

Research Articles

Designing for the Elderly

by Ollie

<https://www.smashingmagazine.com/2015/02/designing-digital-technology-for-the-elderly/>

Vision and Hearing

- Presbyopia: the lens of eye beginning to harden, making it harder to read text that is small and close. Common from age 40 on.
 - **Avoid font sizes smaller than 16px**
- color vision also becomes worse.
 - **Avoid blue for important interference elements**
- Hearing also declines
- **Provide subtitles when video or audio is fundamental to the user experience**

Motor Control

- older people are better with touch interfaces than with a mouse. Motor control with a mouse becomes harder with age.
 - reduce distance between interface elements that are likely to be used in sequence (form fields) (at least 2 mm apart)
- **Buttons should be larger for older people**

Devices

- older people use phones less, they are “annoying” and often ignore SMS entirely.
 - **the mobile version of the site will be significantly less important** for FEE than desktop.

Life Stage

- Common security question: “What was the model of your first car?” a 66 year old would probably not remember this.
 - **Be aware of content or functionality that implicitly assumes someone is young** or at a certain stage in life.

Experience with Technology

- Easy to assume that everyone knows how a scrollbar or scaffolding works, but people who didn't grow up with computers might have never used the interface that we take for granted.
- **Make function as self-evident as possible.**
- don't make assumptions about prior knowledge.

- Interrogate all parts of your design for usability, even the parts you didn't create.

Cognition

- Memory:
 - **Introduce product features gradually** over time to prevent cognitive overload.
 - Avoid splitting tasks across multiple screens if they require memory of previous actions
 - During longer tasks, give clear feedback on progress and reminders of goals.
 - Provide reminders and alerts for cues for habitual actions.
- Attention Takeaways:
 - don't be afraid of long-form text and deep content
 - allow for greater time intervals in interactions (server timeouts, inactivity warnings)
 - **Avoid dividing user's attention between multiple tasks** of parts of the screen
- Decision-Making
 - Older people tend to emphasize prior knowledge.
 - **Prioritize shortcuts to previous choices** ahead of new alternatives

UX Design Thinking From a Senior Citizen's Perspective

Emily Grace Adiseshiah - UsabilityGeek

<https://usabilitygeek.com/ux-design-thinking-senior-citizen-user/>

Make Your UI Reader-Friendly

- Fonts: the bigger, the better
 - >12-point fonts
 - Provide options to control font size. If not, **at least test for zooming in on a page**, as this can result in problems with function or display.
- Color & Contrast for optimal visibility
 - Don't ignore color guidelines
 - Ex: blue should be avoided for interface elements that do not bear links
 - Further: there should be **color distinction between links that a user visited and has yet to visit** (also because an elderly person may have a harder time remembering which ones they have been to)
- Language that plays to the audience
 - ***Nielson Norman Group** points out that not all designers read the information on the pages that they design, and therefore do not consider the effort it takes to engage with it.
 - Phonetics, slang, and wordplay can present challenges to certain age groups.
 - Empathy mapping can help create content that works for your particular target users group

- Make thing easy to click
 - **Scrollbar issue: give users a lot of options**, including making the page draggable itself, dragging the slider, and using the scroll wheel. Test for these!
- Make UI patterns memorable to aid cognitive difficulties
 - Consider a top horizontal bar that visualizes **breadcrumb** nav that guides users toward specific locations with few clicks needed
 - Avoid links that are not 100% necessary, to build user trust, so that they click on things that are only relevant and significant to locations in the site.
- Get to know your user base
 - User test! To determine how effective your scaffolding is.

A Human-Centered Take on Senior and Technology

Mahsa Yavari

<https://theuxblog.com/blog/ux-for-elderly-seniors>

My Design Values

1. **Empowering & Inclusive:** users should not question their ability while interacting with a new product.
2. **Functional & Appealing:** the interface can/should be intentional, functional, beautiful and engaging.
3. **Integrity & Transparency:** design should be trustworthy.

