

Family Bimodal Bilingual Language Development: Longitudinal Study of Families Learning ASL

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How do families communicate with young deaf and hard-of hearing children?



<https://magazine.uconn.edu/2018/02/28/case-bilingual-deaf-children/>

- Does sign language obstruct spoken language development?
- Can hearing parents provide adequate sign language input?

Roadmap for today

A winding black road on a blue background. The road starts at the bottom left and winds upwards and to the right. There are four yellow circular markers on the road, each connected to a text block by a thin yellow line. At the top of the road, there is a light blue location pin marker connected to a text block.

**Introduction to
Family ASL
project**

**Overview of bimodal
bilingual approach in
Deaf families**

**Sample results
from 3 families**

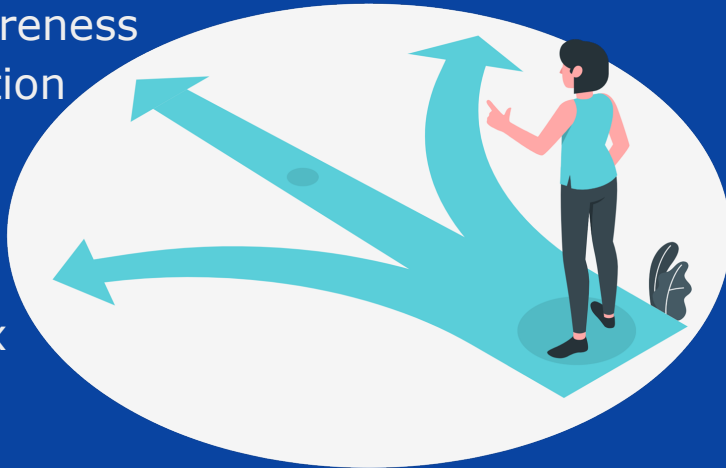
**Overview of bimodal
bilingual approach in
Hearing families that
sign**

Pursuing a bimodal bilingual approach

General language measures
ASL Receptive Skills Test

Phonological awareness
Phonetic articulation

Expressive
vocabulary
Productive syntax



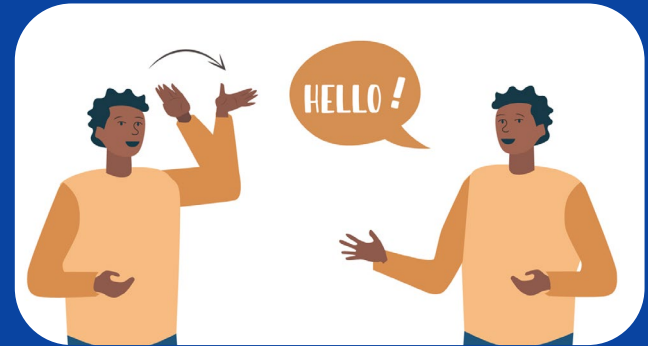
Deaf children with amplification who use a natural sign language with their Deaf families scored in the normal range for hearing children on standard English tests, outperforming oral-only DHH children.

Davidson, Lillo-Martin & Chen Pichler (2014)

Pursuing a bimodal bilingual approach

Bimodal bilinguals may initially display **temporary, normal lags*** parallel to those observed for hearing bilinguals (Goodwin & Lillo-Martin 2023; Tang, Qun, Jia & Yiu 2023).

Bimodal bilingualism continues to confer **linguistic and academic advantages into adolescence** (Tomasuolo, Fellini, Di Renzo & Voterra, 2010; Henner et al. 2016; Hrastinski & Wilbur 2016).



Deaf children in hearing+signing families: A unique context for language acquisition



Deaf children learning a sign language **as an L1** from hearing parents who are learning the sign language **as an L2**

Hearing+signing parents: Mixed picture with gaps

Previous studies report that Deaf parents' signing displays:

- generally **more skilled communicative strategies** (e.g. joint attention, attention-getting) but with wide variation (Spencer & Harris 2006);
- **richer and more varied** signed phonological input than signing from hearing parents (Lu, Jones & Morgan 2016).

