INCLUSIVE CLASSROOM:
CO-CREATING SOLUTIONS WITH THE ASL COMMUNITY

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OVERVIEW

Duration:
Feb 27 - May 4, 2023

Supervising Professors:
Deb Chachra, Jonathan Adler

Co-design People Group:
ASL Interpreters

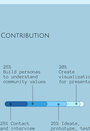
This three-month design class project focused on developing a **product proposal** tailored to the needs of the ASL community. Our team collaborated closely with various ASL interpreters to understand their challenges and values, incorporating their feedback into our design process. Ultimately, our team concluded our research, ideation, and prototyping. As a result, we developed an immersive **ASL learning program model** designed to meet diverse needs, whether individuals are exploring ASL as a potential career path or simply interested in learning the language.

BACKGROUND

The Deaf community often relies on American Sign Language (ASL) interpreters to communicate with the hearing population in crucial situations such as medical appointments, educational environments, or social events like weddings. While our project focused on ASL interpreters as the primary user group, we recognized that by addressing their needs, our design also had the potential to positively impact the broader ASL community.

Our project embraced a "bottom-up" design approach, working closely with ASL interpreters to understand their specific challenges and needs. Instead of imposing tech-driven solutions, we prioritized creating a system that reflects the values of the interpreters and the community.

MY CONTRIBUTION



During the researching stage, I engaged with various individuals from our target audience, including parents, educators, and ASL learners. I conducted in-depth interviews with five professional ASL interpreters to understand the current needs and challenges they face. I also facilitated weekly team meetings to discuss design decisions, incorporating feedback from our co-design sessions.

Leveraging my experience in learning a second language and researching global programs that promote early ASL exposure, I contributed to shaping our design goals and finalizing the project's deliverable.

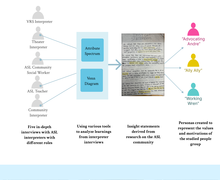
For the final presentation, I created visually engaging and easy-to-understand posters using Adobe Illustrator and Figma. I also designed and laser cut a classroom model to effectively communicate our design concepts to stakeholders and the public.

DESIGN PROCESS

PHASE 1: INTERVIEWS AND PERSONA CREATION

To better understand our user group, we reached out to various ASL interpreters through friends, social media, and deaf schools. We conducted 5 in-depth interviews, capturing their stories and using design methods to extract key insights. Based on these insights, we developed 3 distinct personas:

- Advocating Andre: A strong community advocate, promoting societal change and accessibility, representing a "localized" identity.
- Ally Ally: Enjoys interpreting and building connections with the ASL community, described as an "immigrant" to the culture.
- Working Wren: A typical VRS interpreter who works behind the scenes, minimally involved in the community, representing a "visitor" identity.



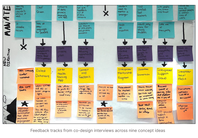
Visuals of our three personas, including quotes from interviews, motivations, community roles and interactions with the Deaf Community

PHASE 2: IDEATION AND CO-DESIGN

Using the insights from Phase 1, we brainstormed product ideas and tested our assumptions through co-design sessions with the interpreters we interviewed. We also considered the values and expectations of key stakeholders.

Diagram illustrating the design process during Phase 2.

Sketches of the nine best concepts generated during the ideation phase



Feedback tracks from co-design interviews across nine concept ideas

During this process, we learned that many technical solutions, such as translating gloves or hearing aids, are often rejected by the ASL community because they overlook the social context and focus on a "quick fix" rather than addressing deeper needs. To tackle issues like underrepresentation in media and low public awareness of ASL, and interpreter burnout due to workforce shortages, we realized that a more systemic change is needed.

PHASE 3: PRODUCT PROPOSAL AND PRESENTATION

Based on the previous research, we developed the concept of an **ASL Immersion Program for high schools**. This program offers classes in any subject, taught entirely in ASL by interpreters, providing both deaf and hearing students with an immersive learning experience. **The goal is to foster early exposure to ASL and encourage more students to pursue careers as interpreters.**

Quinn's Story

A narrative focused on Quinn, a student who thrives in the ASL Immersion Program. This story highlights the program's impact on students in becoming interpreters, addressing critical issues like interpreter workforce shortages and high demand. It also highlights how the program supports students navigating dual community without being rigid certification barriers, while reducing burnout for current interpreters.

Interpreter Personas and Testimonies

Testimonials from two interpreter personas: Advocating Andre, Ally Ally, and Working Wren, which demonstrate how the ASL Immersion Program aligns with their motivations and roles in the community. Andre's story shows the program enables students to explore early career paths in interpreting, while offering essential support to the deaf community.

Final poster showcasing the potential benefits of the ASL Immersion Program for students and the ASL community

We built a cardboard prototype of an inclusive classroom setup where both hearing and deaf students can learn together. Based on research into existing programs, we designed our classroom setup: the U-shaped table setup allows students to easily see each other and the teacher while signing ASL; A quiet corner, physically separated from the main area, offers a space for students who need to reduce visual stimuli; and we proposed a central 3D signing display to project a zoomed in view of the teacher's signs, ensuring all students have clear visibility.

Photos of the laser-cut and assembled desks and chairs used to model the inclusive classroom design

REFLECTION

This semester-long project was part of the "Collaborative Design" course, focused on practicing user-centered design. We began with research into specific user groups, followed by product ideation, iterative design, and concept presentation. While the final outcome was a product proposal rather than a working system, it was strongly informed by our co-design sessions with the ASL community. Through this process, I honed my user experience design skills and gained valuable insights into the dynamics of the ASL community. The conversations inspired deep reflection on the role of technology in accessibility.

Group photo at final presentation event
(From left: James Davis, Bryce Ferguson, Tyler Ewart, Lili Baker, Jayuan Liu)