DEMO: Guess the Sign: Exploring the Transparency of ASL Signs

Deanna Gagne, Laura Wagner, Marjorie Bates, Desiree Kirst,
Kaj Kraus, Nikole Patson, Lillian Berggoetz, Charlotte Vaughn

Sign languages are often assumed to be easily understandable due to their iconicity—where signs visually resemble their referents. However, research has demonstrated that the *transparency* of ASL signs is quite limited; non-signers generally struggle to guess their meanings when they don't have prior knowledge of the sign's intended referent. Our demo invites participants to engage directly with this phenomenon by attempting to guess the meanings of ASL signs based solely on their form. This interactive study replicates and extends prior work (Sehyr & Emmorey, 2019), testing the ability of individuals across different ages and language backgrounds to recognize ASL signs.

This demo is based on a study, Guess the Sign, run through the Language Science Station (LSS) at Planet Word in Washington DC in 2022-2023 (Vaughn et al., 2024). A research team developed the study with input from the LSS, and the LSS trained student research assistants to run the study with visitors to the Planet Word museum as its participants. Student research assistants conducted the study and did an extended educational debriefing with participants using best practices in science communication. During that period, the study was also run at the Center of Science and Industry (COSI) in Columbus, Ohio.

Demo Description

Demo participants will watch short video clips of 10 ASL signs and reply with their best guesses about what they think each sign means (Figure 1). After each guess, they will also rate their confidence in their guess. The demo culminates in an educational discussion about language modality, iconicity, and the misconception that sign languages are inherently more transparent or easier to learn than spoken languages (Figure 2). No actual data will be collected or analyzed as a result of this demo. All demo attendees will be provided with take-away educational materials.

Connection to the Special Session Theme

This demo embodies community engagement by making psycholinguistic research, especially of understudied languages and modalities, accessible to the public. By actively participating, attendees experience firsthand how sign languages are structured, how they may be the same as and/or different from spoken language or gesture and how sign languages are learned through exposure rather than intuition. The activity fosters awareness of linguistic diversity, challenges biases about sign languages, and encourages greater appreciation for the Deaf community and its languages.

Logistical Needs
- Tables
- Power supply (extension cord)

We will bring iPads and charging cords, plus printed handouts and QR codes to share materials.

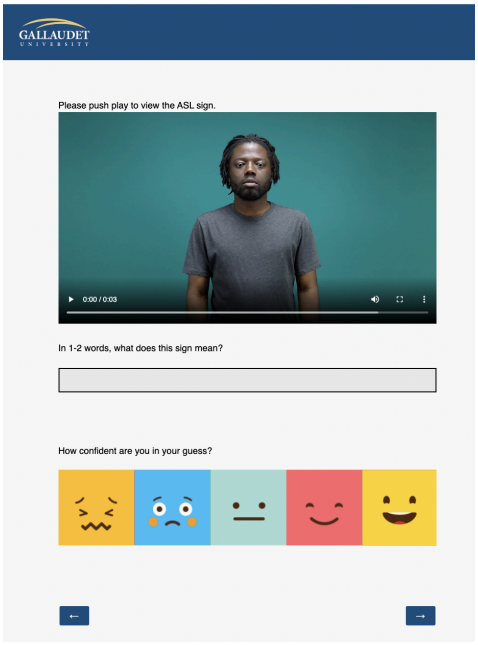

Figure 1. Example view of the interface for guessing a sign in our demo. The videos (n=10) are randomly selected from a set of 400 signs replicating the set of signs from Sehyr & Emmorey (2019).

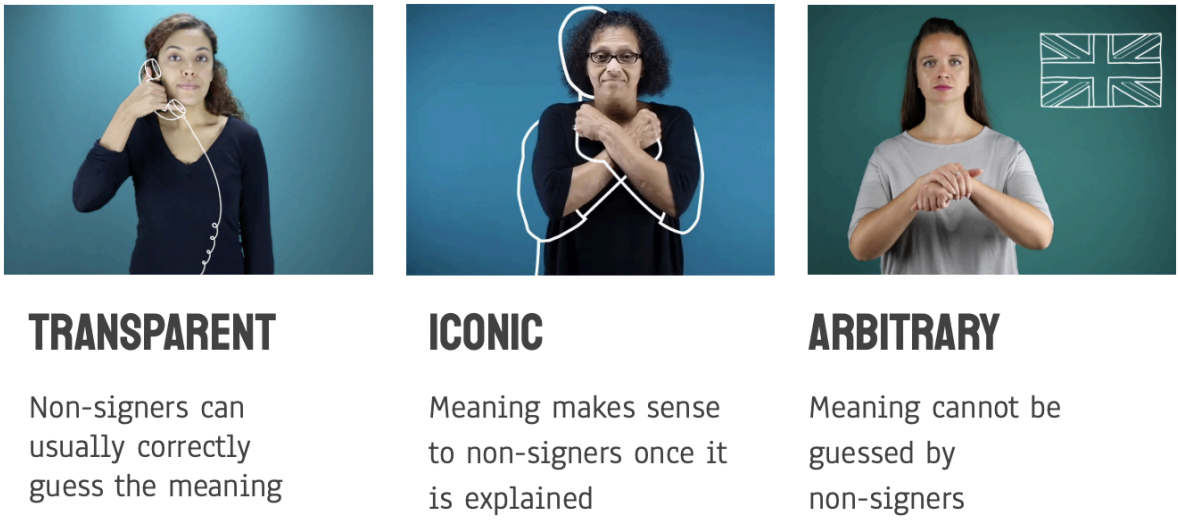

Figure 2. The differences between transparent, iconic, and arbitrary sign-meaning mapping. Many people tend to conflate transparent and iconic categories, assuming that iconicity in a sign provides transparency.

References

Sehyr, Z. S., & Emmorey, K. (2019). The perceived mapping between form and meaning in American Sign Language depends on linguistic knowledge and task: Evidence from iconicity and transparency judgments. *Language and Cognition*, *11*(2), 208-234.

Vaughn, C., Mechtenberg, H., & Contreras, J. O. (2024). The Language Science Station at Planet Word: a language research and engagement laboratory at a language museum. *Linguistics Vanguard*, *10*(s3), 245-255.