Latest studies suggest **resilience of deaf infants** (0-18 mo.) e.g., ability to develop **age-appropriate ASL vocabulary** regardless of ASL proficiency of hearing+signing parents (Caselli, Pyers & Lieberman 2021; Berger, Pyers, Lieberman & Caselli 2023).

Family ASL: Bimodal bilingual development by deaf children with hearing parents

What do interactions between dhh children and their hearing+signing parents look like in detail?

- How proficiently do parents learn ASL and how do they use it at home?
- What strategies best support parents' L2 development?
- What is the relationship between parents' and children's language development?

Family ASL Services

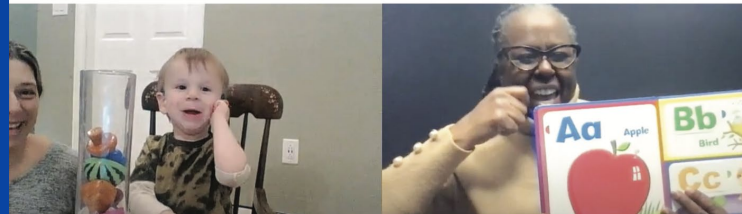
SKI-HI Deaf Mentor Curriculum

ASL @ Home



UConn IRB Protocol H20-0037 Approved November 18, 2022

**Interested in research
about how families
learn ASL together?**



Interested in possibly participating?

Email: familyasllabmanager@huntersoe.org

<https://slla.lab.uconn.edu/family-asl/recruitment/>



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**WAYS DEAF ADULTS VISUALLY
INTERACT WITH YOUNG CHILDREN**



Family ASL Services



Family ASL Study - Results from 3 Families

Ellie

- ❖ Profoundly deaf
- ❖ Received cochlear implants at 20 mths
- ❖ Age 2;00 at start of project
- ❖ Family used ASL and sign-supported English with her before joining
- ❖ Within 1 SD on cognitive and social-emotional screener

Nayla

- ❖ Profoundly deaf
- ❖ Received cochlear implants at 26 mths
- ❖ Age 2;05 at start of project
- ❖ Family used spoken English, sign-supported English, and ASL with her before joining
- ❖ Within 1 SD on cognitive and social-emotional screener


Haven

- ❖ Profoundly deaf
- ❖ Received cochlear implants at 12 mths
- ❖ Age 3;02 at start of project
- ❖ Family used primarily English with her before joining
- ❖ Within 1 SD on cognitive and social-emotional screener

ASL-CDI (Communicative Development Inventory)

