LLCN LABORATORY FOR LANGUAGE AND COGNITIVE NEUROSCIENCE

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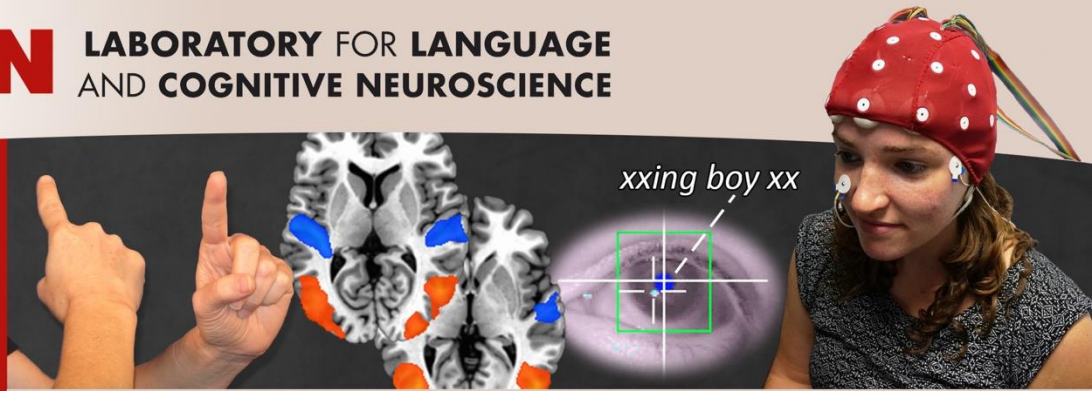
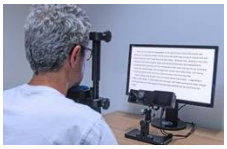


Deaf signers are “speed readers”!

Eye-tracking studies show that deaf early signers read faster, skip over more words, and re-read text less, compared to their hearing peers. Crucially, deaf readers understand the text just as well as hearing people.



Skilled deaf readers exhibit unique eye movement behaviors that allow them to read more efficiently than hearing readers. For example, they are more accurate at moving their eyes to the “optimal viewing position” within a word. **An example of “deaf gain” rather than “hearing loss”!**

Deaf signers may be ”speed readers” in part because they have **larger reading spans**, compared to hearing people. That is, they perceive words and letters farther out in the visual periphery.

For deaf and hearing signers, the reading span extends ***10*** *characters* to the left, but only ***4*** *characters* to the left for hearing people.

Raw gaze plot from Bosworth & Stone (2021)

Larger reading spans may be due to experience comprehending sign language because signers fixate on the face and perceive signs in the visual periphery. Reading also involves processing language to the left and right of fixation. Supporting this idea, we recently showed that hearing early signers (Children of Deaf Adults or CODAs), like deaf signers, have a larger leftward reading span compared to hearing non-signers.

Eye-tracking papers investigating reading in deaf signers from LLCN & Collaborators

Cooley, F., Emmorey, K., Saunders, E., Sinclair, G., Stringer, C., & Schotter, E. (2025). Identifying text-based factors that contribute to the superior reading efficiency of skilled deaf readers: An eye-tracking study of length, frequency, and predictability. *Journal of Experimental Psychology: Learning, Memory, and Cognition*, 51(7), 1178-1189.

Emmorey, K., Akers, E., Saunders, E., Bannazadeh, M., Droubi, E., Cooley, F., & Schotter, E. (2025). Assessing the effects of sign language experience vs. deafness on the leftward reading span. *Cognitive Science*, 49, e70162.

Schotter, E., Stringer, C., Saunders, E., Cooley, F., Sinclair, G., & Emmorey, K. (2024). The role of perceptual and word identification spans in reading efficiency: Evidence from deaf and hearing readers. *Journal of Experimental Psychology: General*, 153(10), 2359–2377.

Sinclair, G., Cooley, F., Stringer, C., Saunders, E., Emmorey, K., & Schotter, E. (2025). The impact of a wider reading span on landing positions and fixation duration: a comparison of deaf and hearing readers. *Journal of Experimental Psychology: Human Perception and Performance*.

Stringer, C., Cooley, F., Saunders, E., Emmorey, K., & Schotter, E. (2024). Deaf readers use leftward information to read more efficiently: Evidence from eye tracking. *Quarterly Journal of Experimental Psychology*, 77(10), 20988-2110.

THANK YOU. None of these studies would be possible without the contributions of individuals like you. We would like to take the opportunity to thank those of you who have generously given your time. For more information, please visit our website at https://slhs.sdsu.edu/llcn/