

E-Learning- Accessibility of Students with Visual Impairment in Higher Education

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ABSTRACT

This paper explores the e-learning accessibility of students with visual impairment to begin as a current learning method in the education system. Even in training, the significance of e-studying has improved appreciably. Although a maximum of the technically triggered accessibility management education structures and e-learning contents are conquered all accessibility there are still barriers to be considered. As a matter of current pandemic, it still seems that the subject of accessibility is still exclusively discussed on a technical level. Important aspects like target group-oriented learning methodology and course administration had improved to meet the needs of students with visual impairment. However, e-learning is as important for the accessibility for student with print disabilities and the technical adaptations of the various education structures are used in an e-learning environment of students with visual impairment. The present qualitative study explored the accessibility of e-learning of students with visual impairment. The study implied the need for training students with visual impairment to overcome the learning barriers through implementation of technological advancements such as e-learning and online learning at higher education.

Keywords: E-Learning, Accessibility, Visual Impairment

INTRODUCTION

When learning - particularly in a digital environment - many students with

Visual Impairments make use of assistive technologies to access their education resources. Assistive technology states to any equipment, software or product that serves to improve or increase the functional capacity of a specific with a disability (Assistive Technology Industry Association, n.d.). Students with low vision typically use screen magnification software, which enlarges the display to a contented size with an as little population as possible. With this software, the individual moves the mouse indicator around the screen, observing one serving of the display at a time. Students who are visually impaired are more likely to use screen reader software, which narrates the elements on the display as the user navigates around the screen via the keyboard. It is vital that assistive technology to be considered when designing and getting to know substances that can be to be accessed by way of college students with visual impairments. Students with disabilities struggle to access schooling, as well as access to digital styles of education. For students with visual disabilities, accessibility also contains the use of digital gears that can expand their ability to easily navigate through educational learning materials and access content without having to depend on Braille textbooks.

MATERIALS & NEED FOR THE STUDY

Arrigo, M. (2005) has conducted a study on E-learning accessibility for blind students. Since the middle of the 1990s, the number of colleges and universities which provide courses and degree programs via distance education has been growing dramatically. The advantages of online learning have been widely described in the literature. However, the prospective promise of the digital era often has not become the reality for most people with disabilities, especially in the educational context. Some studies of the statistical access of distance education web pages of the major organizations for distance learning have revealed a high percentage of inaccessible pages. In this study scenario where almost, all universities which offer traditional programs have started to, or plan to offer distance education programs using the Internet, it is very important to redesign traditional pedagogical approaches by integrating information and communication technologies into courses. The aim of this study is to introduce some studies about the accessibility of e-learning and to introduce an online learning environment designed for blind students.

Kharade & Peese(2012) has examined the study learning by e-learning for visually impaired students: Opportunities or again marginalization? In recent years, e-learning has become a valuable tool for an increasing number of visually impaired (VI) learners. The benefits of this technology include (1) remote learning for VI students; (2) the possibility for teachers living far from schools or universities to provide remote instructional assistance to VI students; and (3) continuing education for VI adults. A number of studies confirm that VI students appreciate the advantages of e-learning systems, but they also have to face several challenges in pursuing their education through the e-learning mode. E-learning can be a valuable opportunity for VI users if suitable education methods and appropriate

technologies are used. Hence, it is crucial to identify the needs and requirements of the target community in order to create a system that fulfils their expectations. This article describes the experiences of Indian VI learners with learning, throws light on the problems often encountered by them when using assistive technology, and proposes guidelines for designers in order to develop more accessible e-learning systems.

E-Learning

E-learning is a constructed course or understanding learning experience familiarized electronically; it can additionally consist of overall performance support content. There also are many exceptional elements that can make up an e-learning knowledge of a program, including live or pre-recorded lecture content, video, quizzes, simulations, games, activities, and different interactive elements. E-learning is part of the new dynamic that characterizes educational systems at the start of the 21st century. Like society, the concept of e-learning is subject to constant change. In addition, it is difficult to come up with a single definition of e-learning that would be accepted by the majority of the scientific community. The different understandings of e-learning are conditioned by particular professional approaches and interests (Sangrà, Vlachopoulos et al. (2012).

Accessibility

Accessibility can be viewed as the "ability to access" and benefit from some system or entity. The concept focuses on enabling access for people with disabilities, or enabling access through the use of assistive technology; however, research and development in accessibility brings benefits to everyone.