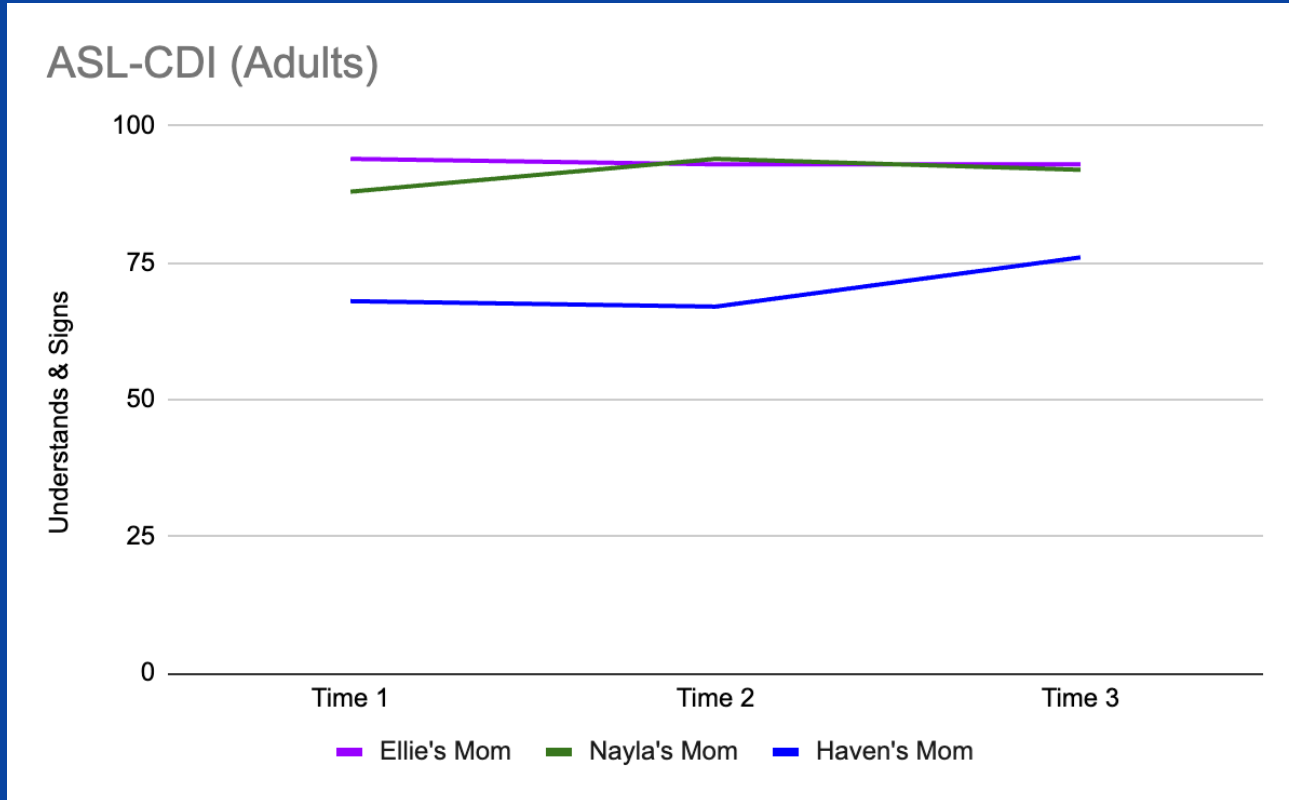
(Caselli et al. 2020)

