

Elaine Gale, PhD, is an associate professor and program leader of the Deaf and Hard of Hearing teacher preparation programs at Hunter College of the City University of New York (CUNY). Her research includes joint attention and Deaf adult involvement in early intervention.

Patrice Creamer, MSW, is an ASL specialist. She has served as project director and administrator on several Deaf research projects at the National Development and Research Institutes in New York City for more than 10 years.

Visual Strategies for Engaging Deaf and Hard of Hearing Children

*By Elaine Gale, Patrice Creamer, Deborah Chen Pichler,
and Diane Lillo-Martin*

All of the authors are part of Family ASL, a project focusing on bimodal bilingual language acquisition by deaf children and their hearing parents. Family ASL is supported by the National Institute on Deafness and Other Communication Disorders of the National Institutes of Health under Award Number R01DC016901. The content of this article is solely the responsibility of the authors and does not necessarily represent the official views of the National Institutes of Health.

Suppose a tree falls but nobody is around. Does it make a sound? Similarly, if someone signs and no one is looking, is that communication? Without looking, children do not see signs and do not receive visual language. It does not matter how careful the signing is. If the child is not visually engaged, then that child does not have full access to language.

The first step in engaging deaf and hard of hearing children in language-rich environments is getting their attention. Deaf adults—parents and teachers—are sensitive to children’s visual needs (Graham, 2015; Harris, 2001; Mather, 1989; Singleton & Crume, 2022; Willie et al., 2018). They intuitively understand what it means to elicit and maintain a child’s attention visually, and they use specific strategies (e.g., taping, waving, moving into the child’s

Right: In order for a deaf or hard of hearing child to have full access to language, that child must be visually engaged.

*Screenshots courtesy of the Family ASL Project
Photos by Elaine Gale*



field of vision) to ensure the child receives their message.

Studies show that deaf children with cochlear implants who have Deaf caregivers have English scores comparable to those of their hearing peers (Davidson et al., 2014). Also, when compared with deaf children who did not have bilingual bicultural language experiences, they had higher communication, language, vocabulary, and knowledge of English syntax (Watkins et al., 1998), potentially a result of this early experience with signing and visually sensitive caregivers. However, people who hear, including hearing parents with deaf children, do not have the same sensitivity to visual attention. In fact, hearing parents need assistance to understand the need for the visual strategies, to develop them, and to effectively use them

(Jamieson, 1994; Waxman & Spencer, 1997; Willie et al., 2020).

It may seem surprising that hearing people need support in doing what Deaf people do naturally, but perhaps it should not be. Hearing teachers intuitively raise their voices as they enter their classes to get students' attention; Deaf teachers intuitively wait for the students to look at them. Deaf sign language teachers report that when hearing students wore earplugs for an extended period, the students continued to rely primarily on their auditory sense, even when they knew it had been inhibited. On debriefing, the hearing students recounted narrowly escaping accidents that they would have easily avoided if they had relied on their visual sense. One earplugged student was nearly hit by a car. The student's behavior—still

Deborah Chen

Pichler, PhD, has been a faculty member in the Department of Linguistics at Gallaudet University since 2002. Her research and teaching interests revolve around the language acquisition of children and adults, and she has a special interest in bilingualism involving sign languages.

Diane Lillo-Martin,

PhD, is Board of Trustees Distinguished Professor and department head in the Department of Linguistics at the University of Connecticut. Her research interests include sign language acquisition in a variety of contexts and the grammatical structures of American Sign Language.

The authors welcome questions and comments about this article at egale@hunter.cuny.edu, pcreamer20s@huntersoe.org, deborah.pichler@gallaudet.edu, and diane.lillo-martin@uconn.edu, respectively.

relying on sound, though he knew he had put in earplugs—starkly contrasts with the instinctive behavior of Deaf individuals, who look more purposefully in each direction before crossing a street.

As early as the 1980s, researchers looked at differences in the way Deaf and hearing teachers and parents interact with deaf children (Mather, 1989; Meadow-Orlans et al., 1981). These studies resulted in identifying specific strategies that Deaf adults use that help deaf children engage with their families for early communication—and later engage in print and develop early literacy skills. Today, we know that the first step in providing young deaf children with a language-rich

Today, we know that the first step in providing young deaf children with a language-rich environment is the use of visual strategies that have been intuitive for Deaf adults.

environment is the use of visual strategies that have been intuitive for Deaf adults. We recognize that these strategies are necessary to get and maintain attention, and we know that these strategies are sometimes not intuitive for adults who hear, including hearing parents.

When hearing parents learn these strategies—from the explicit teaching of Deaf adults or from participation in structured mini-lessons—they develop these skills themselves. Gaining and maintaining their deaf children's attention, parents ensure their children receive their messages, and this provides one of the first steps in their children's access to a language-rich environment.

Resources for Learning Visual Strategies

By Elaine Gale, Patrice Creamer, Deborah Chen Pichler, and Diane Lillo-Martin

An environment rich in the visual language of signs is essential, and strategies to ensure access are critical. Deaf and hard of hearing children, like all children, need full access to language in their early years. The first step in every educational plan is to provide an early language-rich environment. Check out the following to support your child in the visually language-rich environment you create.

