



Attitude and Application of Assistive Technologies by Visually Challenged Youths at Under Graduate Level

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Abstract: In the era of grey revolution students may find themselves challenged in today's fast-moving competitive digital environment. At the same time visually challenged students have additional challenges. They must learn the same higher levels of information-processing and manipulation skills as their classmates and they must have access to the advanced technologies such as hardware and software that make the "21st century literacies" possible. (Anstey & Bull, 2006; Karchmer, Mallette, Kara-Soteriou, & Leu, 2005; Taffe & Gwinn, 2007). This access has been made available to individuals with disabilities through a wide range of special devices and software, referred to as 'assistive technology', which allow them to access information and the general curriculum, as well as through innovative technological tools. Visually impaired students, therefore, must develop expertise in using assistive technology, and they must develop skills in performing other complex tasks. This empirical paper attempts to find out the Attitude and Application of Assistive Technologies by Visually Challenged Youths at Under graduate Level. 30 visually challenged youths were taken as sample for the study. A questionnaire (AAATVCYUL) with 28 items were constructed by the investigator and administered to 30 visually challenged youths for the collection of data. Findings revealed that respondents use assistive technologies more for recreational purpose than the educational purpose.

Index Terms - visually challenged, grey revolution, information-processing, 21st century skills, assistive technology

I. INTRODUCTION

A person experiences some degree of sight loss which cannot be corrected using glasses or contact lenses is called as visual impairment. Assistive technology is a term used to cover a wide range of different products and services. The Foundation for Assistive Technology (FAST) defines it as: "Assistive Technology (AT) is any product or service designed to enable independence for disabled and older people" (FAST, 2001). The British Educational Communications and Technology Agency (Becta ,2003) defined assistive technology as: "the software and technology which helps people with disabilities and special needs to overcome the additional barriers they face in communication and learning".

In USA, assistive technology is defined in the Individuals with Disabilities Education Act (IDEA, 2004): “Assistive technology device means any item, piece of equipment, or product system, whether acquired commercially off the shelf, modified, or customized, that is used to increase, maintain, or improve the functional capabilities of a child with a disability”. Assistive technologies strives to accentuate strengths rather than weaknesses, to enable expression of abilities at a level commensurate with intelligence, and, ultimately, to enhance the quality of life of persons with learning disabilities” (Raskind, 1994).

II. Objectives of the study

- To assess the level of utilization of Assistive technologies by visually challenged youths.
- To find out the purpose of utilizing Assistive technologies by visually challenged youths.
- To evolve recommendations for policy making.

III. Research questions

The research questions for the present study are as follows.

- *Are the visually challenged youths utilizing Assistive technologies for learning?*
- *Are the visually challenged youths utilizing Assistive technologies for the research?*
- Do the visually challenged youths utilize Assistive technologies for enhancing their life skills?
- Are the visually challenged youths utilizing Assistive technologies for developing their communication skill?
- Do the visually challenged youths utilize Assistive technologies for recreational purpose?

IV. RESEARCH METHODOLOGY

The present study adopted survey technique for data collection. The investigator, after conceptualising different articles related to the utilization of different Assistive technologies, constructed a tool with 28 statements. The tool, Attitude and Application of Assistive Technologies by Visually Challenged Youths at Under Graduate Level (AAATVCYUL) Questionnaire has been given to the psychologists and technologists for obtaining their opinion. Based on their opinion rewording and rephrasing have been done in the questionnaire wherever necessary. Questionnaire (UATVCYUL) was administered with 30 visually challenged youths. Of them, 18 were male and 12 were female, came from various places of Tamilnadu for their educational purpose.

V. RESULTS AND DISCUSSION

Based on the data collected through the questionnaire are analyzed and interpreted as follows:

Table 1 Responses of the AAATVCYUL Questionnaire

Dimensions	Responses in Percentage (%)							
	Yes		Often		Seldom		Not at all	
	Male	Female	Male	Female	Male	Female	Male	Female
Learning	48	16	20	8	23	28	9	48
Research	61	24	23	16	16	41	-	19
Seminar	16	-	14	-	11	16	59	84
Communication skill	-	-	6	-	38	3	56	97
Life skill	6	-	18	-	19	29	39	71
Job searches	7	-	10	13	35	24	48	63
Motivational Speeches	-	-	7	-	15	7	78	93
Recreational	92	78	8	18	-	4	-	-

Regarding the dimension Learning is concerned 48% of male use assistive technologies for their learning. At the same time 48 % of female are not at all using assistive technologies for their learning. Awareness should be given by the parents and teachers to overcome this problem.

Research is important for every individual at tertiary level. But 61% of the male said yes, 23 % said often and 16% seldom use assistive technologies. 24%, 16%, 41% of female responded Yes, often and seldom respectively and 19% of female said Not at all using assistive technologies for their research purpose. The reason may be due to lack of computer knowledge.

Seminar taking is one of the important factors at tertiary level. It is disheartening to note that 59% of male and 84% of female are not using any assistive technologies for this purpose.

Communication is one of the important skills required for any individual. 56% of male and 97% of female have failed to use any technology for enhancing their communication skill. It is understood that either male or female, visually challenged students do not have awareness on communication skills.

Life skill is one of the key factors in determining the personality of the individual. 71% of female and 39 % of male visually challenged youths do not have idea about life skills. Awareness should be created by the teachers to develop life skills among the visually challenged youth.

Searching for the Job is one of the difficult tasks for visually challenged people. They need somebody's assistance to move around to get a job. But with the help of computers they can find the job sitting at their own place. Only

7% of male said yes and 48% of male and 63% of female not at all use any assistive devices to find the job in the job market.

Motivational speeches help the individual to enhance their self-confidence. But 78% of male and 93% of female visually challenged youths do not hear any motivational speeches. None of the male and female students said yes to this dimension. It is not a good sign. So awareness should be created to listen motivational speeches to improve their self confidence.

Recreation gives relaxation to the mind after the work. 92% of male and 78% of female visually challenged youths said yes to this dimension. This response shows that assistive technologies are mostly used by the visually challenged youths for the recreational purposes than the educational purposes.

VI. Recommendations

Based on the findings of the present study the following recommendations were made:

- Orientation should be given in colleges to use assistive technology devices.
- Computer training should be given to all visually challenged youths.
- Electronic library should be created in all institutions to utilise the e-books and journals. Concerned subject teachers can assist the learners in this regard.
- The person in-charge of the assistive technologies gadgets should know all functions of the gadgets.

VII. Conclusion

Technology offers for students, highly effective tools to learn on their own from the Internet, with almost all the information, to search and research tools to sort out what is true and relevant, to analysis tools to make sense of it, to network and collaborate with people around the world. While the teacher can be a guide, most of these tools are best used by students (Marc Prensky, 2008). It is inevitable that the electronic devices begin to reflect the individual's development, to connect with others globally and to contribute to the world. Hence motivation should be given to use the assistive technologies by the visually challenged is mandatory, which in turn develop their self confidence.

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