

Plain Language + Plain Interaction—Making Voting Accessible

The primary outcome of our ITIF-AVT grant was a ballot interface prototype that can be used on any device, including tablets, smartphones, or desktops. In the tradition of universal design, our ballot interface leverages the robust assistive technologies available for desktops and other devices, while making the ballot instructions and ballot marking interaction usable for both expert users and users who don't read well or who have mild cognitive impairment.

The ballot interface was tested on a tablet, with a range of participants including

- participants with measured low literacy levels
- seniors with high literacy but unfamiliar with tablets
- seniors with low literacy and unfamiliar with tablets
- users with mild cognitive impairment.

We found that the combination of plain language and plain interaction made the ballot interface accessible for most participants—even those unfamiliar with tablets.

Plain Language

Previous work by Ginny Redish and Dana Chisnell (2009) demonstrated the crucial role of plain language in ballot instructions for successful voting. In our testing, we found that participants with lower literacy tended to act on every single word. As other researchers have also found, these participants do not generally make inferences, and they take the meanings of words and sentences literally. During our iterative testing (two rounds of testing, with a total of 22 participants), we worked to keep the messages clear while

- eliminating ambiguous words
- reducing election jargon
- reducing the text on key screens such as the introductory screens, review screens, and confirmation screens

For all instructions, we found that concise, positive, specific, prescriptive wording was the most helpful. We also confirmed that participants did better when provided with context information before instructions for action (“You voted for 2 candidates. You can vote for 2 more.”) Plain Interaction As paper ballots have moved to DREs and other electronic interfaces, the design of the ballot marking interaction has become increasingly central. Previous research on websites found that distractions (such as links, shifts in locus of action, even sidebars) had detrimental effects on task success for participants with low literacy levels (Summers & Summers, 2005; Summers & Summers, 2006). Our ballot interface research confirmed that distractions can similarly impede the voting process. Our iterative testing resulted in a streamlined and focused interaction. We removed potential disruptions, eliminating supplemental content, making help content shorter, removing extra icons, and removing the back

button from selected screens to keep the voting process straightforward and intuitive. We made sure feedback was concise, immediate, and non-disruptive.

At the same time, during testing users tried to interact with the interface in some ways we had not anticipated. By supporting these additional behaviors, we were able to avoid “errors” and allow the interaction to proceed smoothly. Examples included allowing users to touch anywhere on a name to select it, or touch anywhere outside a lightbox message to close it, or scroll using multiple gestures (by pressing a button, dragging the scrollbar, or flicking a finger).

Room for Collaboration

We finished our research with an attractive, accessible ballot, and we present it with pride. We’re excited by the potential opportunity to work with the state of Washington and others on implementation of our interface.

But we had some unanswered questions—issues that remained for participants with short-term memory loss, or traumatic brain injuries. We’d like to share some short video clips with workshop attendees, showing both our triumphs (problems that got solved) and a handful of open issues. We’d like to tap into the expertise and experience of workshop attendees to brainstorm additional improvements.

Kathryn Summers, Ph.D.
University of Baltimore
1420 N Charles St
Baltimore, MD 21201
410-837-6202
fax 410-837-6252