the potential to change the education in a better way to all people, including, of course, the cognitive disabled people. From basic mathematics to specialized technical courses, MOOCs may enhance the opportunity to have better educational programs for cognitive disabled users, nevertheless, there are many things to do, about accessibility to guarantee a delightful user experience. This chapter introduces a new perspective to design inclusive MOOCs’ interfaces.

INTRODUCTION

Computers usage has been wide extended to almost all people in the world; this has been able due to better usability. User Centered Design Process (UCDP) has improved this usability making products easier to use. Nevertheless, there are some users for whom this improvement has not been completely reached, especially in recent fields as MOOCs.

Not only because MOOCs started with college courses, will means that always be this way. Nowadays students of basic education can find a variety of courses about math skills, lecture and language skills, and many other interesting and useful subjects. MOOCs’ flexibility make possible to design any kind

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of courses, technical courses made by companies about a standardized process or about how to use an specific mechanical tool. Although there are cases of college students with mild intellectual disability that has the potential to take a common MOOC, moderate disabled students may take MOOCs to reinforce their educational instruction in school or job. One important aspect of online learning related with intellectual disabled students is about the personalization of rhythms of studying, that goes according to student abilities (Buzzi et al., 2012).

Making clear the potential of MOOCs to benefit special education, it is necessary to design more inclusive and accessible interfaces.

There are some specific characteristics of users with disability that makes especially necessary the implementation of universal design in all the elements of the software interfaces, the most important is the variety of abilities and limitations found in a user population, even in the most heterogeneous.

Of all approaches for designing software present in literature, when the population of users involves or is totally formed by disabled people, there are more than a few that can help to build more usable products for them. When defining this kind of software, the designer should consider two main points of accessibility: First the accessibility in how the tasks of the system are going to help the user to reach the functional objective (as construct a text document, to watch a video, to check e-mail, etc.), and second, how should be designed the graphical/communicative elements of the systems in order to facilitate the interaction with the user (zoom tools, speech tools, screen readers, etc.), this last point is where the chapter focuses.

All these have led concepts of universal software, accessible software, design for all, universal usability, among others; which although the differences in foundations, all of them propose usable software to the most diverse users as possible. Universal Design provides the general guidelines that improve the usability to reach the most variety of users as possible. Through a Universal Design (UD) process, every design decisions are taken considering the needs of all target users, finding creative design proposals that are usable enough to all possible users.

By including the Universal focus in a User Centered Design Process, there is a better opportunity to find all users’ needs that can be computationally satisfied according to their characteristics, extending the usability independently of the users’ expertise.

In this chapter, a tool, based on screen overlays also called transparencies, to enhance mobile interfaces for MOOCs is presented

Describe the general perspective of the chapter. End by specifically stating the objectives of the chapter.

BACKGROUND

The disability condition would affect the performance of a user only when the interface (and the entire computational environment) is designed without taking in consideration the users’ needs.

The nature of MOOCs makes them vulnerable to the previous fact, since the variety of users (in capabilities and limitations) that may be interested in some curse, and that all those users may present some difficulties or limitations during the course and it is impossible for designers to attach all possible users.