Q2. BEAR

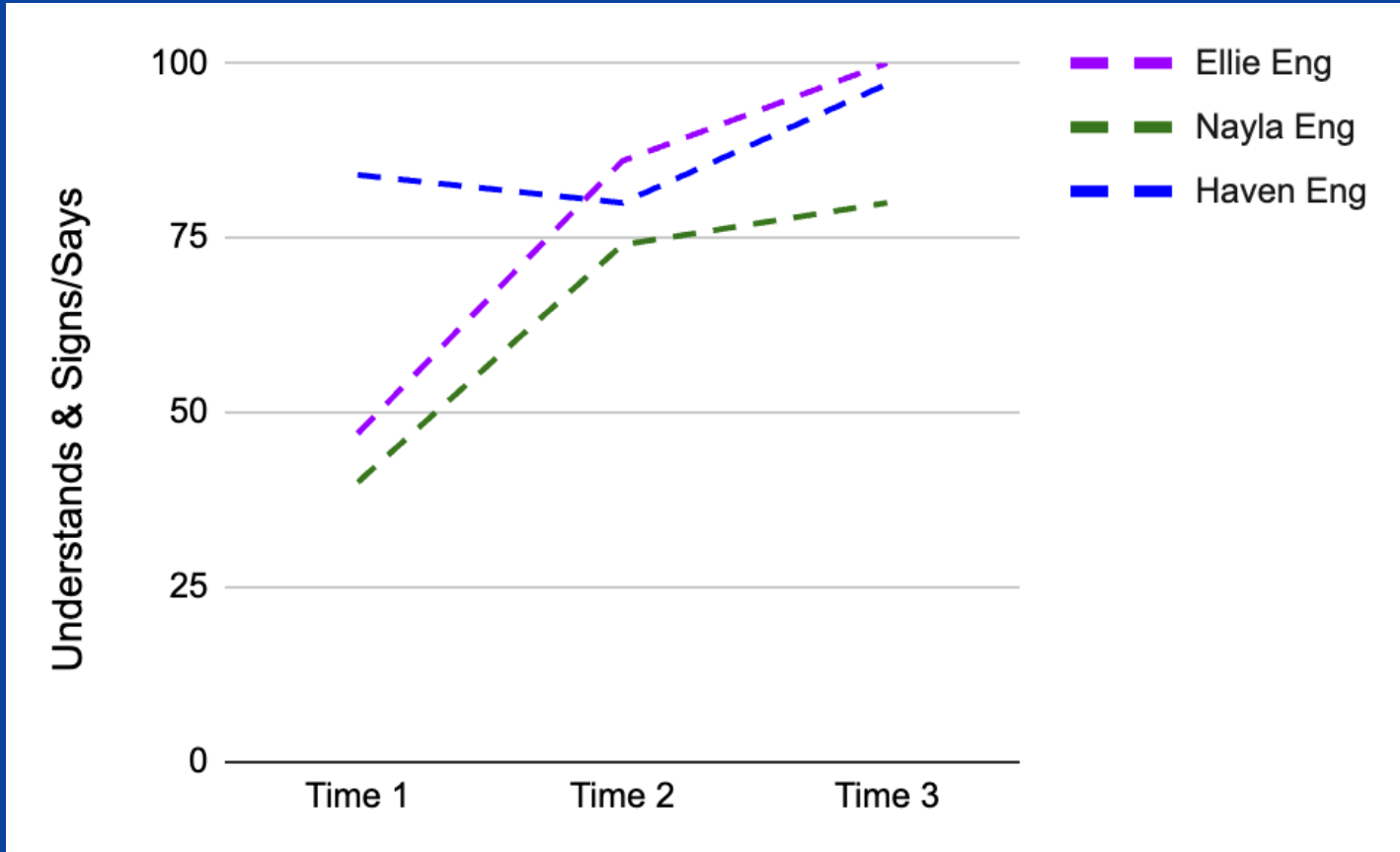


	Understands	Understands and signs	Uses a different sign for this	Doesn't know this sign	Skip / No answer
Adult	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Child	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

