AUSIGN - An AUSLAN Interpreter

The primary concept behind AUSIGN is to design a pair of smart gloves that interpret Auslan (Australian Sign Language) and convert the signs into spoken language via built-in speakers. This will empower individuals who are deaf or non-verbal to communicate more easily with the broader public, particularly in situations where an interpreter is not available.

Technically, the gloves will integrate flex sensors or variable potentiometers on each finger. These components register changes in resistance as the fingers bend and stretch, allowing the system to recognize specific hand gestures corresponding to Auslan signs. One of our key design goals is to make the gloves lightweight, portable, and comfortable, but we also understand that usability involves more than just hardware specs.

To ensure that AUSIGN addresses real user needs, we are conducting primary market research through a structured survey. This will help us:

- Validate the real-world usefulness of our concept
- Gather direct feedback on desirable features, comfort, pricing, and expectations
- Understand attitudes within the Deaf and non-verbal community toward current assistive technologies

In order to gather meaningful and relevant insights, we plan to distribute this survey to individuals who are deaf, hard of hearing, or non-verbal, as well as people who work closely with them (e.g. Auslan interpreters, educators, and disability support workers). Specifically, we will target:

- University of New South Wales (UNSW) disability and accessibility support services
- Local Deaf advocacy and community groups (e.g. Deaf Australia, Sydney Deaf Community)
- Online forums and Reddit communities (e.g. r/auslan, r/deaf)

- Social media platforms where deaf individuals and Auslan users are active (e.g. Discord communities)

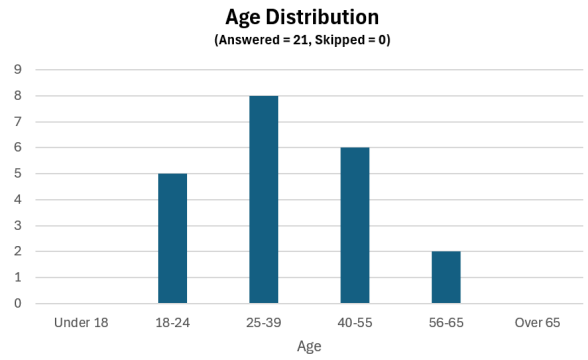
This approach ensures that we reach a diverse and representative sample of potential users and stakeholders, giving us data that is both credible and actionable.

The insights gathered will directly influence the design direction, ensuring our product is user-driven rather than purely engineering-driven.

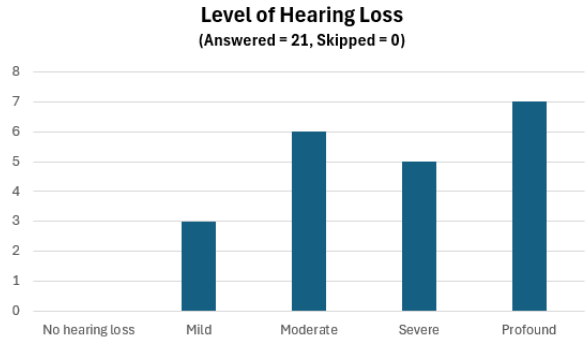
Keeping this in mind, we came up with the following survey questions:

Section 1: Demographics

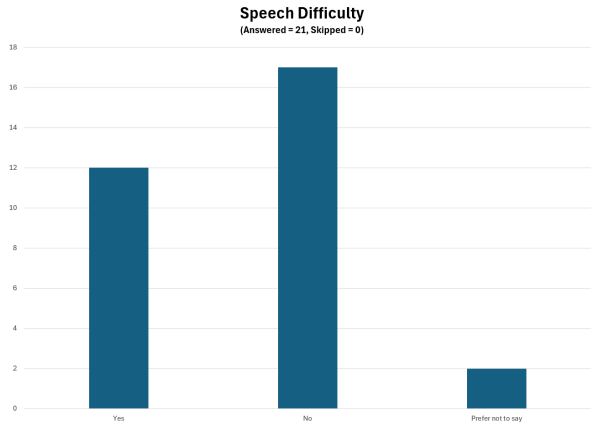
1. Age:
    - Under 18
    - 18 - 24
    - 25 - 39
    - 40 - 55
    - 56 - 65
    - Over 65



2. What is your level of hearing loss?
    - No hearing loss
    - Mild (21 - 40dB)
    - Moderate (41 - 70dB)
    - Severe (71 - 90dB)
    - Profound (91+ dB)

