



July 1999, Vol. 1 Issue 2

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Usability News is a free web newsletter that is produced by the Software Usability Research Laboratory (SURL) at Wichita State University. The SURL team specializes in software/website user interface design, usability testing, and research in human-computer interaction.

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Exploring How the Elderly Use the Web

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The fastest growing segment of the US population is persons over the age of 65, according to the U.S. Bureau of the Census (1996). With the growing use of computers by the elderly, designers should be sensitive to the specific abilities and performance characteristics of the aged. Previous studies of web design for the elderly have primarily focused on naive computer users, but the findings of such studies may not adequately reflect the performance of more experienced users (Mead, Spaulding, Sit, Meyer, & Walker, 1997). We have been exploring the ways in which the elderly use websites in comparison to college-age students. In one study, we compared college-age (19-27 years) and elderly (64-87 years) users in a usability test of two websites. One site used a combination of graphics, text, and animations. Navigation on this site required the use of a variety of inputs, including forms, drop-down boxes, image maps, and text hyperlinks. The second site was a non-graphic, text-based site that used text hyperlinks for navigation. We asked all participants to complete four specific information search tasks with each site. We collected performance data such as time-on-task, total number of pages visited, number of different pages visited, number of screen clicks, keyboard inputs, as well as information regarding the success of task completion. After completing each task, participants were asked to give a subjective evaluation of the task difficulty and to rate each site's ease of use.

Preliminary results indicate that the elderly users were slower than the college-age users; they also made fewer screen inputs, traveled to fewer pages, and were less likely to return to a previously visited page while completing a task (regardless of the site type). However, the elderly were also more accurate than the young. In general, it appears as though the elderly simply took the time to carefully read the text on a webpage before continuing the tasks. This, we believe, led to higher accuracy. Small font size and animated graphics were identified by both groups of participants as being "distracting." We are currently investigating how these aspects of web page design and others (i.e., color, white space) affect performance for this target population.

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