Beach Center on Disability
a resource for families and professionals

Research Highlights

Topic: Technology Use

Davies, D., Stock, S., & Wehmeyer, M. (2001). Enhancing independent Internet access for individuals with mental retardation through use of a specialized web browser: A pilot study. *Education and Training in Mental Retardation and Developmental Disabilities*, *36,* 107-113

BOTTOM LINE

Using a specialized Internet browser called *Web Trek*, individuals with mental retardation were able search for web sites, save favorite sites and return to sites they had saved. This type of support for computer and Internet usage is an important adaptation to overcome barriers to technology use. A comparison task to use an established web browser (*Microsoft Internet Explorer 4.0*) showed that using *Web Trek* was more successful for the participants. Results of this pilot study show that self-directed access to the Internet and World Wide Web is achievable for individuals with mental retardation.

TIPS

- When choosing or designing software for people with mental retardation, reduced screen clutter, verbal prompts, personalization and customization, graphics, and error minimization strategies are important features.

KEY FINDINGS

- Using a specialized Internet browser called *Web Trek*, individuals with mental retardation were able to search for web sites, save favorite sites and return to sites they had saved.
- Participants made significantly fewer errors and were able to access websites needing significantly fewer prompts when using Web Trek as compared to Internet Explorer 4.0.
- With *Web Trek*, all participants completed all required tasks, while only four participants completed all tasks with Internet Explorer 4.0.
- All participants expressed enjoyment at accessing the Internet and wanted to continue Web surfing after the experimental trials were completed.

METHOD

- Twelve individuals with mental retardation with no previous experience on the Internet access participated in the study. Their ages ranged from 20 to 45 years of age, and their Intelligence test scores ranged from 50 to 72, with a mean score 59.8.

- *Web Trek* was designed to run on handheld computers running Windows CE. Individuals with mental retardation, service providers, and other professionals had input in the design process.

- A within-subjects design was used. Each participant was asked to perform three Internet-related tasks (searching for web sites, saving favorite sites, and returning to sites they had saved) with Web Trek and Internet Explorer 4.0. The order of the browser used was randomized, except with the last participant, who used *Web Trek* first to ensure that half of the participants experienced this condition first.

- Data were collected on independence, measured by the number of prompts required, and on accuracy, measuring the number of errors made, for each task. Frequency of task completion was also recorded.

- T-tests were used to analyze the data.

RELATED PUBLICATIONS

Davies, D. K., & Stock, S. E. (1995, March). *Money coach: A functional multimedia computer program for maximizing independence in financial management for adults with development disabilities*. Paper presented at the 1995 CSUN technology and persons with disabilities. Los Angeles, CA.

Vockell, E. & Milhail, T. (1993). Instructional principles behind computerized instruction for students with exceptionalities. *Teaching Exceptional Children, 25,* 38-43.

Wehmeyer, M. (1998). National Survey of the Use of Assistive Technology by Adults With Mental Retardation. *Mental Retardation, 36,* 44-51.

This research was conducted by AbleLInk Technologies and was supported by the U.S. Department of Education under P.O. # ED-98-OI-3746. Any opinions, findings, conclusions or recommendations expressed do not necessarily reflect the views or policies of the Department of Education. For more information, contact the Beach Center on Disability at 1200 Sunnyside Avenue, 3111 Haworth Hall, The University of Kansas, Lawrence, KS 66045-7534. Phone: 785-864-7600. Email: Beachcenter@ku.edu. Website: www.beachcenter.org.