

Secondary research example A

“A User-Centered Design and Analysis of an Electrostatic Haptic Touchscreen System for Students with Visual Impairments” by Amelia Bateman, Oliver K. Zhao, Andrea V. Bajcsy, Mathew C. Jennings, Bryan N. Toth, Alexa J. Cohen, Emily L. Horton, Anish Khattar, Ryan S. Kuo, Felix A. Lee, Meilin K. Lim, Laura W. Migasiuk, Ramkesh Renganathan, Amy Zhang, Márcio A. Oliveira, 2018.

A team of fourteen researchers at the University of Maryland set out to study visually-impaired students' interaction with electrostatic haptic feedback, hoping to identify lines and shapes that make user-centered interaction more productive. Researchers focused specifically on the visually challenging nature of graphs, charts, tables, and plots prior to adding auditory cues.

Insight from this study

Our team is looking into prototyping a workshop. Our workshops would focus past Hulu's teaching users Hulu's programs, towards Hulu's and others learning from a range of users, the feedback and insights from whom they need to make their company's offerings more inclusive. We are crafting our second interview questions to determine how we might best structure our workshop, and letting our users drive our design strategy. Our team thought about designing hot keys with haptic feedback or force-touch gesture for “pause” and “play.” We also considered changing the flow and order of the Screen Reader, and we brainstormed ideas to allow the user to customize UI settings. We discovered how incredibly well the visually-impaired navigate spatial orientation. The article talked about how placing the haptic feedback in the corners of the digital screen increased user accuracy. It made me think about orienting the screen for Hulu with fixed buttons in the four corners. Especially, “updates” “play/pause” and “profile settings.” This could possibly be how we send notifications for our workshops.

Secondary research example B

“Exploring spatial interaction in assistive technology through prototyping” by Thomas René Iversen, Suhas Govind Joshi, 2015.

The authors Thomas Rene and Suhas Govind Joshi explore the use of Tangible User Interfaces (TUI) as an alternative means for elderly people to interact with technology. TUI's in the article is referring to as interfaces that connect digital information to physical objects and environments. The goal of the article is to discuss how spatiality of tangible interactions during prototyping, with a concentration on the spatial interaction of assistive technology. Three prototypes are made within three different themes of spatial interaction.

Insight from this study

I found the article so interesting that I looked for other examples of TUI's on YouTube. I remember having this debate in class about the future of technology and how it is becoming more about touch screens and invisibility. I read somewhere that this generation is going to have an older population and to me it means that there will be more of us that will be relying on assistive technology to live somewhat normal lives. The information in this article has made me re-think my approach to a tangible prototype. My team has been brainstorming ideas and have come up with very conceptual ideas that might seem to help. However, it seems that we have forgotten about basic tasks that disabled people can do that they are familiar without having to learn new ones. Another insight I got from reading this article is how I can collect data on our prototype using the metric they used to measure how the participants performed. What I like about the prototypes used in their explorations is that they are very simple and low-fi. As a designer, I feel compelled to create high fidelity prototypes but forget that a prototype is not meant to be a finished product but more as a tool to gather feedback for improvements. It inspires me to be more creative and concentrate on user requirements.

Secondary research example C

“A Case Study Documenting the Development of Job Assist: A Speech Based Job Search System for Individuals with Visual Impairments” by Julian Brinkley, Sayak Biswas, Vaibhav Gupta & Juan E. Gilbert, 2017.

The authors of this article studied the use of the Job Assist desktop application that addresses accessibility issues by enabling individuals with visual impairments to access pertinent job information through spoken conversational interaction. The primary goals of this application were to develop an efficient way for individuals with visual impairments to retrieve job information without the use of a screen reader and also to enable the user to save jobs for later retrieval.

Insight from this study

For the Hulu project, our team is focused on improving and redesigning the sign-in and on-boarding pages of Hulu's website. Our goal is to provide users with disabilities the ability to customize and personalize their watching experience based on their individual needs. Hulu can collect their input about their disabilities when creating an account or signing in and provide a preset of accessibility options catered to each user. Since our target audience are users with visual impairments, we tested three individuals with these impairments and gained insights that informed how our concept would be executed and how our prototype would appear. We have considered the more evident requests from our users such as having larger font size, increased screen contrast, and centering elements for easy access and identification. However, from reading this article, my group could also highly benefit in considering voice recognition and utilizing a language feature that can interpret and accept all different types of spoken accents as well as include a feature that can accurately locate a user geographically for individuals creating a new Hulu account. For individuals with not just visual impairments but especially physical impairments, they would definitely benefit from having voice recognition and accurate interpretation. If my group's redesign were to be implemented into Hulu's website, I would hope that the engineers and programmers would be able to code these types of features into the Hulu platform. These types of additional considerations would help create a more inclusive and accessible experience because we tend to overlook certain details about our users that we did not think about beforehand.