Objectives of the Study

- To understand the core problems concerning accessibility of students with visual impairment.
- To assess the learning process of students with visual impairment.

- To find out the effectiveness of E-Learning - Accessibility in the learning process of students with visual impairment.

STATISTICAL METHODS

The purpose of this study was to explore the learning experiences of Visual Impairment students by using an exploratory case study design to understand their perspectives of the online learning environment.

A qualitative case study research approach was used to deepen the understanding of students with visual impairment and the challenges faced by them. E-Learning Accessibility of using it was considered by personal interviews.

The Case study method was used. The researcher considers this to be an intrinsic case study. According to Bromley (1990), a case study is “an organized inquisition of an event or a set of related events which intends to describe and explain the phenomenon of interest.”

DATA COLLECTION

The data was collected from students studying in an institution in the Sivagangai district, Tamilnadu.

SAMPLING SIZE

Data was collected from three prospective teachers who undergoing teacher training in the special education field. Two of the participants were low vision and one was totally blind. They were chosen for the study because it was apt to choose them to know the effectiveness of E-learning Accessibility.

RESULT

The findings of this study were most of the students took advantage of different situations to do activities related to their study – for example, they used commuting time to listen to audio (MP3) or DAISY (Digitally Accessible Information System) materials, or to read with the aid of a magnifying glass; used their free time at

work to read (with a screen reader or with screen magnifiers, or even with the help of low-vision aids), listen to the learning content, prepare for tests and written assignments, or reply to the forum; and used waiting time to read or listen with a laptop or even a mobile phone to the learning content and take notes on it. In common, all the contributors spent one to 2 hours day by day on their have a look. The minimal they did every day turned into connecting to the digital campus to test the conversation areas. In the event that they had more time, they read or listened to the studying content material, did venture work, transformed learning content into audio shape to carry with them while commuting, noted complementary content fabric, and so on. All of them had very conducive and supportive domestic environments to pursue their education. However, they had several fears about their participation in online course activities.

DISCUSSION & SUGGESTIONS GIVEN BY THE PARTICIPANTS

- It will be useful if the online course concerns have to collect the content – lesson through the lesson – into character documents, label graphics with alternative text tags, and send the documents to the student by means of e-mail, ideally in a Microsoft phrase record.
- Timed tests must be given conveniently while essential. The visually impaired students have to be requested to do the timed assignments most effectively if it's remote reliably required and even then, they should be provided continued time for the submissions of their assignments.
- Online accomplishment designers have to use stable designs, right headings, fewer frames, contrasting colorings, and accessible snapshots, as well as available formats of materials to make the capabilities of online studying tools more available for students with disabilities usage in the assistive era.

- Teachers must post all materials as Microsoft word documents and avoid PDF documents.
- Instructors have to be carefully skilled to provide for the online learning challenges in demanding situations for Visual Impairment students.
- Instructors must ask students to share accessibility doubts in order that the teachers can try to prepare the issues.
- Online systems should have normal definitions and students need to be updated about them without delay.
- Assistive technology professionals need to be covered when educational programs make choices about online learning.
- The direct emailing of assignments, projects, and other postings to instructors, rather than from within the email feature of the online educational tools, should be allowed.
- Students with Visual Impairment should be well competent in the short-cut keystrokes for confident online educational tools. It will be helpful for students using access software and applications.
- Students with Visual Impairment should keep their access software and applications as up-to-date as possible so that the latest updates are available to them.

CONCLUSION

The conclusion of this study demonstrates that students with visual impairment learners are looking at e-learning as an alternative for their educational development. But they do have more than a few concerns which create expressive wedges in their minds compared to participating positively in e-learning and accessibility of the systems. The accessibility challenges in e-learning tools and the usability limits of assistive technology further intensify the situation. The recommendations given by those participants approximately how better to accommodate some of the most elaborate

functions of online studying structures need to be considered by the way of online route developers. So, the developers, tutors, and experts should adhere to these suggestions which can give students with visual impairment a better chance for successful accessibility to the usable features of online education until the problematic features are remedied by the experts. Additionally, we do provide all students get a higher chance for a successful education section which warrants training in e-learning accessibility. Efforts to remedy the situation have to be grounded in bettering the complicated functions that prevent full accessibility to the students with visual impairment. The technological accessibility barriers are unacceptable in this time of technological prominence, whilst computers have the ability to bridge the virtual divide and educators need to update with recent technological advancement for ensuring e-learning accessibility among students with visual impairment at higher education.

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