Divergence & Transformation

- Broaden the parameters of the design problem to explore more possibilities by gathering unfiltered quantitative and qualitative information
- Write down all preconceptions, set them aside and move on. Come back to them when you have a clearer idea of the problem that you are trying to solve.
- Technology shapes the way millennials live but seniors are more unattached to technology
- “Digital Natives and Digital Immigrants” (Prensky). Digital immigrants (older gen, seniors) read the manual carefully first. The older generation relied heavily on learning from an instructor and listening carefully.

Important cognitive skills involved in using a website

- Working memory: ability to simultaneously grasp, retain, and manage new information
- Spatial working memory: the ability to remember where things are located and actually find them
- Perceptual speed: the speed at which a person processes information

Why are seniors disengaged from tech?

- Lack of knowledge of digital conventions
 - 80% of participants between 48 and 66 are unfamiliar with the practice of clicking on the company logo as a way to return to the homepage
 - Visual representations are easier to recall overall
 - **Minimize scroll** (older users may not have scroll wheel). Pages with wider margins are better so that they can be viewed on lower screen resolutions.
- **Skeptical attitude**: seniors are the most skeptical of the internet. They do “cautious clicking” and are worried a wrong click could have consequences that damage their device.
 - Make it safe to explore with ways to undo, cancel, and back-pedal easily
 - Important to make the store very **safe**
- Difficulty: older people find the internet difficult to handle and learn things in technology

Empathy Map

- Embody users' pains and gains. Helps us get into users shoes.

Seniors as Web Users

Jakob Nielsen - Nielsen Norman Group

<https://www.nngroup.com/articles/usability-for-senior-citizens/>

Clear Gains

- While seniors are slower at tasks than their millennial counterparts, they are (slowly) getting faster/more successful at tasks every year.
 - Websites are better designed than they used to be. And seniors are slowly getting more skilled at using the web.

Design Issues: Readability, Clickability

- All websites should let users increase text size when desired, especially if the site's default text is small font size.
- Hypertext links are essential. Using large text is important to ensure readability and larger targets for clickability. Also, avoid tightly clustered links.
- **Pull down menus, hierarchically walking menus, and other moving interface elements are problematic for seniors.** Better to use static user interface widgets.

Behavioral Issues: Hesitation and Discouragement

- 45% of seniors are uncomfortable trying new things and are hesitant to explore.

- And when they fail, they are twice as likely to give up rather than trying a new path.
- When they have problems, they blame themselves 90% of the time.

Offer Supportive (and Forgiving) Design

- Easily lose track of where they have visited. Important to color visited and unvisited links distinctly.
- **When seniors encounter error handling: simplicity is very important.** Focus on the error, explain it clearly, and make it easy/possible to fix.
- Some seniors have trouble managing multiple browser tabs

Avoid Navigation Changes

- All users detest change, but drastic change hurts seniors the most.
 - **Try to maintain consistency in key task steps for as long as possible**

Traffic Lights of UX: Staying Smart with Color

Ben Mulholland - Usability Geek

<https://usabilitygeek.com/traffic-lights-ux-smart-color/>

Red: Warnings and Importance

- Most important notifications are in red, and biggest for error prevention

Orange: Transient Warnings

- Two existing associations:
 - Immediate instructions to carry out
 - Waiting

Green: Success and Encouragement

- Actions which are complete, correct, and positive

Interviews

Sidebars/Layout

With Steve

- Steve preferred double sidebar layout
- Have a sticky sidebar that helps you go through page/section of the site

Membership Login

With Donna

- Does the associations finances and ship store
- Never actually goes on the website, unless to look at store items
 - What needs to be updated on the site the most? The shipstore: a place to put shipping and handling and a place to pay dues
 - Need 2 separate areas for donations and dues
- Big complaint from others: website is not updated with current stuff.
 - But need to balance that with information that is for members only

With Steve and Del

- Very interested in login portal for members, who can have access for more up-to-date information
- Access also linked to dues being paid
- Del likes the Association of American Revolution
- ID or email login?
 - Self-created user ID
- Login/membership would also grant access to other member's phone numbers and addresses
 - Shipmate's stories also have addresses. Ok to leave up? Yes.