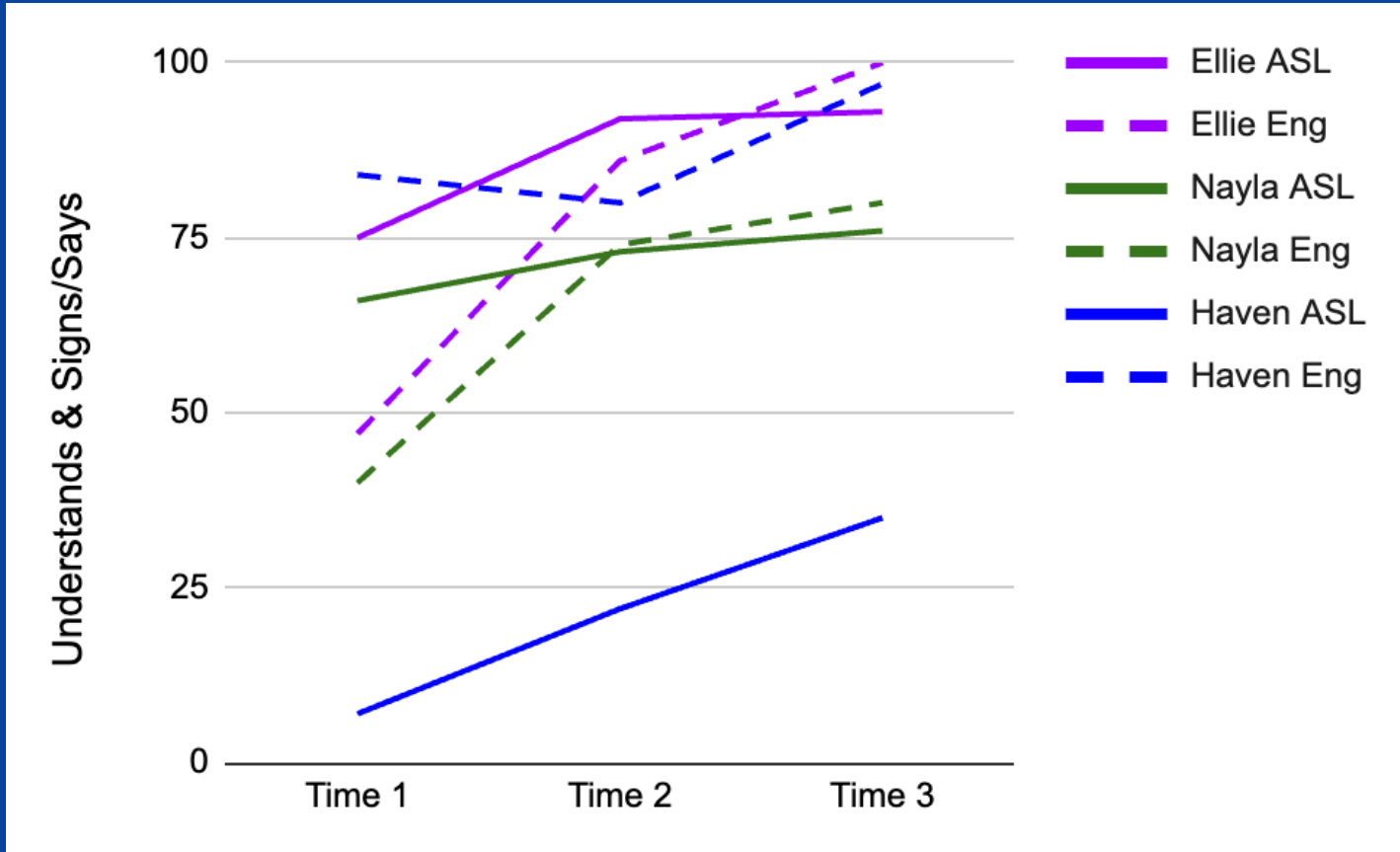
ASL-CDI Results (Adults)



ASL-CDI and Eng-CDI Results (Children)



ASL-CDI and Eng-CDI Results (Children)



ASL-PET (Phonological Elicitation Task)

Procedures: Participants watch the model produce each word twice and copy once as similar as possible

Note: For this presentation, we present results and analysis of data from children only