DEAF LEADERSHIP INTERNATIONAL ALLIANCE

TIP SHEET ON STRATEGIES

The Deaf Leadership International Alliance, an organization that advocates for involvement of Deaf adults in early intervention for deaf children and their families, suggests various strategies to communicate with children, read books to children, and prepare deaf children for literacy. The full list of strategies can be seen in Figure 1. For more information, see www.dliaconnect.org.

SKI-HI DEAF MENTOR CURRICULUM

ASL FOR FAMILIES

The SKI-HI Deaf Mentor Program (Pittman, 2001) is a curriculum with four sections: a) Introduction and Overview, b) ASL for Families, c) Early Visual Communication Program, and d) Deaf Culture Program. The Early Visual Communication Program has 18 lessons focused on visual strategies from evidence-based research. For more information, see <https://deaf-mentor.skihi.org>.

ASL AT HOME

TECHNIQUES AND STRATEGIES

ASL at Home (Zarchy & Geer, 2023) is a family curriculum, with chapters that are organized around common routines for families with children from birth to 3 years of age. Each chapter includes a technique that aligns with visual strategies. For more information, see www.aslathome.org.

FAMILY ASL MINI-LESSONS

DEVELOPED BY RESEARCHERS

We, the co-authors of this article, are part of a research team studying how deaf and hard of hearing children learn to use ASL with their hearing parents. The material we put together consists of short and focused lessons that are about 5-10 minutes each. Each mini-lesson introduces the strategy, shares demonstrations of the visual strategies with photos and videos of parents using the strategy, provides opportunities to practice the strategy, and clarifies any questions or misunderstandings. It includes an ASL specialist who meets with families and children remotely to support the children—and parents—in their ASL development. For more information, see <https://slla.lab.uconn.edu/family-asl/>.

Figure 1: DLIA Visual Strategies



12 WAYS DEAF ADULTS VISUALLY INTERACT WITH YOUNG CHILDREN

Attention	1	ELICIT ATTENTION WITH EYEGAZE EXAMPLE: move your eyes in the child's line of vision to elicit attention
	2	USE POINTING FOR REFERENCE EXAMPLE: point to object to direct child's attention
	3	COMBINE KINESTHETIC, TACTILE & VOCAL STIMULATION EXAMPLE: tap and wave in child's line of vision
Parentese	4	SIGN IN SLOWER TEMPO EXAMPLE: sign HAPPY slowly
	5	REPEAT SAME WORDS EXAMPLE: sign HAPPY multiple times in a row
	6	EXAGGERATE MOVEMENTS EXAMPLE: sign HAPPY big and with extremely wide eyes
Joint Attention	7	FOLLOW CHILD'S LEAD EXAMPLE: start an interaction with a toy a child looks at with interest
	8	PROVIDE TIME TO EXPLORE EXAMPLE: allow child time to explore before initiating or continuing an interaction
	9	ENGAGE IN SEQUENTIAL INTERACTION EXAMPLE: be sure the child is looking at you before initiating a conversation about a toy; if the child breaks eye contact, pause until the child returns their eye gaze back to you
Shared Reading	10	KEEP BOTH LANGUAGES VISIBLE EXAMPLE: have the book on your stomach facing out to the child and use miniature signs on the book
	11	USE ATTENTION MAINTENANCE STRATEGIES EXAMPLE: tap child lightly and shift book to attract attention
	12	ADJUST SIGN PLACEMENT TO FIT THE STORY EXAMPLE: sign on the book or child



* THE TERM "DEAF" IS AN INCLUSIVE TERM REPRESENTING ALL INDIVIDUALS WITH VARIOUS HEARING LEVELS AND CULTURAL EXPERIENCES.

Figure 2: Example of a Family ASL Mini-Lesson



Family ASL Mini-Lesson for Repeating the Same Words

CONNECTION/INTRODUCE:

Introduce and connect the family with the visual strategy to repeat the same words multiple times. The ASL specialist explains that it is important as it provides children with more opportunities to connect words with concepts.

TEACH/DEMONSTRATE:

The ASL specialist teaches and demonstrates several ways to repeat the same words and in different contexts. The picture series to the left shows a Deaf adult signing *gas* multiple times in different ways and contexts. She first signs the word to introduce it. Next, she signs the word on the book page to show the iconic action of putting gas into the car, reinforcing the sign. Finally, the Deaf adult and the child make the sign together.

