

Management of individuals using assistive technology

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Abstract:

In this paper, it is examined whether the individuals use assistive technology and indicatively what tools they use in their business environment or in their studies regarding the students of this research, increasing their productivity in their work, too. The sample is divided into two teams (Team A" & B"), that means individuals with and without learning difficulties. The results supported the hypothesis that the individuals with learning difficulties used assistance technology in their work or in their studies in comparison with the adults without learning difficulties.

Keywords:

Management, organization, assistive technology, adults.

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INTRODUCTION

This research aims to investigate if people with or without learning difficulties use assistance technology and if they use what tools. According to Blankfield S. (2001) many employees and managers do not report on their Curriculum Vitae or to their employer that they have learning difficulties. All office jobs have been automated with the use of information systems and assistive technology. So, in this way, individuals can cope with the new situation without difficulty, because they do not write by hand. Moreover, Eisenberg (2007) mentioned that students with dyslexia had better progress using the "ipod-touch" than those who did not use such an assistive technology. Similar research has not been made in Greece and especially in adults. (Athanasopoulou L., 2016). But, in England has been done similar research in nursing administration (Morris D., 2006).

It would be remiss, if it is not mentioned the speech recognition or voice recognition systems, which allow to people to give commands and enter data using their voices alone, and not by using keyboard or mouse. Voice recognition systems use a microphone that it is incorporated in the display. A similar operation has the systems that synthesize speech or convert text to speech. There are software such as screen enlargers or screen magnifiers which allows people to enlarge a portion of the screen in order to recognize more easily display thumbnails. Finally, the use of assistive technology motivates especially children to correct their orthography and syntax of the texts (Panteliadou & Antoniou, 2008).

Assistive technology is an effective tool for providing prompts that can be self-operated by individuals with intellectual disabilities (Mechling C. Linda, 2007).

Methodology of the research

This paper comprises an overview if there is a difference between two teams regarding the use of assistive technology. There was a presentation of all assistive technology software to all participants by the researcher and then, the installation of software was done in the computers of the participants of this research. (<http://access.uoa.gr/ATHENA/eng/applications/view/61>) (retrieved on November 2016). This software is free in the Web. The sample was used, especially, the pointing magnifier and the enor mouse.

Absolute (N) and the relative (%) frequencies used for the description of qualitative variables. To compare quantitative variables between two teams, it was used the nonparametric Mann-Whitney test. The ratio was compared with the criterion χ^2 test. The level of significance is bilaterally and statistical significance was set at 0.05.

Results

The following table presenting the use of software of assistive technology shows that the sample of this research depends on existence of learning difficulties. Absolute (f) and relative frequency (%) of responses to the question, about the use of assistive technology and examination of difference's existence, seem to depend on the presence of learning difficulties.

Assistive technology	Teams			
	Team A'		Team B'	
	<i>f</i>	(%)	<i>f</i>	(%)
Big Clock	6	(11,1)	1	(1,9)
Multimedia Calculator	7	(13,0)	0	(0)
Pointing Magnifier	16	(29,7)	7	(13,0)
Enor mouse	13	(24,1)	25	(46,2)
Balabolka	7	(13,0)	8	(14,8)
No assistive technology was applied	4	(7,5)	10	(18,5)
χ^2 test	28,07			
<i>p</i>	<0,001			

According to the findings of the above table, statistically significant differences are found by using assistive technology, depending on existence of learning difficulties. [$\chi^2(df=5, N=108) = 28.07, p<0,001$]. Specifically, about half of individuals (46,2%) without learning difficulties was used the assistive technology "Enor Mouse", while one of four individuals with learning difficulties use this assistive technology. Also, it is observed that almost three of ten individuals with learning difficulties used the assistive technology "Balabolka" (13%) and "Multimedia Calculator" (13,0%), while no individual without learning difficulties was used the assistive technology "Multimedia Calculator". Finally, the results were revealed that individuals with learning difficulties were used more the assistive technology "pointing magnifier". Moreover, one of five individuals without learning difficulties did not use (18,4%) assistive technology, while the percentange (7,5%) of the sample with learning difficulties were not used assistive technology.

Conclusion - Discussion

According to Colwell C et al. (2002) who mentioned that in their research used the Information System "PEARL", as well as assistive technology, such as word prediction software, voice recognition, text reader in order to help people with learning difficulties.

A similar investigation indicates that the participants had positive results after using an asynchronous e-learning environment (Weiss J, Nolan J. et al, 2007).

In a similar survey, it is reported that there was a positive attitude towards new technologies, which can help users easily handling such systems. But the survey of the sample was small and worth doing further research on a larger sample. (Raaij E. & Schepers J., 2006). Conversely, students with dyslexia who communicate through video conferencing at the same time had difficulties in their performance. (Woodfine B. et al, 2008).

It is necessary to do research in synchronous and asynchronous environment, so people, mostly, with learning difficulties can respond easily. Also, it has to be investigated for individuals the use of assistive technology to adults, because the surveys are done mainly to children.

The promotion of the special education technology is important, because researchers can improve the science supporting of our work (Edyburn Dave L., 2010).

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