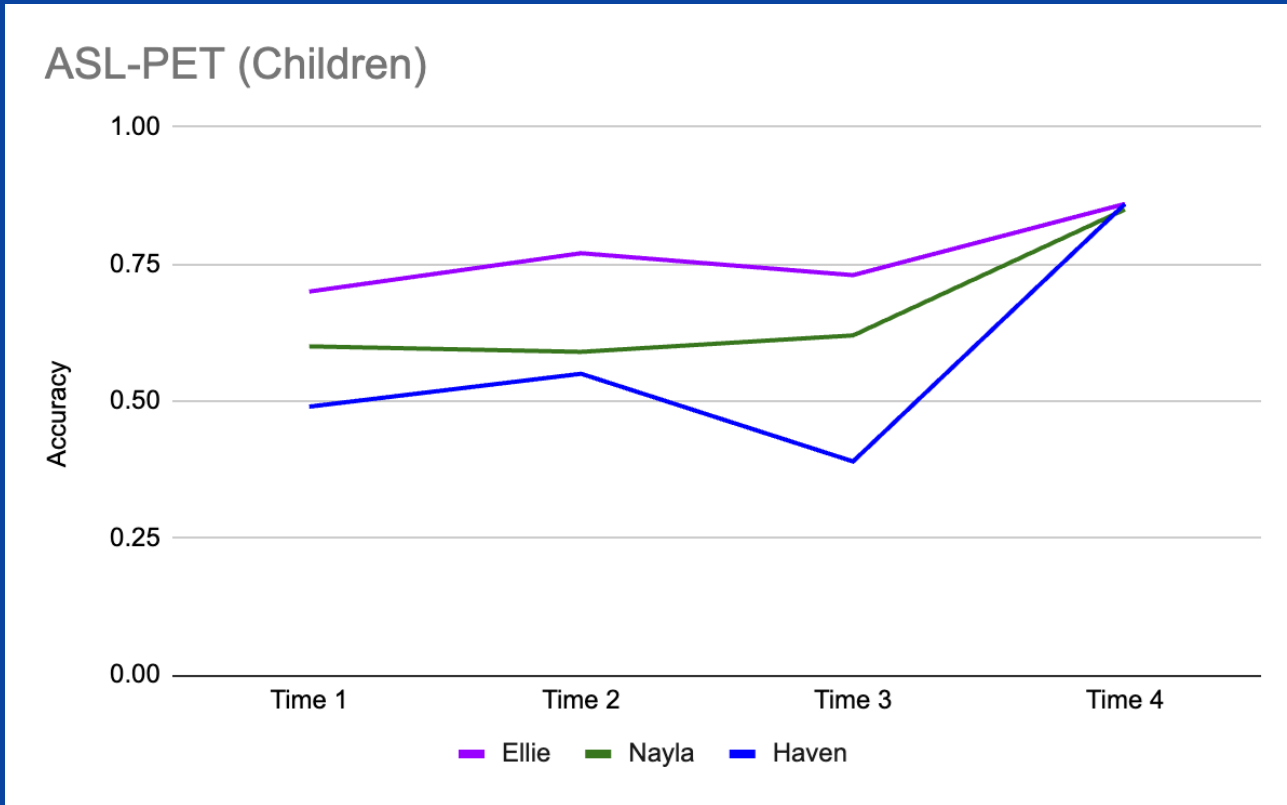
Model:



Participants:



ASL-PET Results



(Gu, Lillo-Martin, Gale & Chen Pichler 2023)

Visual Communication & Sign Language Checklist (VCSL)

(Simms et al. 2013)