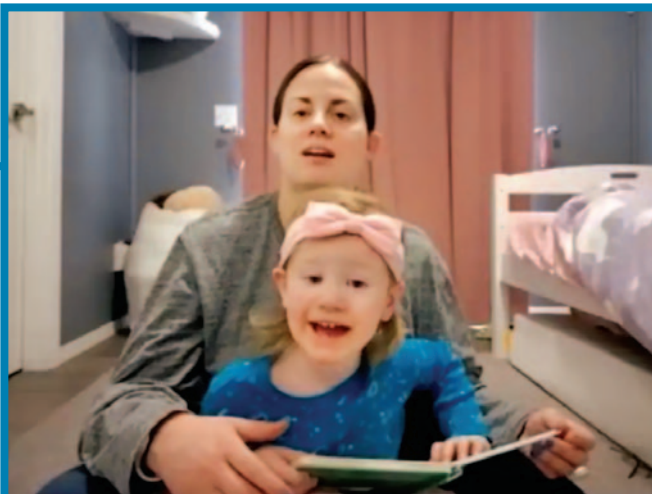
Another strategy involves showing videos by Hands Land (www.handsland.com), a nonprofit organization led by Deaf individuals promoting language play for early sign language development. Hands Land videos rhythmically sign daily activities using the same word or phrase multiple times. Sharing videos of other hearing parents repeating words multiple times effectively is another way to demonstrate visual strategies. Including other hearing parents using visual strategies is important to show those parents that other parents like them, with deaf children, can also effectively use visual strategies.

ACTIVE ENGAGEMENT/APPLY AND LINK/CLARIFY:

After the introduction and demonstrations, parents are encouraged to make a conscious effort to use the visual strategy for the week and to jot down comments and questions to discuss during the next ASL specialist session to clarify if needed.

Family ASL Mini-Lesson Structure

The mini-lesson structure (shown below) supports hearing families in understanding, developing, and effectively using visual strategies with their deaf or hard of hearing child. See Figure 2 for an example of a mini-lesson led by a Deaf ASL specialist.



REMIND:

Since it can take time for hearing parents to remember to use visual strategies, in future sessions it is helpful to remind them to use those strategies.

In the photo above, a parent was attending a session along with her child. During a book reading activity, they were both facing forward. This required the child to turn her head to visually interact with her parent. Following a lesson on eliciting attention with eye gaze, the ASL specialist gently reminded the parent to sit facing the child to maximize visual interaction.



Above: Incorporating what she's learned from a family ASL mini-lesson, this hearing parent first signs *farm* to introduce the word to her child. Then she signs *farm* on her child to reinforce the sign. The parent and the child sit facing one another to maximize visual interaction.

References

- Davidson, K., Lillo-Martin, D., & Chen Pichler, D. (2014). Spoken English language development among native signing children with cochlear implants. *Journal of Deaf Studies and Deaf Education*, 19(2), 238-250. <https://doi.org/10.1093/deafed/ent045>
- Graham, P. J. (2015). Examining the need of attention strategies for academic development in deaf and hard of hearing children. *Journal of Education and Human Development*, 4, 16-21.
- Harris, M. (2001). It's all a matter of timing: Sign visibility and sign reference in deaf and hearing mothers of 18-month-old children. *Journal of Deaf Studies and Deaf Education*, 6(3), 177-185. <https://doi.org/10.1093/deafed/6.3.177>
- Jamieson, J. R. (1994). Instructional discourse strategies: Differences between hearing and deaf mothers of deaf children. *First Language*, 14(42-43), 153-171. <https://doi.org/10.1177/014272379401404102>
- Mather, S. (1989). Visually oriented teaching strategies with deaf preschool children. In C. Lucas (Ed.), *Sociolinguistics of the Deaf community* (pp. 165-187). Academic Press. <https://doi.org/10.1016/b978-0-12-458045-9.50014-8>
- Meadow, K., Greenberg, M. T., Erting, C., & Carmichael, H. (1981). Interaction of deaf mothers and deaf preschool children: Comparisons with three other groups of deaf and hearing dyads. *American Annals of the Deaf*, 126, 454-468. <https://doi.org/10.1353/aad.2012.1463>
- Pittman, P. (2001). *The Deaf Mentor curriculum*. SKI-HI Institute. <https://deaf-mentor.skihi.org>
- Singleton, J. L., & Crume, P. K. (2022). The socialization of modality capital in sign language ecologies: A classroom example. *Frontiers in Psychology*, 13. <https://doi.org/10.3389/fpsyg.2022.934649>
- Waxman, R. P., & Spencer, P. E. (1997). What mothers do to support infant visual attention: Sensitivities to age and hearing status. *Journal of Deaf Studies and Deaf Education*, 2(2), 104-114. <https://doi.org/10.1093/oxfordjournals.deafed.a014311>
- Wille, B., Allen, T., Van Lierde, K., & Van Herreweghe, M. (2020). The Flemish Sign Language diagnostic instrument for children up to two years old: Adaptation of the ASL VCSL Checklist. *American Annals of the Deaf*, 165(3), 311-334. <https://doi.org/10.1353/aad.2020.0020>
- Wille, B., Mouvet, K., Vermeerbergen, M., & Van Herreweghe, M. (2018). Flemish Sign Language development: A case study on Deaf mother-deaf child interactions. *Functions of Language*, 25(2), 289-322. <https://doi.org/10.1075/fol.15010.wil>
- Zarchy, R. M., & Geer, L. C. (2023). American Sign Language at home: A family curriculum. <https://www.aslathome.org>