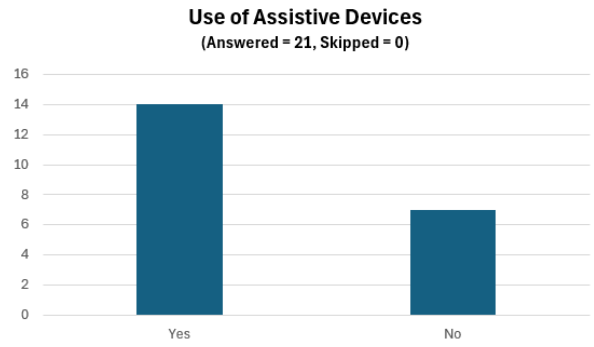


3. Are you also non-verbal or do you experience speech difficulties?
    - Yes
    - No
    - Prefer not to say



Section 2: Communication Tools and Tech Usage

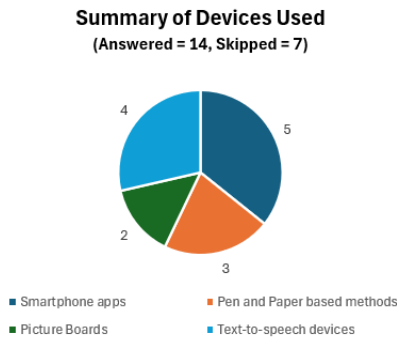
4. Do you currently use any assistive devices for communication?
    - Yes
    - No



5. *(If answered Yes above)*

    What communication device(s) do you currently use?

    (Open-ended)

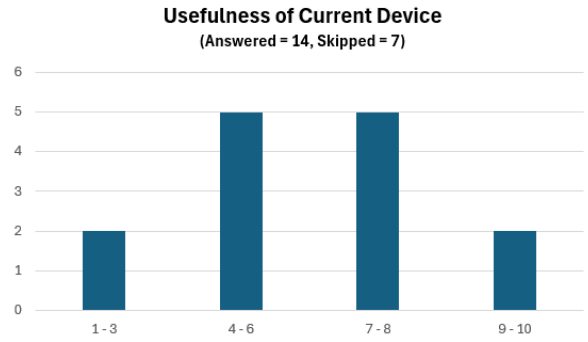


6. *(If answered Yes above)*

   On a scale of 1 to 10, how useful is your current communication aid in daily life?

   (1 = Not useful at all, 10 = Extremely useful)

   ◯ 1 ◯ 2 ◯ 3 ◯ 4 ◯ 5 ◯ 6 ◯ 7 ◯ 8 ◯ 9 ◯ 10

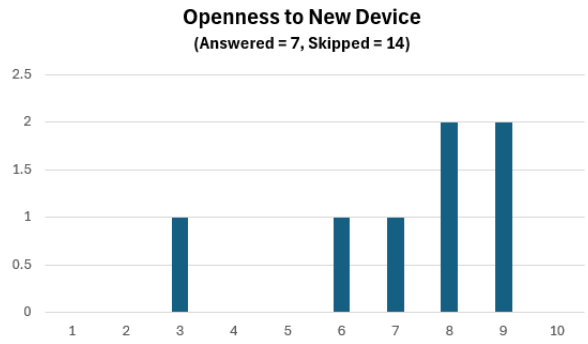


7. *(If answered No to Q4)*

   How open are you to using a new device that may improve daily communication?

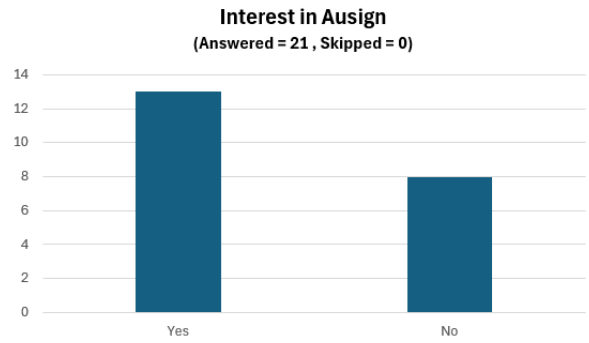
   (1 = Not open at all, 10 = Very open)

   ◯ 1 ◯ 2 ◯ 3 ◯ 4 ◯ 5 ◯ 6 ◯ 7 ◯ 8 ◯ 9 ◯ 10



Section 3: Product-Specific Feedback

8. Would you be interested in using a device like AUSIGN that converts Auslan gestures to speech? If no, why?



9. Aside from translating sign language into speech, are there any additional features you believe would make this product more useful or appealing for members of the Deaf or non-verbal community?

10. What price range would you consider reasonable for this product?
    - Less than 50 AUD
    - 50 to 100 AUD
    - 100 to 200 AUD
    - Over 200 AUD