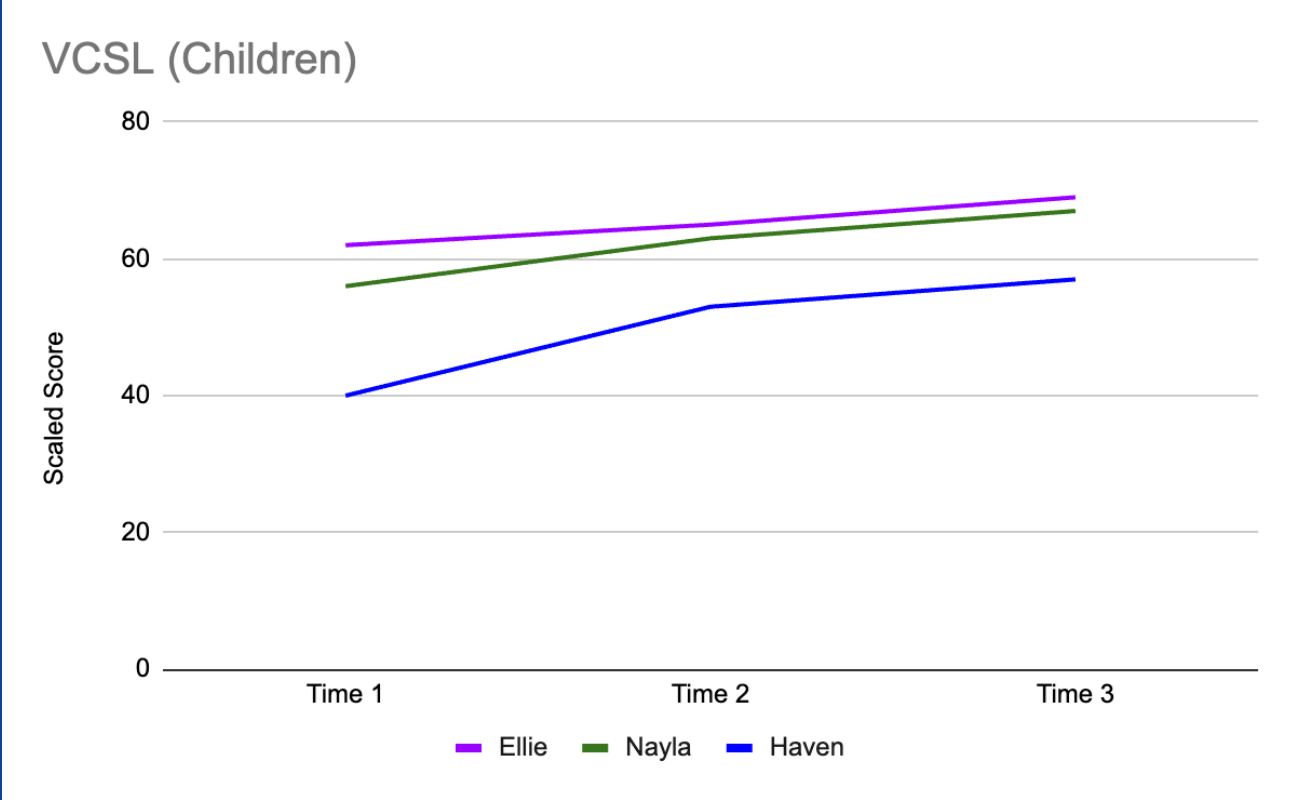
VCSL

Visual Communication and Sign Language Checklist

<i>2 year to 3 years</i>	Not Yet Emerging	Emerging	Inconsistent Use	Mastered
Uses <i>descriptive classifier</i> (e.g., CL: F spots)				
Begins to use non-manual markers (i.e., facial expressions such as raises/squinted eyebrows)				
Points to common areas in house when asked question (e.g., MOMMY GO?)				
Requests help when needed				
Uses pronouns (e.g., HE, SHE, IT)				
Names objects/animals/people in pictures when asked				

Rasch scoring approach (Allen & Morere 2022)

VCSL Results (Children)

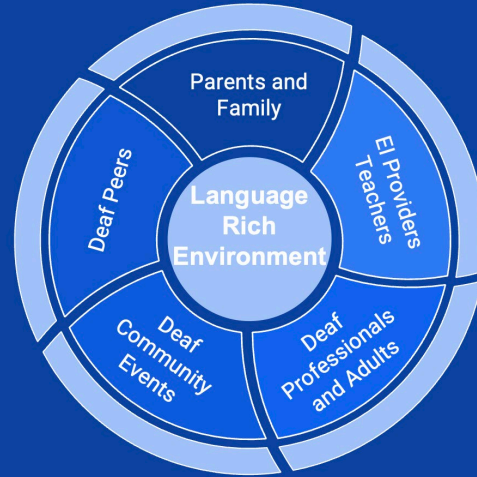


Summary

- Overall, we see positive ASL growth in all three families, despite variations in parents' ASL proficiency.
- Adopting a natural sign language for family use did not interfere with children's English development, whether families showed higher or more moderate levels of ASL proficiency.

Take-away messages from this project

Hearing parents can support L1 sign language development



Bimodal bilingual approach offers flexibility



Parents need not be the sole ASL input providers.

