Comparison of Students Using Electronic Learning Website of the University of South Africa

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ABSTRACT

It is almost impossible to perform academic activities, such as accessing study material or contacting lecturers and other teaching and learning processes, at an open distance learning institution without the use of computers and the internet. This article investigates and reports on the time taken by students with and without disabilities to complete certain tasks using the University of South Africa’s learning management systems (LMS). The findings of the study indicate that the time taken by students with disabilities to finish tasks is much longer compared to the students without disabilities. The study established that well-developed e-learning platforms guarantee efficient and effective use by both students with and without disabilities. The study suggests that it is significant for all LMS stakeholders to be involved in the development of e-learning websites. This is to ensure that accessibility and usability of these websites are adhered to during the development of e-learning websites.

KEYWORDS

Accessibility, Controlled Usability laboratory, Disabilities, Eye Tracking, Observation, ODEL Institution, Universal Access and Design, Usability

INTRODUCTION

All people, including people with disabilities, should be able to access and use websites. In this way all people will be accommodated in learning through websites (Waight & Oldreive, 2016). According to Bonk, Lee, Kou, Xu, and Sheu (2015) the use of online resources via learning websites at higher education institutions poses certain challenges, for example:

- Insufficient time to use the multitude of available resources
- The dubious quality of the materials found on websites
- The shortage of e-learning support on websites that are considered to be of adequate value

Given these challenges, websites should be flexible to accommodate each user’s needs; they should be usable and accessible. It is important that people with disabilities should be able to browse websites with ease and satisfaction and attain their intended goals when visiting these websites (Waight & Oldreive, 2016). People with disabilities should be able to accomplish their intended tasks when they work on websites. They should not have to put in more effort in order to attain these results; that is, they must obtain their intended results in a similar way as all other people obtain their results when visiting websites.
If the ways in which computers and physical spaces are accessed or not appropriately designed, people with disabilities (and even those without disabilities) may encounter obstacles to using a computer and to reading text and hypertext. They may also experience navigational problems and difficulties with images, photographs, diagrams, charts, interaction and animation, and video and audio within computing facilities (Munro & McMullin, 2009). Having a disability need not hinder a student’s access to e-learning websites or impair the usability of such websites. This is especially important at an ODeL (open distance e-learning) institution where students study and are taught online. According to Burgstahler (2015), there are many reasons why students with disabilities should be empowered to enroll for electronic learning programmes offered by higher learning institutions. They include the following:

- Numerous individuals regard it as unethical to exclude suitable participants from programme access.
- Applying accessibility design principles benefits all students, including those with disabilities.
- Expensive redesign may be necessary when a student with a disability enrolls in an unreachable course.
- In some nations, institutions are legally obliged to give capable students with disabilities access to their programmes.

In the light of the above reasons, a study was conducted at a large ODeL institution, the University of South Africa (Unisa), to examine the inclusion of students with disabilities in e-learning.

The different types of disabilities that are usually distinguished include: mobility or ambulatory, visual, auditory, cognitive and neural disabilities (Abou-Zahra, 2017). This study investigated the impact of mobility disabilities, specifically limited hand function, visual disabilities and auditory disabilities, on accessing Unisa’s learning management system (LMS).

Given these types of disabilities, the following three research objectives were identified:

1. To determine the time participants take to accomplish specific tasks on Unisa’s websites
2. To examine ways to improve the accomplishment of tasks
3. To recommend means of improving the implementation of e-learning websites at an ODeL institution

Given the objectives of this study, the research questions were as follows:

1. How long did it take participants to accomplish specific tasks on Unisa’s websites?
2. In which ways can the accomplishment of tasks be improved?
3. How can the implementation of e-learning websites at this ODeL institution be improved?

The article is structured as follows: The next section discusses the accessibility and usability of websites. The author then presents the methodology adopted for the study and the main focus of the study. Solutions and recommendations are presented, and the study concludes with an argument for the integration of e-learning that caters for the needs of students with and without disabilities.

**BACKGROUND**

According to Prayaga, Rennie, Pechenkina and Hunter (2017), the challenges to digital literacy include the following:

- sociocultural factors, including attitudes, ambitions and purposes; social, institutional and family support or the shortage thereof; linguistic and cultural barriers; and overcrowded living spaces
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