Eight Lessons Learned and Design Implications

This article is from a talk that Tom Tullis of Fidelity Investments gave at an AARP symposium on March 4, 2003. It is based on work that Tullis did with Ann Chadwick-Dias and other colleagues to study and improve web sites for older adults.

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1. Older adults tend to read most of the text on a page.
    - Reduce the amount of text on each page while conveying the required information and not compromising the effectiveness of instructional text.
    - Be as concise as possible when providing instructions.
2. Older users tend to be more cautious in everything they do on the web, including clicking on links.
    - Use action-word links that clearly explain what will happen when the user clicks the link.

      The more clear the resulting action for the link, the more likely older users will click it (and the faster they will click it).
3. Even though it may not significantly improve overall performance, older users prefer larger text.
    - Use a "medium-sized" default font.
    - Provide an obvious way for older users to increase text size, like a visible button.
    - Use "scalable fonts" or fonts that will allow the user to increase and decrease text size using the browser functions (View > Text Size > Larger).
4. Older users are more likely to click objects that look "clickable", including bullets, headings, etc. and have difficulty clicking small text links.
    - Use an obvious and consistent method of displaying text links, like blue underlining with red on mouseover.
    - Use image-based links that provide a larger target area for the user to click.
    - Increase redundancy in links (making text AND bullets links) to increase the chances that older users will successfully reach their target.
5. Numerous experiential differences contribute to older users' overall level of confidence and anxiety in using the web.
    - Keep your design simple and stable. Too many changes in the design over a short period of time will force the older users to re-learn how to work with the site. The more success older users experience with a

particular site, the higher their confidence level will become, and the lower their overall anxiety.

6. Older users often do not understand terms that younger users consider common knowledge.
    - Do not use web or other technology-related terms without defining them. Some of these terms include Back (or go Back), link (click the link), URL, menu bar, toolbar, IM, minimize, Login, and home.
    - Keep terminology as simple as possible throughout your site.
7. As people age, they have an increased likelihood of disabilities, including visual (myopia, cataracts, etc.), fine motor (tremors in hands), muscular/skeletal (bone disease like arthritis), and cognitive (short-term memory decreases).
    - Review the W3C's Web Content Accessibility Guidelines. This provides recommendations for supporting assistive technologies and designing for users with disabilities.
8. Older users have difficulty working with pages that are dense or have too much detail.
    - Keep pages as simple as possible so that older users do not encounter "information overload."
    - Provide concise instructional text and break information up into separate pages if necessary, so that no one page presents too much information or requires users to remember too much.

Overall, Fidelity's first two studies have led to two interesting conclusions.

First, even when level of PC/Web experience is controlled, older adults experience more usability issues on the web than younger adults.

Second, when specific design modifications were made to accommodate the unique needs of older adults, the modifications improved usability for all users, with equal effect.