❖ Each family's acquisition path is unique

- *For families who embrace ASL, bimodal bilingualism is an achievable goal!*



Family ASL Presentations at EHDI

Title	Date	Time	Location
Family Bimodal Bilingual Language Development: Longitudinal Study of Families Learning ASL	Monday March 18, 2024	1:55 PM - 2:20 PM	Granite A-C
Families Learning ASL on Zoom: The Good, The Bad and The Beautiful	Tuesday March 19, 2024	9:40 AM - 10:05 AM	Capitol 3
Family ASL: Mini-Lessons on Visual Communication Strategies	Tuesday March 19, 2024	10:10 AM - 10:35 AM	Capitol 3

Guiding Values
for
Language Access



Researching
Shared Attention
Through
Deaf Eyes



Diversity, Equity & Inclusion:
Deaf Gain
in Children's Books



DHH Adult Consumer-to-
Family Support Services:
Exploring Parent Experiences
and Perspectives



Thank
You



ASL-PET Stimuli: Child-directed rhythmic signing

- Rhythmic signing accentuates the phonological and prosodic patterns
- Rhythmic signing plays an important role in enhancing infants' acquisition of the basic forms of signed language

SOUP



AIRPLANE

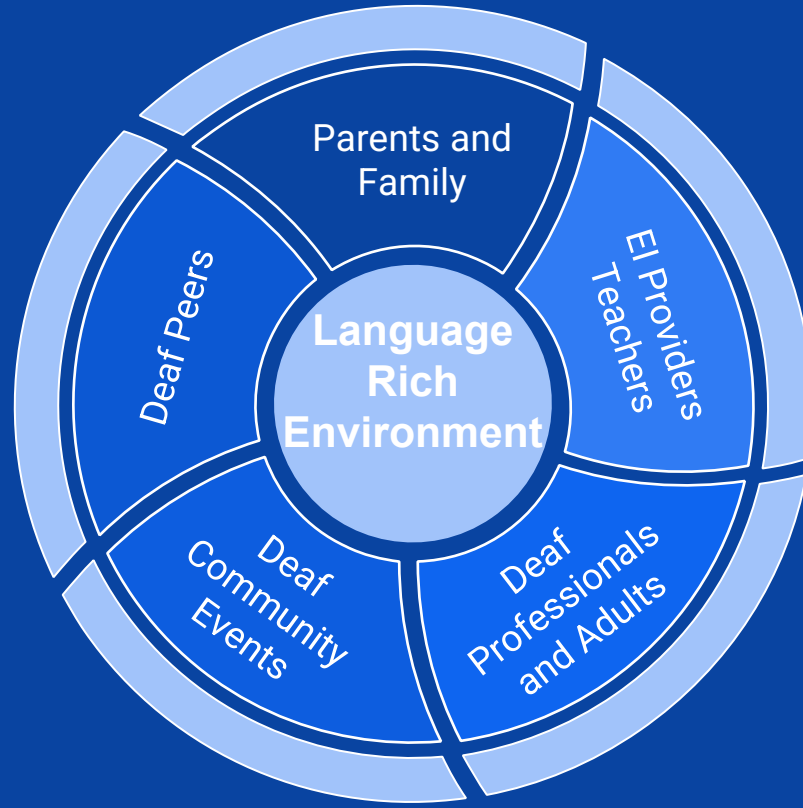


How can the bimodal bilingual approach impact families learning ASL?

❖ Parents can learn enough ASL to provide accessible input

- Parents need not be the sole ASL input providers. Parents can seek opportunities for their child to interact with signing deaf adults and peers to experience a greater variety of signing interactions





❖ **Effective communication with DHH children can involve a combination of sign and spoken language**

- If parents want to include spoken language, and their child is able to access sufficient input, the family can use a bimodal bilingual approach, which naturally involves use of both languages.
- Language planning can identify occasions for the use of each language separately or together.

